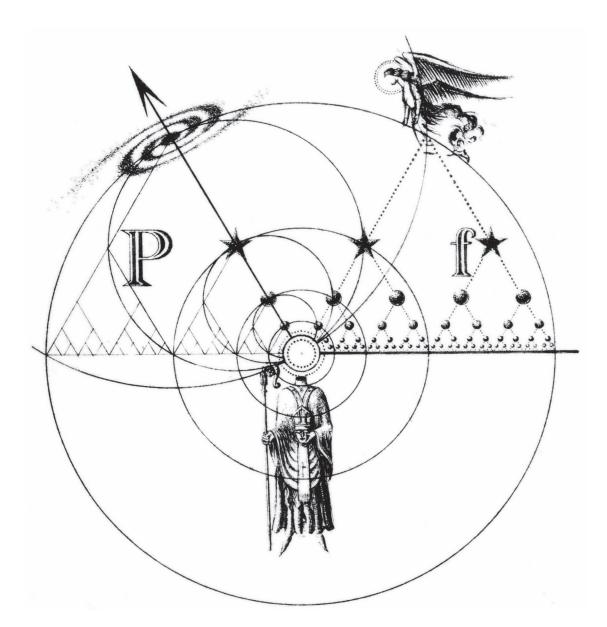
THE HIERARCHY OF HEAVEN AND EARTH

A NEW DIAGRAM OF MAN IN THE UNIVERSE



D. E. HARDING

THE HIERARCHY OF HEAVEN AND EARTH

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A REPRODUCTION OF THE ORIGINAL

MANUSCRIPT

DIGITAL VERSION

THE SHOLLOND TRUST

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PREFACE TO THE HARDBACK EDITION

D.E. Harding

First and foremost, I want to thank my friend Julian Watson for so generously taking on the massive and complicated job of producing this facsimile version of my full-length *Hierarchy of Heaven and Earth*. I had thought of that original version as a necessary but unpublishable preliminary to the abridged version, which was first published by Faber and Faber in 1952, then by Harper and Row, and is now published by The Shollond Trust. But I'm so glad that Julian has changed my mind on the subject.

His hope and mine is that would-be readers of the small *Hierarchy*, who are apt to describe it as "dense" (by which I think they mean compact, rather than the alternative definition in my dictionary, namely *impenetrably* stupid!), will find this comparatively informal and discursive - if not chatty - version more digestible, an altogether easier read. Our further hope is that some friends may go straight from *On Having No Head*, and later books of mine, to this full version of the *Hierarchy*, without bothering about the short version.

Secondly, a brief word about how to read this book. Even in this low-density version, you may come across some difficult passages. My advice to you is to skip lightly over them. You will soon land on firmer ground. And remember that there are some (non-essential) items in this book that I don't fully understand either, or agree with completely. I take my cue here from Robert Browning who, when asked to explain some difficult lines in one of his poems, replied:

"Well, when I wrote them God and I knew what I meant. Now only He knows."

INTRODUCTION TO THE HARDBACK EDITION

Richard Lang

The Hierarchy of Heaven and Earth was first published by Faber and Faber in 1952. This was not, however, the original version. It was a précis of the much larger work which Douglas Harding had already written but had considered too large for publication. Having completed the original manuscript he went through it again and condensed it to publishable size. A substantial task in itself which he executed superbly. The précis is not only a faithful representation of the ideas in the original manuscript, but is also beautifully written. However; because of its condensed nature some people find it hard work. Deep ideas come thick and fast.

When I first read the Faber version in the early 1970's I had the advantage of knowing Douglas Harding and being able to discuss with him the ideas in the book. Whenever I had difficulties I could talk to the author. But then one day Douglas showed me the original version, the 'Big Hierarchy' as he called it. I was stunned. I hadn't realised the book I had been reading was only a précis. I knew I had to read this manuscript. In 1976 I therefore stayed with Douglas for two or three weeks and read it from cover to cover. It was a tremendous experience. The quotations alone, down the margin of each page, were an education. And, large as it was, I found I couldn't put the book down. I was carried along from chapter to chapter by the author's enthusiasm and inspiration, and by the delight and wonder of having my eyes opened afresh, again and again, to the universe and my place in it. And though the book is deep, it is easy to read. Unlike the shorter version, it develops at a relaxed pace, taking time to go into things.

The book you now hold in your hands is a reproduction of the whole of the 'Big Hierarchy' (with the page size reduced.) This is the first time this work has been made available to the public. It is an exciting moment. Due to the considerable expense of the project there are only three hundred copies being printed, but we hope that nevertheless it will have an impact. It may well be that in the future this book will be recognised as one of the great intellectual inspirations and achievements of the twentieth century. C.S. Lewis only read the condensed version, but he recognised its stature when he wrote in the Preface:

"This book is, I believe, the first attempt to reverse a movement of thought which has been going on since the beginning of philosophy."

He then added: "If [this book] should turn out to have been even the remote ancestor of some system which will give us again a credible universe inhabited by credible agents and observers, this will still have been a very important book indeed."

And he went on to say. "It has also given me that bracing and satisfying experience which, in certain books of theory, seems to be partially independent of our final agreement or disagreement. It is an experience most easily disengaged by remembering what has happened to us whenever we turned from the inferior exponents of a system, even a system we reject, to its great doctors. I have had it on turning from common 'Existentialists' to M. Sartre himself, from Calvinists to the *Institutio*, from 'Transcendentalists' to Emerson, from books about 'Renaissance Platonism' to Ficino. One may still disagree (I disagree heartily with all the authors I have just named) but one now sees for the first time why anyone ever did agree. One has breathed a new air, become free of a new country. It may be a country you cannot live in, but you now know why the natives love it. You will henceforward see all systems a little differently because you have been inside that one. From this point of view philosophies have some of the same qualities as works of art. I am not referring at all to the literary art with which they may or may not be expressed. It is the *ipseitas*, the peculiar unity of effect produced by a special balancing and patterning of thoughts and classes of thoughts: a delight very like that which would be given by Hesse's *Glasperlenspiel* (in the book of that name) if it could really exist. I owe a new experience of that kind to Mr. Harding." (1)

This is high praise indeed. But who is Mr. Harding and what led him to write The Hierarchy of Heaven and

Earth?

Douglas Harding, born in 1909, was brought up in Lowestoft, Suffolk, by parents belonging to the Exclusive Plymouth Brethren, a small fundamentalist Christian sect. His was a restricted boyhood - novels were frowned upon by his parents, theatre was out of the question. Nevertheless, Harding received an education, and early on demonstrated an ability to collect and collate things - butterflies, fossils etc. - and accompany this by reading round the subject. At 15 he got a distinction in exams, partly as a result of organising his study systematically. He was particularly good at art and geometry. These emerging interests and organisational skills played their part later on in his career as an architect, and in the writing of *The Hierarchy*.

Harding left the Plymouth Brethren when he was 21. Already working as an architect in London, he wrote an essay which challenged the Brethren's claim to be the sole possessors of the Truth. Typically Harding did not slip out of the back door quietly. He publicly declared his differences and was excommunicated - one of the worst cases they had had, was the word amongst the Brethren at the time. Thrown out of his Plymouth Brethren lodg-ings in disgrace, he was then ejected from his next lodgings when by chance the landlady there turned out to be a Plymouth Sister as well.

Harding's father, a genuinely spiritual man, was devastated by his son's departure from the Brethren and his openness to other religions than Christianity. He desperately tried to dissuade Douglas from his Hell-bent course. He wept. Leaving was worse than committing murder, he said. But he failed to change his son's mind. After this Harding saw his father only occasionally before he died. And all those years later Harding was still in disrepute. After his father's funeral he was forbidden to attend the reception. The Brethren had not forgotten.

But that is looking ahead from his time in London. It was 1930 and Harding, having started work as an architect, was reading in his spare time. Free of the authority of the Brethren, he began developing his own philosophy. He was curious about himself. Who was he? Philosophy at this time was coming under the influence of Einstein's ideas on Relativity. Affected by these new ideas, Harding realised that who he was in the world depended in part upon the range of the observer - it was *relative* to the range he was viewed from. From several feet he was clearly human, but at closer range he was a community of cells. Working in the City of London he was also aware of being part of a larger organism or body - the city. He realised he did not stop at the boundary of his skin. The city though conventionally assumed to be external, was as much a part of him as his arms or his cells. He could no more exist without his environment than without his heart, or without the cells of his heart.

By the late 1930's Harding was in India practising architecture - the Depression made work hard to find in England. When war broke out he was commissioned into the army as an engineer. The War only served to intensify his quest for self-knowledge, for with the Japanese advancing through Burma life was uncertain. He wanted to find out who he really was before he died.

By 1942 Harding, now 33, had mapped out in rough the layers of his identity in the world - cells at close range, molecules even closer; a man at several feet, humanity further away, a planet beyond that and so on. But what was the centre and source of this onion-like system of appearances? Who was he really? This became Harding's burning question, his obsession.

His centre certainly wasn't himself as a man - his humanity was but one of the layers, not the centre.

One day Harding was reading a book on philosophy and found a self-portrait by the German philosopher Ernst Mach. This wasn't a conventional self-portrait drawn from a mirror - a view of oneself at a range of several feet. It was Mach's view of himself at no distance, as he saw himself without a mirror, from his own first person point of view. It showed Mach's legs pointing towards the top of the picture, further down his hands with paper and pencil, below this his chest and down one side of the picture his nose, stretching practically from the ceiling to the floor. This drawing was the clue that awakened Harding to his identity at centre - the penny dropped (and, he says, is still dropping!) Like Mach, when he looked out into the nearer regions of his world he saw his body, and beyond that the surrounding scene. But what grabbed Harding's attention was the absence of Mach's head in the picture, or his own head as he looked at himself. One look nearer than his 'nose-blur' was nothing - no head at centre, no face, no shape or colour or edges, no matter or spirit or soul - nothing at all. Yet this nothingness

was self-evidently aware - aware of itself, and aware of what it contained: his body, his thoughts and feelings, his world.

Harding knew he had struck gold and the following weeks and months were spent in feverish activity writing down a deluge of ideas and diagrams. He was up half the night, determined to record everything that poured through him. This simple insight, this direct seeing into his own essence, suddenly made sense of so much he had been reading and thinking about. Soon he realised that if he was to present this insight seriously to the world he needed to know much more science, more history, more psychology, more philosophy, more literature. He needed to educate himself. Back in England after the War he took a year off architecture to study, to put his ideas together in a book. Well, one year turned into two which turned into five and more! He worked fourteen hours a day with no holidays. When finally he had finished he condensed it, realising the full version was far too long for a publisher to take on. He sent this shorter version to C.S. Lewis. Lewis replied in ecstatic tones:

'Hang it all, you've made me drunk, roaring drunk as I haven't been on a book (I mean a book of doctrine; imaginative works are another matter) since I first read Bergson during World War I. Who or what are you? How have I lived forty years without my having heard of you before ... my sensation is that you have written a book of the highest genius.' (2)

This version of *The Hierarchy of Heaven and Earth* was published by Faber and Faber in 1952.

But Harding did not stop here. A few years later his classic little book *On Having No Head* (3) put into easily readable form the experience and some of the implications of *headlessness*. Harding describes at the beginning of this book the moment when he discovered who he really was. He says that he was walking in the Himalayas. But if you talk with him he will say that yes he did see this when he was out walking there, and he enjoyed his true nature being filled by those majestic mountains, but that it wasn't really the first time - except that every time one sees into one's true nature it's the first time! It was a popular way of sharing his insight. Here is that description of his awakening in *On Having No Head*:

"The best day of my life - my rebirthday, so to speak - was when I found I had no head. This is not a literary gambit, a witticism designed to arouse interest at any cost. I mean it in all seriousness: I have no head.

"It was eighteen years ago, when I was thirty-three, that I made the discovery. Though it certainly came out of the blue, it did so in response to an urgent enquiry; I had for several months been absorbed in the question: what am I? The fact that I happened to be walking in the Himalayas at the time probably had little to do with it, though in that country unusual states of mind are said to come more easily. However that may be, a very still clear day, and a view from the ridge where I stood, over misty blue valleys to the highest mountain range in the world with Kangchenjunga and Everest unprominent among its snow-peaks, made a setting worthy of the grandest vision.

"What actually happened was something absurdly simple and unspectacular: I stopped thinking. A peculiar quiet, an odd kind of alert limpness or numbness, came over me. Reason and imagination and all mental chatter died down. For once, words really failed me. Past and future dropped away. I forgot who and what I was, my name, manhood, animalhood, all that could be called mine. It was as if I had been born that instant, brand new, mindless, innocent of all memories. There existed only the Now, that present moment and what was clearly given in it. To look was enough. And what I found was khaki trouserlegs terminating downwards in a pair of brown shoes, khaki sleeves terminating sideways in a pair of pink hands, and a khaki shirtfront terminating upwards in - absolutely nothing whatever! Certainly not in a head.

"It took me no time at all to notice that this nothing, this hole where a head should have been was no ordinary vacancy, no mere nothing. On the contrary, it was very much occupied. It was a vast emptiness vastly filled, a nothing that found room for everything - room for grass, trees, shadowy distant hills, and far above them snowpeaks like a row of angular clouds riding the blue sky. I had lost a head and gained a world.

"It was all, quite literally, breathtaking. I seemed to stop breathing altogether absorbed in the Given. Here it was, this superb scene, brightly shining in the clear air alone and unsupported, mysteriously suspended in the void, and (and this was the real miracle, the wonder and delight) utterly free of "me", unstained by any observer.

Its total presence was my total absence, body and soul. Lighter than air, clearer than glass, altogether released from myself, I was nowhere around.

"Yet in spite of the magical and uncanny quality of this vision, it was no dream, no esoteric revelation. Quite the reverse: it felt like a sudden waking from the sleep of ordinary life, an end to dreaming. It was self-luminous reality for once swept clean of all obscuring mind. It was the revelation, at long last, of the perfectly obvious. It was a lucid moment in a confused life-history. It was a ceasing to ignore something which (since early childhood at any rate) I had always been too busy or too clever to see. It was naked, uncritical attention to what had all along been staring me in the face - my utter facelessness. In short, it was all perfectly simple and plain and straightforward, beyond argument, thought and words. There arose no questions, no reference beyond the experience itself, but only peace and a quiet joy, and the sensation of having dropped an intolerable burden." (4)

Of course, what Harding then did was take up a burden and present a passionate argument - using a great deal of thought and words, raising innumerable questions and making connections with almost everything under the sun! But he was well aware of the limitations of words and philosophical systems. His final paragraph in the Epilogue to the Faber version of *The Hierarchy* describes such limitations.

"If His Being, in which I am allowed to share, does not utterly abase me - making this inquiry absurd, though a needful absurdity - what is left worth my amazed reverence? Indeed my finest and most thrilling discovery is that, because all my roots are in the Undiscoverable, I also am undiscoverable: I will not bear inspection, and can never make head or tail of myself. Self-knowledge is the smouldering wick that is left after the light of wonder has been put out. Once the universe becomes credible, once I seriously suppose I know a thing or two about myself, then I have sunk back into the stupor of the half-dead. Nor is it any consolation that I have escaped from astonishment into thought - wonder and love inspire vast underground systems in which to take cover from wonder and love; but those who, lacking constructional enthusiasm, stay above ground, are exposed to God's weather and liable to feel His wind on their faces. If this book quenches the feeblest flame of awe, of direct awareness, in myself or anyone else, then it were better never to have written it." (5)

Since the 1960's Harding has developed the *experiments*. These are simple tests or explorations of what and who you are in your own experience. They involve putting aside for the moment what others make of you and looking for yourself. The experiments guide you home to your own present experience of you. I believe they are a breakthrough in making available to more people, in a scientifically valid way, what the mystics have been celebrating for centuries. Harding, as well as writing, travels the world giving workshops using these experiments. The aim of such workshops is re-awakening to who we are at centre in contrast to what we appear to be to others (at whatever range.) There are dozens of the experiments but here, to give some idea of their nature and put very briefly and simply, are four of them:

Seeing. First point at your feet, then at your legs, then your torso, noting how you're pointing at *things.* Now point at your 'face'. Dropping memory and imagination, are you in fact pointing at anything at all now, let alone a face? Aren't you Space for other people's faces, as well as your own in the mirror sometimes?

Closed Eyes. Shut your eyes, drop memory and imagination and notice whether you have any limits now, whether you are in any kind of box or body. Aren't you more like Room - Space for passing sensations, thoughts and feelings, Silence for sounds; just Capacity for everything you experience?

Thoughts and Feelings. Can you discover any thoughts and feelings which aren't changing and don't belong to the objective world? Is anything central and unchanging except your Awareness, this sense of Being or I Am?

Movement. Standing up, point at your centre, at your 'facelessness', and turn round on the spot. Are you moving - or is the room moving through your central stillness? Whether you are walking, driving, flying, do you ever really move an inch? Isn't the countryside rushing past the car window rather than you through the countryside? What difference might awareness of this make in our busy lives?

Harding's life and work marry science and religion. Harding has always been a deeply religious and spiritual man. It is in his genes, in his family. Christianity made a profound impression on him as a boy. Yet in a sense it

has been science that has led him to God.

The evidence of the senses is his primary guiding light, not inherited belief. Modern science emerged towards the end of the Middle Ages in part as a reaction to the speculative thinking of the Schoolmen who, legend has it, once debated how many angels might dance on the end of a pin. They didn't trust their senses enough to look - scripture was their authority. It took Galileo and other scientists to challenge Church dogma by conducting experiments. If you want to know whether a large stone falls at a different rate from a small one, drop both off the Tower of Pisa at the same time and watch! This is the spirit of modern science in action - trusting your senses. Don't just speculate, experiment. Don't just think, look. In its search for knowledge science observes things, peeling away layer upon layer as it looks ever closer, piecing things together as it retreats to more distant viewpoints.

Harding joined this sense-based, scientific quest to know the world. But he did something extra to what science was doing - he included looking directly at that bit of the world that was himself, not from outside but from inside. He took his own subjective view of himself seriously. This was not lateral thinking but vertical looking. He turned the arrow of his attention round 180° from observing things and their relationships out there, at a distance, to observing himself at zero distance. He leaped from himself as object to himself as subject. Applying the method of science to himself at centre he discovered he was empty of all things, void of matter void of mind - yet this emptiness was aware, and packed full of everything. For others he was a many-layered system of appearances surrounding an inaccessible mystery, but for himself he was that mystery, that invisible root from which the universe grows. And that central mystery was not hidden. It was - it is - wide open to inspection. Scientific observation led Harding to religion's Beatific Vision, to the heart of matter which is spirit, awareness, God ...

Thus Harding discovered a very different universe from our 'commonsense' version. The latter influenced by Newton's description of reality as objects acting on other objects, has little or no room for consciousness or subjectivity. It is a centreless and largely dead cosmos with specks of consciousness here and there (actually undetectable when investigated). Harding now found himself observing the world as it really presented itself (to any observer anywhere) - arranged in onion-like layers around consciousness. Echoing Dante's pre-scientific mediaeval cosmos with its 'spheres', or the Elizabethan cosmos with its 'chain of being', the scientific cosmos that revealed itself to Harding was organised hierarchically - the further a layer was from the centre the higher its status. Looking down Harding saw his (headless) body emerging from this central consciousness. Looking out he saw people, houses, the rest of the human scene. Looking up he saw planetary, solar and galactic bodies. And though the idea of a centre implied a point, inspection revealed this central consciousness to be everywhere, flooding every level of the universe with life.

We have here a considerable contribution to the new cosmology that is emerging on this planet as we move forwards into the next millennium. This emerging cosmology is rooted in the evidence of our senses, which is also the root of science. Yet our developing vision of who we are need not throw out tradition for the sake of it. This new vision is simply our contemporary gesture towards making sense of the world, given what we know, just as our ancestors made their own sense of the universe as best they could. We hope that publishing this original version of *The Hierarchy of Heaven and Earth* helps in the birth and emergence of a fresh way of appreciating who and where we are.

References

1 D.E. Harding, The Hierarchy of Heaven & Earth, University Presses of Florida, Gainesville, 1979

- 2 C.S. Lewis, Letter to D.E. Harding, 1951
- 3 D.E. Harding, On Having No Head, Arkana, (Penguin) London, 1986
- 4 D.E. Harding, On Having No Head, Arkana, (Penguin) London, 1986
- 5 D.E. Harding, The Hierarchy of Heaven & Earth, University Presses of Florida, Gainesville, 1979

Books etc. by D.E. Harding published by The Shollond Trust.

The Hierarchy of Heaven and Earth, A new diagram of man in the universe. (Condensed version.) On Having No Head, Zen and the rediscovery of the obvious. Religions of the World, A handbook for the open-minded. The Science of the 1st Person, It's principles, practice and potential. The Little Book of Life and Death. Head Off Stress, Beyond the bottom line. The Trial of the Man Who Said he was God. The Spectre in the Lake. Look For Yourself, The science and art of self-realisation. To Be and Not To Be, That is the Answer.

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On Having No Head, Seeing one's original nature.

Lecture and workshop in Melbourne, Australia.

Interview with Douglas Harding – His Life and Philosophy.

Headless Way workshop, Sweden 1992.

CD.

Lecture and workshop in Melbourne, Australia

Related DVD.

Who Are We Really? An experimental approach. Richard Lang.

Related CD.

Discovering Your True Self, Practical experiments for seeing who you really are. Richard Lang.

See also:

Face to No-face, edited by David Lang, published by Inner Directions.

Open to the Source, edited by Richard Lang, published by Inner Directions.

The Light That I Am by Amberchele, published by Non-Duality Press.

Stepping Into Brilliant Air. (Poetry) Colin Oliver. The Shollond Trust.

High River. (Poetry) Colin Oliver.

NOTES ON PUBLISHING THE HARDBACK EDITION

Julian Watson

Encountering the manuscript

The Hierarchy of Heaven and Earth is not the first book by D.E. Harding which I encountered. As a relative late-comer to his world it was the string of titles published by Arkana to which I turned after an initial encounter with their author. Enthused by their vigorous and fluent style rooted in the experiential and the challenge of articulating it in a thought-provoking way, I moved on to articles in back issues of less-known magazines, and whatever else his efficient but makeshift organisation could put my way.

Included in this later treasure trove there was a functional looking paperback published by the University Presses of Florida, entitled *The Hierarchy of Heaven and Earth*. Peppered with some interesting looking diagrams, given a somewhat unexpected (for me) preface by C.S. Lewis, and numbering around 260 pages, I noticed that the book was first published by Faber and Faber in the year of my birth, 1952. Somehow the book had the atmosphere of those times for me; not just that preface by C.S. Lewis, whose Narnia books were part of my childhood and whose religious books were on my parents' shelves, but in its austerity and the sense of its endeavouring to articulate a worldview for times that were blinking uneasily in a sunlight that was uncertain after such a dark night. This was a book that was markedly different from the others I had read.

Little did I know, at that point, that perhaps the distinctive flavour which I thought I detected may have been more to do with its peculiar genesis as a book than some cultural perceptiveness on my part.

I certainly found it a hard read, completely different from the other books I had accumulated. In fact I put it down, pretty much defeated by its density, hoping to look at it again on a rainy day when nothing else would be making demands. (Such days are a fantasy, mostly.)

Some time later I was visiting Douglas Harding's house for a gathering of friends. I mentioned to Judy Bruce that I found *The Hierarchy* a fascinating but rather indigestible book.

She said that she agreed but had I seen the original? She walked over to a cupboard, opened it and hauled out two huge binders and transferred their weight to my lap.

Revealed was an astonishing thing. Here was a manuscript of around 650 very large pages, beautifully typed and carefully organised with a broad column of text and an accompanying narrower column for discursive notes and diagrams. It was swiftly clear that this was a vastly more expansive and rich affair, both visually and verbally, than the published paperback version. There and then I became determined that somehow this original version should be published.

There were immediate problems apart from the considerations of finance and whether anyone would be interested in the idea. The version that the author owns is actually a carbon copy (albeit with original illustrations) which is not clear enough for good quality reproduction. The top copy, I was told, was at The University of Florida at Gainesville. I could foresee difficulties if I was to work out there on the idea, and to expect that the volumes could be returned this side of the Atlantic might be a tall order of a substantial kind.

There were some dead ends and false starts but eventually thanks to the good offices of Dr. Gene Thursby, the original was sent from Florida and I was able to prepare it for publication here in Belfast.

Ideas as to what form this publication of the full text of *The Hierarchy* should take changed as we progressed into the project. Originally I thought that photocopying would cope with the task and that it might be possible to publish the book for a relatively modest sum for a presence of its size. However the large pages, the faintness of certain parts and the need for some rigorous long-term organising made me dubious of this route, particularly

after confronting some firms with the task. The proposed publication developed into a full-size off-set litho facsimile and then condensed into one volume by the simple expedient of printing on both sides of the sheet. We nearly proceeded with this but we were operating under a misunderstanding in the costing which made the idea seem nearly realistic when in fact it was prohibitive. A completely reset edition of the work was too daunting in other ways.

I was anxious that a reduction in page size might make the text too small to read, but this option really became a necessity and my fears proved to be unfounded. By reducing to 72% of the original we were able to get a big increase in pages to the sheet. The general opinion is that the text is still perfectly readable and moreover this makes a book that is actually manageable and invites reading, rather than an outsized monster production whose function would only be to provide awkward ballast for bookcases.

The architecture of the manuscript

What is the physical form of this extraordinary manuscript? Like the copy that I saw in Douglas Harding's house it came in two binders of distinctive character. The make is Twinlock and the design is called Drawlock. The hefty black boards measure 17¹/₂" x 14 ⁵/₁₆". The page size is 16¹/₂" x 14 ⁷/₁₆". The page width is slightly wider than the board width. This is necessary because of the binding mechanism. Each page has two cut outs on the left edge - these are shaped like a T on its side. A wad of pages thus has two consistent grooves into which can be slotted two substantial canvas webbing strips. These strips are attached to the top boards threaded through a long metal strip, pass through the pages, then thread through another metal strip and are attached to the back boards via a tensioning mechanism inset into the board. There are signs that the author may have added a kind of locking plate to this mechanism once the thickness of the volumes had been established. The straps of the second volume have been cut perhaps in an earlier attempt to reproduce the pages, and indeed the mechanism in this volume seems to have become seized. I was able to undo the locking mechanism in the first volume, easing the removal of the pages for reproduction.

There is a reference number in the first volume on the maker label which is 13009. The label in the second volume has been removed. In both volumes the author's name and then address have been written in by hand:

'D. Harding, 83 Christchurch St, lpswich.'

The paper is in fairly good condition but has suffered some tearing and is quite brittle round the binding grooves. In future it will probably be advisable to keep the manuscript in a good quality solander box of the sort used by museums.

The layout of the text follows a consistent format. Each sheet is typed on one side only. On all sheets, apart from the Title and Part pages, there is (going from left to right) a $2\frac{1}{4}$ " margin from the left edge to the column edge of the main text. This is $8\frac{3}{8}$ " wide to a lightly drawn pencil line. Then there is a narrow margin of $\frac{1}{4}$ " and another light pencil line followed by a column of $3\frac{1}{4}$ " width designated for notes and illustration. Finally there is a third light pencil line and a $\frac{5}{8}$ " margin.

Parts 1 and 2 (up to page 312) are bound in the first binder and the other four parts and the Appendix are bound in the second binder.

The thickness of paper added together and minus the binding boards is around 2%" thick. In sheer physical terms, even before anyone gets around to the content this is a monumental work.

Like its paperback cousin this original version is divided into six parts. There is some cross-over in chapter headings, but very soon the versions part company, maintaining only a distant family resemblance. Here each part and each chapter have extensive quotations at their commencement. The notes are entirely lacking in the paperback version and there are far, far more illustrations and diagrams in the original than the fifty three in the paperback. Even accounting for an entirely different size and format it is probably reasonable to say that the text you hold in your hands here is at least four times the length of the paperback. To take one example early on: Chapter III, 'Projection and Reflection' in the paperback is seven pages long while in the original it is thirty two pages. Brevity may often be a virtue but the care and thought that is so obvious in the original manuscript sug-

gest that condensation may have lost a great deal.

Idiosyncrasies and editorial decisions

The purpose of this edition is simple. It is to enable people to read this impressive manuscript in a form which is as close to the original as is practicable but which also invites reading. It shows great intellectual ferment, challenge, struggle, debate, creativity and emergence in its existing form, some of which would be lost in a resetting, if that had been feasible. This has, though, in spite of it being a complete reproduction, necessitated some editorial decisions.

The pencil has been used by the author extensively throughout and this does not always reproduce well. In the left margin, not even visible when the book is bound, there is frequently an array of pencilled marks probably of use to the author as he was assembling the book and needed to make cross-references and reminders. We have not reproduced these as they would be of interest only to the most pains-taking of academics studying the construction of the manuscript, rather than its content, and we needed to adjust slightly the page size to maximise the number of pages to a sheet. The inner margin we have chosen is approximately the visible margin when bound and does not include these notes nor the binding indents. The edge margins have also been altered as in the original the text sometimes comes right to the edge of the page, a brinkmanship we technically and conscientiously could not follow in reproduction.

The vertical column lines are very faint and do not reproduce clearly but this will not affect the reading of the text. However there are, throughout the main body of the text, little glyphs indicating a note in the right margin. These were frequently of borderline clarity. I decided to emphasise very carefully many of these, along with any deletions and the occasional hand written amendments that also appeared in the text. It must be emphasised that this was done very carefully and faithfully. The only instance of any alteration at all was in two cases:

A. The note glyphs were sometimes very small and these were enlarged for clarity's sake. On a number of pages there were so many of them that some were repeated thus risking unnecessary confusion. In these instances I altered their design slightly, but not their position.

B. In seven instances - on pages 12, 184, 191, 200, 307, 338 and 500 - there were extra notes inserted on leaves opposite the text, breaking the standard right-side only format. For a while we intended keeping these in their original place by printing them on translucent paper inserts, but this was going to be very expensive and maybe confusing. I have instead stencilled, in pencil, letters A through to G, in places suggested by existing arrows and the general layout onto the pages and placed these extra notes at the back of the book.

Part of the interest in reproducing this manuscript as it is, albeit a lesser one, is that the reader can see the alterations and additions made by the author as he progressed. Some are easy to see - in the pencilled deletions, for instance, or the notes added in available space and out of sequence. Others will not show up so well. Occasionally a note or a diagram has been removed by simply pasting a piece of paper over it. One or two drawings have been added in this way, maybe because they were too detailed to risk doing straight onto the carefully laid out manuscript paper. Marks, such as strong flecks in the paper and aged glue lines, which don't make sense at the reproduction level have been touched out on the plates. I have, however, frequently left the ghosts of typing corrections made by the author provided that they could be understood as such.

Page numbering

Another idiosyncrasy with which the reader will have to contend is in page numbering. According to the system this starts at the beginning of Chapter 1 after the preliminary pages. However the Part pages are not numbered and there are other surprises in store emanating from the author's later additions:

A. As is suggested in the pencilled alteration on the contents page, pages 45 to 48 are removed and the original three-part Appendix is replaced by a single inclusion on pages 43 and 44. The gap in the numbering remains but the text is whole.

B. A substantial overhaul seems to have occurred in Chapter IV from page 99 on to the end. The section titles

don't correspond with the contents page and we are given five page 102's before we continue on course.

- C. There are two page 171's.
- D. There are two page 367's and 368's.
- E. There are two page 559's.

To correct these actually quite minor discrepancies, all of which the author was fully aware of at the time, would have been a very difficult undertaking indeed.

Finally in the matter of pagination, because this reproduction uses both sides of the sheet decisions have had to be made as to when to leave a page blank at the end of a chapter. This consideration was not part of the original manuscript's design which relied on the single sided format. It seemed appropriate to the feel of the text to be fairly liberal with these spacing pages. Along with the existing inconsistencies of pagination this has further contributed to the knock-on effect of sending the odd and even numbering of the pages from left to right and back again throughout the book.

Copy pages

Sadly the illustrated title page is not original but a photostat. I have not been able to ascertain where the original is. We have been able to make a decent reproduction notwithstanding. Also page 346 seems to be a carbon copy but a reasonably clear one.

All these matters are easy to take on board and should not hinder the enjoyment of the content and the perusal of what we hope will be a very distinctive and beautiful book. The manuscript is completed with care and thought in its content, organisation and aesthetics. Its clarity and individuality are good reasons to reproduce it as it is.

INTRODUCTION TO THE DIGITAL EDITION

Mary Blight

I first came across the Headless way when Richard Lang was hosted here in Perth, Western Australia by Peter and Pearl Sumner. Richard ran a workshop of headless experiments in the Sumners' home, Gurukula in 2006. The experiments were a revelation to me and my husband Sam. After years of searching, here was the answer to my question Who am I. Simple, pure, unadorned and, over the next few years, totally transforming.

I first saw the Hierarchy of Heaven and Earth in the large edition when it was presented to my husband, Sam Blight, just before Douglas Harding died. Sam had revamped and greatly expanded the headless.org site in collaboration with Richard Lang, and in thanks, Sam was presented with the Hierarchy, signed by Douglas Harding. Sadly, we never got to meet Douglas, as we went to the UK for the annual Headless gathering at Salisbury about five months after his death.

Life requires us to work, eat, sleep and also, luckily for me, allows me time to contribute to the headless way and its growing community of people. In 2008, the idea of republishing the Hierarchy was discussed by Sam, Richard and I. The last few copies of the original print run were left, and they were selling steadily.

Soon the book would be out of print, and what was to be done? A digital edition of the book was considered and I volunteered my help to coordinate volunteers to help get this done.

In late 2008 the work started. Richard Lang organised for the entire book, all 690 plus pages to be scanned. I then set about putting each page through an OCR program, producing a copy of each page that was OK, but had a lot of mistakes in it. Richard then called for volunteers via his email groups and my inbox was soon flooded with offers to help. Each volunteer received one or two pages to correct, with the PDF of the page as a guide. Some people could not get enough, with one volunteer emailing back a page each day with the words 'more more!' in the email. It was fun dealing with everyone and seeing the enthusiasm out there to help get this major philosophical and indeed spiritual work ready for the digital world.

Once all of the pages were back from the volunteers, I once again went to work, this time putting the pages together into chapters. The images had already been copied and saved as *tifs*, but were not yet inserted back into the chapters. I called for more volunteers and a hardy group of individuals then checked a whole chapter each, and then double checked a second chapter if they were up to it. Some people dropped out, due to financial, work or health issues. Some came back after various life issues had come and gone. Others stayed on, just as enthusastic and available as ever. Somehow, the right number of volunteers was always there to help with the next step.

Once the words of each chapter were thoroughly checked, I went to work again, putting each chapter into InDesign, applying the formatting and inserting the pictures back in. Then it was time for the volunteers to do one more edit, just to check the overall layout and find any other small errors that still remained.

Overall this work took over two years, from late 2008 to July 2011, and I have thoroughly enjoyed the entire project and the privilege of getting to know so many wonderful, selfless people.

At the end of this introduction, I will list all of the volunteers who helped with this wonderful project.

A couple of notes on changes to the Hierarchy from the printed version

The intention of this digital edition was to reproduce the Hierarchy exactly as it appeared in the printed edition of 300 copies that was edited by Julian Watson. To a large extent, this has been done with the following exceptions:

1. Section 3 contained the extra notes that in the original typed version were added throughout the book

as fold out pages. The digital edition has included those notes throughout the book where they were originally intended to be:

Section A was put back into Chapter 1

B into Chapter 8

C and D into Chapter 9

E into Chapter 12

2. Page numbering in the printed edition of the book was a problem, as detailed in the introduction by Julian Watson. In the digital edition, the pages were numbered manually until the book was finalised, then the book was set to automatic numbering and all the pages numbered in order. Then the Contents for the book were generated digitally by the InDesign program. Therefore page numbering throughout the digital edition and the Contents do not match exactly with the printed edition edited by Julian Watson.

3. Page 585 in the printed Hierarchy did not have symbols matching the text with the side notes. These were inserted in the digital edition after some educated guessing by a volunteer and myself.

Finally, there may still be some small errors in the digital edition. We have checked each chapter several times, but it is easy to miss something in an edition like this. For any errors that remain, please accept our apologies.

And now for the list of the volunteers who helped with this great work. I thank them all and honour them for their efforts. Without their help this project to produce a digital edition of the Hierarchy would not have been possible.

The OCR corrections volunteers were:

Adam Pearson, Alan Mann, Alfredo Passeri, Andrea Vachon, Andy Murphy, Angelina Beena, Anne Melnick, Bev Feldt, Beverly Dillon, Brandon Ferris, Brian Mayne, Byron Varvarigos, Cameron Watson, Candace Walkup, Carles Aviva, Carlo Manfredini, Charles DeVries, Christine Henderson, Damien Thomas, Danielle Bol De Greve, David Lavis, David MacDougall, Deborah Saring, Deevz Porlares, Dianne Scott, Domingo Mosquera, Dominique Anglesio, Dorin, Douglas Macrae, Dr Martin Treacy, Eric Lilius, Francesca de Picciotto, Ganesan Hariharan, Gary Harmon, Georg Schmalzhofer, George Fine, George Mercadante, Gerald Deslandes, Goran Holm, Hanle Pieterse, Howard Lotker, Ian Niles, Ian Nuberg, Ivo Thyssen, Jack Dempsey, James Elkin, Janice Hamer, Jeff Harding, Jeff Kleinbard, Jeffrey Barrett, Jeremy Becker, Jeremy Clancy, Joe Blazenski, John Daly, John Ramsey, John Revington, Judy Bruce, Karen Astill, Kathy Berndt, Ken Hutley, Kerrie Riordan, Kimberly Harvey, Laudis Rodriguez, Lauren Walker, Leigh Lennox, Lili Pana, Linda Hubbard, Linda Leary, Lloyd Board, Manuel Asali, Mark Butt, Mary Back, Mary Whinder, Matt Cardin, Matt Gammett, Michael Johnson, Mikaela Myers, Mitesh Dhabi, Norman Kjellerup, Olga Sheppard, Patrick Garneau, Paul Bowman, Peter Daw, Peter Jackson, Peter Wright, Richard Vanner, Robyn Glover, Rohan Nicholls, Santharaj Kuppuswamy, Sharon Lloyd, Shawn Stemen, Shreekanth, Sperry Andrews, Stephen Voss, Stephen Wallington, Steve Dorland, Steve Holloway, Steve Schlesselman, Steve White, Stuart Dole, Sujora Conrad, Toby Philpott, Tom Anderson , Tony Ford, William Meek, Zoe McCann.

The First Edit volunteers were:

Alan Mann, Andrea Vachon, Beverly Dillon, Brandon Ferris, Byron Varvarigos, Christine Henderson, David Lavis, David MacDougall, Deborah Saring, Dianne Scott, Dominique Anglesio, Francesca de Picciotto, George Mercadante, John Ramsey, Lauren Walker, Linda Hubbard, Manuel Asali, Mark Butt, Mary Back, Mary Blight, Mary Whinder, Mitesh Dhabi, Olga Sheppard, Patrick Garneau, Peter Wright, Stephen Wallington, Steve Holloway, Steve Schlesselman, Stuart Dole.

The Second Edit volunteers were:

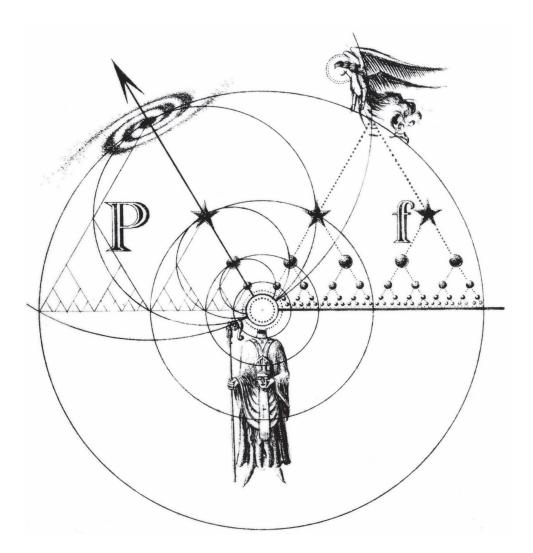
Alan Mann, Andrea Vachon, Beverly Dillon, Brandon Ferris, Christine Henderson, Francesca de Picciotto, George Mercadante, Goran Holm, Jack Dempsey, John Ramsey, Kerrie Riordan, Lauren Walker, Manuel Asali, Mark Butt, Mary Whinder, Olga Sheppard, Patrick Garneau, Peter Wright, Stephen Wallington, Steve Holloway, Stuart Dole.

The InDesign Final Edit volunteers were:

Alan Mann, Christine Henderson, Francesa di Picciotto, George Mercadante, Judy Bruce, Mark Butt, Mary Blight, Patrick Garneau , Peter Wright, Stephen Wallington, Steve Holloway.

THE HIERARCHY OF HEAVEN AND EARTH

A NEW DIAGRAM OF MAN IN THE UNIVERSE



D. E. HARDING

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PREFACE

This book was begun several years ago. It arose out of a public crisis and a private need --- a need to take stock while there was still time, a need to find out just how much and how little I really knew about myself and the universe in which I had somehow occurred. It seemed a pity to die before I had had time to be surprised at being alive, or actively curious as to what man amounted to --- if, indeed, he amounted to anything. Though the present book has grown far beyond my first attempts to meet such a situation, still it remains an effort to answer the question: what am I? "Whatever the human mystery may be I am it." +

What is man? This is the riddle which everyone, while accepting all the outside help he can get and use, must solve after his own fashion. My solution (if it can be called that) will not in its entirety do for anybody else, and it is offered here more as an incentive than as a guide. In any case I have no complete, self-consistent, well-rounded system, but only the sketch-plan of a philosophy. The nature of man is a baffling and inexhaustible topic, about which I do not wish to dogmatize. While I can say with Thoreau, "I should not talk so much about myself if there were anybody else whom I knew as well", \times I have to admit that I am increasingly a stranger to myself. Of the two kinds of men -- those who refuse to take the advice know thyself, and those who imagine they have done so -- the second is perhaps the less wise. Knowledge that is not counterbalanced with knowledge of ignorance is mere dead weight.

This is a philosophical book, but to prevent misunderstanding I must explain at once that the term philosophy as I use it bears a meaning which is not always accepted nowadays. Firstly, I avoid as far as possible the metaphysics which, remote from the concrete details of nature, loses itself in a fog of words. Philosophy has been defined as the sum of scientific knowledge, or an attempt to unify the sciences. + My intention is not so ambitious but I do wish to suggest lines along which the chief results of the separate sciences may one day coalesce into a Science. Secondly, this book is a practical enterprise. Many philosophers, and amongst them the greatest, have held that philosophy is much more than thinking about the important things: it demands and includes appropriate ways of behaving. I shall have a good deal to say on this subject. Thirdly, this book is speculative --- I hope boldly so. Though in the main I agree with Samuel Alexander that "true or concrete thought is tied down to nature"," I dare not claim that all my balloons are captive ones. Some of them sail off into the blue. But is not the view from above, the widest possible perspective, just what we require if we are to find ourselves in the universe? At present we do not know where we are, though it is clear that we are not at home. † Philosophy has failed us. There is a trenchant passage in Kierkegaard's Journals where he says that "In relation to their systems most systematizers are like a man who builds an enormous castle and lives in a shack close by." Our real need is neither castle nor shack, but a home in the universe --- something between a hovel and an equally uninhabitable front parlour, something

+ Christopher Fry, <u>Venus Observed</u>, III. And earlier in the same play: "what in the world is a man? Speaking for myself, I am precisely that question: I exist to know that I exist Interrogatively."

× <u>Walden</u>, 'Economy'.

"The old description of the philosopher as one who tries 'to see life steadily and see it whole' may not be in accord with the fashion of the day. But it has the perhaps higher merit of being in accord with etymology, with common verbal usage, and with a tradition of 2,500 years." Professor C. A. Campbell, <u>Philosophy</u>, April, 1950.

+ E.g. by Paulsen, <u>Introduction to Philoso-</u> <u>phy</u>, pp. 33 ff

Philosophy is apt to go on, William James remarked, as if the actual peculiarities of the world were irrelevant. "But they cannot be irrelevant; and the philosophy of the future must imitate the sciences in taking them more and more elaborately into account." <u>A Pluralistic Universe</u>, p. 331.

° Space, Time and Deity, i. p. 204.

Cf. A. J. Ayer, <u>Language</u>, <u>Truth and Logic</u>, p. 152: "If science may be said to be blind without philosophy, it is true also that philosophy is virtually empty without science."

† "The inhabitants do not bother about the universe, having more important affairs to look after. They know of course their place on the map ... but in the universe they are completely. lost." L.P.Jacks, <u>The Legends of</u> <u>Smokeover</u>, p. 14. that is neither the sceptic's cosmic slum nor the tidy (but insubstantial and draughty) constructions, of the arm-chair metaphysician. I believe we are desperate for lack of a world-picture in which our own lives fill a perceptible corner --- a picture with enough richness of colour and generous detail to fire the imagination, with that conformity to science which any robust intellect demands, and with that clear portrayal of cosmic unity and purpose which alone will satisfy the heart. This book is the rough cartoon of such a picture.

Next as to the presentation. I know of no reason why serious books on philosophical subjects should not be as easy to read as the theme allows. + Accordingly I have tried to write in terms that the educated nonspecialist will follow, and I have helped out the text with many diagrams, using these in what I believe amounts to a new way. Actually, no doubt, the book's intelligibility will depend more upon the reader's sympathies and antipathies than upon any other factor. Whether he is or is not a visualizer will also make a difference. To some, the graphic method is more hindrance than help --- for the sake of such readers the text has been written so that (with a few insignificant exceptions) it can be read without reference to the diagrams; to others the diagrams may perhaps prove as helpful in the reading of the book as they were to me in the writing of it; to a few they will possibly suggest a new field of research. There is an appendix on the subject.

The reason for the dialogues -- between my unreflecting or commonsense self ('C') and my philosophical self ('P') -- which are scattered throughout these pages, is that thinking naturally falls into such a shape. Thought as Plato observed is a dialogue of the soul with herself. \times And in the course of this inward talk, C, though often worsted by P, is never worsted for good, but recovers again and again to play an indispensable part. Let me say here, once and for all, that no man, and least of all a philosopher, can afford to disown this hopelessly unphilosophical side of himself.

A hint about reading the book: I must warn readers against dipping in here and there. Sampling can only mislead, because the plan of the work is roughly dialectical. The findings of earlier chapters are modified later on, and later chapters need the backing of earlier ones if they are to be understood. The whole must be read. ° There will be many things to bring my readers to a standstill, but, like Spinoza, "I pray them to proceed gently with me and form no judgement concerning things until they have read all." *

Even so, there is a highly cultivated type of mind to whom much of what I have to say will remain meaningless. I know the value of the mentality that has no use for speculation, for it is to the intellectual ascetic, with his patient attention to detail, and his refusal to go more than an inch at a time beyond the evidence, that I owe many of the data on which are based the constructions which he condemns as, at best, premature. All I can suggest to him is that our attitudes are complementary, Θ and that there is as deep and as practical a need for large-scale structures of thought as for their building materials. Let him allow me my function It is not so much what we say explicitly about the universe, as what we take for granted, that is significant. For instance Sir Arthur Keith, drawing the (very necessary) distinction between the behaviour of nations and the behaviour of the individuals that compose them, says that whereas the latter is governed by the "ethical" code the former is governed by the "cosmical" code --- that is, by the code of ruthless force and subhuman egoism. Essays on Human Evolution, XXIV, XXV. Note the assumption as to the nature of the cosmos. (I should add that the antithesis between the 'cosmical' and the 'ethical' is taken from T. H. Huxley.)

+ A new standard in simple, but far from shallow, philosophical writing was set by John Macmurray's <u>Freedom in the Modern</u> <u>World</u>. Professor Macmurray found, to his astonishment, that his effort to avoid the specialized terminology of philosophers was philosophically rewarding, since it obliged him to think out much that he had taken for granted. He was "forced, not into superficiality, but into a deeper realization of his own meaning". In some measure this has been my own experience, though I cannot claim to approach Macmurray's lucidity.

× What Yeats (<u>Essays</u> p. 492) says of poetry -- that we make it out of the quarrel with ourselves --- is assuredly true of philosophy. "For man", says Pascal "holds an inward talk with his self alone, which it behoves him to regulate well" (<u>Pensées</u>, 535.) R. G. Collingwood insisted that the true 'unit of thought' is not a proposition, but a question with its answer. The Socrates within us is all-important. See Collingwood's <u>Autobiography</u>, V.

Louis MacNeice, tells us "...that a monologue Is the death of language and that a single lion Is less himself, or alive, than a dog and another dog."

° The general or lay reader, however, is advised to omit the appendices to chapters on his first reading. These appendices are not specially technical or difficult, but they are concerned with matters of detail.

* <u>Ethics</u>, II. xi.

Θ I do not say, with Schweitzer, that "The object of all philosophy is to make us, as thinking beings, understand how we are to place ourselves in an intelligent and inward relation to the universe" (Goethe, p. 3); but that this is at least half the object of philosophy, and that it involves an investigation into the nature of the universe and man's place in it

as I allow his. It is little use pointing out that I have failed in it. I know that already. Constructive proposals are wanted. As the Chinese sage remarks, "The man who criticizes others must have something as an alternative. To criticize without an alternative is like using fire to put out a fire." +

There is another type of reader to whom much of what I have to say will be all too acceptable. I refer to the lazy-minded and intellectually undisciplined enthusiast, to the cult-monger who, unprepared for the long grind of working his way through stubborn facts towards the goal of his desire, tries to leap there at a single bound. But in fact quickadvance leads nowhere, and nothing worth while is achieved without industry, patience, and humility. Let there be speculation about man and the universe (without it man is not himself) but let it be informed speculation, not idle. The warning of Heraclitus that "men that love wisdom must be acquainted with very many things indeed" × is more to the point now than ever it was. Dr. F. Sherwood Taylor underestimates neither the size nor the urgency of the task when he writes: "the only hope for the world is the incorporation of the religious, philosophical, and scientific outlooks in a single comprehensive view, and I would say emphatically that this incorporation has not been accomplished and that its accomplishment is the most immediate and urgent of tasks for those who wish men well." ° We are due for a synthesis. The scientific jungle needs the taming hand of the thinker and the saint; on the other hand, philosophy can find in the luxuriant growth of modern science just the food she should have for further growth, while religion can find in it a much-needed purgative and tonic. Dr. Inge has told us that the task of the century is to spiritualize science; * it is also, I would add, to intellectualize religion. In both tasks philosophy has a great opportunity and a great responsibility. The following pages are an attempt to discharge my own share of this responsibility. +

Finally, let me emphasize the fact that I carry no stock of patent medicines or labour-saving devices. I can offer no easy way out or in, no short cut to bliss, no philosophy without tears, no brand-new gospel. All I can promise are some ancient teachings in modern dress -- teachings that are difficult only because they are simple, and must be lived to be understood -- together with some old recipes for hope and confidence. The merely new-fangled is as useless as the merely traditional. We must go forward to new ideas <u>and</u> back to old ones; we must get down to the facts of science <u>and</u> wake up to those of religion. Genuine progress is not one-way advance from the present into the future, but the symmetrical expansion of the present pastwards and futurewards, so that time is in some sense transcended. D. H. Lawrence is surely right when he says: "Every profound new movement makes a great swing also backwards to some older, half-forgotten way of consciousness." ϕ

+ <u>Mo Tzu Book</u>, XVI.

× Burnet, Early Greek Philosophy, p.137.

° "The Scientific World-Outlook" in <u>Phi-</u> <u>losophy</u>, Nov. 1947, p. 207.

* Christian Mysticism (1899) p. 322

+ "For philosophy has now to give us back, by an act of transcendental imagination, the shape and design of the external world --- the world of which, through an era of analysis, she has progressively robbed and impoverished our souls; and this task demands a combination of realism and religious feeling "Arland Ussher, The Listener, Sept.11th, 1947. Cf. Mgr Ronald Knox: "Our age is in need of a great philosopher; one who can thread his way, step by step, through the intricate labyrinth of reasoning in which scientists have been led; one who can keep his mind, at the same time, open to the metaphysical implications of all he learns, and at last put the whole corpus of our knowledge together in one grand synthesis. He must be able to gaze through the telescope, to peer through the microscope, with a mind unaverted from that great Source of all being who is our Beginning and our last End." God and the Atom, p. 98.

φ <u>Apocalypse</u>, p. 56.

<u>A NOTE ON THE RELATION OF THIS INQUIRY TO METAPHYSICS,</u> <u>SCIENCE, AND LOGICAL POSITIVISM</u>. *

What is the task of the modern philosopher? Logical positivists °, dismissing one of his traditional functions as the excogitation of metaphysical nonsense, and another as unwarranted encroachment upon the realm of science, leave him with only a tiny fraction of his work. Professor Ayer writes: "The propositions of philosophy are not factual, but linguistic in character --- that is, they do not describe the behaviour of physical, or even mental, objects; they express definitions, or the formal consequences of definitions. Accordingly we may say that philosophy is a department of logic." + And the view that philosophy is a kind of speculative knowledge existing alongside the special sciences is quite mistaken. "Those who make this supposition cherish the belief that there are some things in the world which are possible objects of speculative knowledge, and yet lie beyond the scope of empirical science. But this belief is a delusion. There is no field of experience which cannot, in principle, be brought under some form of scientific law, and no type of speculative knowledge about the world which it is, in principle, beyond the power of science to give." \times

Now I do not dispute the usefulness of much of the logical positivists' criticism of metaphysical thought-structures, or of their efforts at demolition and the removal of rubbish. † Nor, indeed, can Mr. Ayer be denied the right to define philosophy as a department of logic. Nevertheless this definition seems to me to depart from usage unnecessarily. Moreover it leaves anonymous that small but not superfluous class of persons who are neither scientists, nor metaphysicians, nor logicians, but who desire to take as their subject matter the chief findings of the special sciences, and, cutting across all departmental barriers, to find the larger pattern. Logical positivists would reply (I suppose) that, in so far as this task of integration is neither a matter of metaphysics (i.e. of a peculiar kind of nonsense) nor a matter of logical analysis (i.e. of philosophy proper), it is the task of science, in which the philosopher has no business to meddle. Ideally, perhaps, this is so: T. H. Huxley defined science as "all knowledge that rests upon evidence and reasoning", and Dr Alex Hill goes so far as to say that "all intelligent knowledge is science". But I think it is clear, first, that science shows few signs of undertaking this work of self-integration; second, that the individual scientist, by reason of his inevitable and necessary specialization, is scarcely the man for the job; third, that the method of the work cannot yet (if ever) be exact or 'scientific, but must be rambling, speculative, and provisional; fourth, that the project is worth while all the same, and even important. Therefore I say that, until such time as science can take over (supposing that time should come), there exists a need for a more or less non-metaphysical philosophy whose propositions are factual rather than linguistic. Lacking such a philosophy, we are overwhelmed with huge masses of unco-ordinated information about ourselves and the universe. To many people this state of affairs is intellectually and aesthetically intolerable.

It may be said in reply, of course, that actually there is no work for the

* I suggest that the general reader should omit this Note, on the first reading.

^o See, e.g., Ludwig Wittgenstein, <u>Tractatus</u> <u>Logico- Philosophicus</u> ("The object of philosophy is the logical clarification of thoughts") Bertrand Russell, <u>Our Knowledge of the External World</u>, II; A. J.Ayer, <u>Language</u>, <u>Truth and Logic</u>. The more recent periodical literature is enormous.

+ <u>Op.cit</u>, p. 57

 \times A. J. Ayer, op. cit., p. 48.

† While I keep as close as I can to empirical data in this book, I cannot altogether eschew 'metaphysical' questions. For I believe (1) that all serious discussion makes assumptions about ultimate matters, which assumptions are best admitted; (2) that though the most comprehensive and least comprehensive aspects of the universe are mysterious, the familiar intermediate aspects do provide curves which may be extrapolated at both ends to yield reasonable hypotheses; (3) that such hypotheses are capable of empirical verification when the poet and the worshipper come to the aid of the thinker, and particularly when all three are united in the mystic. It is mere dogmatism to say that the analytical intellect is the only truth-getting instrument, and that nobody can learn to use other instruments.

C. D. Broad (<u>Philosophy</u>, Oct. 1949, pp. 292-3) points out that, "if we can judge of what philosophy <u>is</u> by what great philosophers have <u>done</u>" then it involves Synopsis -- "the deliberate viewing together of aspects of human experience which, for one reason or another, are generally kept apart by the plain man and even by the professional scientist or scholar."

kind of philosophy I propose, or that the work, though desirable, is too difficult to succeed. To these objections the present book is my answer. While I cannot expect any reader to agree with all that I say, in detail, I do claim to show (1) that important new propositions about the universe (propositions which are neither nonsense on the one hand, nor tautological on the other; which are not confined to any particular science but nevertheless have an empirical basis) are forthcoming; (2) that some of these propositions are capable of suggesting new and fruitful lines of research in the special sciences; (3) that such cross-fertilization of the existing sciences is capable of leading to the birth of a new science or sciences. Let me give one example. In the following pages I show that there exist, besides the physical and chemical and biological units which are our scientific stock-in-trade, several kinds of objects which are concrete, material things × offering an abundance of empirical evidence as to their nature. The scientist ignores them, for their temporal dimensions place them beyond the borders of his field of view: the 'specious present' he takes to them is too brief to contain them. ° In other words, they are nonexistent for him because he does not give them time to exist: he destroys their essential character by dividing their time. Here, then, is work for the philosopher --- to discern and to study the numerous orders of physical (or rather psycho-physical) units whose only disqualification is that their 'minimum time' (the-time they need to be themselves) is somewhat greater than science is as yet prepared to recognize. In this case at least, the present limitations of science and common sense demand that philosophy shall do precisely what Professor Ayer declares it cannot do, namely, "afford knowledge of a reality transcending the world of science and common sense." * It is to be hoped, indeed, that science will eventually take over the study that philosophy thus initiates. Meantime, the philosopher must do the best he can. And, after all, this function -- of bringing to birth and rearing the infant sciences -- is none other than that which positivists generally accord to philosophy. The only mistake of Comte and his followers in this respect is to suppose that philosophy is now old and past bearing, and that the family of grown-up sciences can have little further use for their mother. I try to show that, on the contrary, she is still the head of the family (without whom the children are either strangers or at loggerheads) and still capable of adding to their number.

I suggest that there is not <u>one</u> remedy for the well-advertized infertility of philosophy, but two; and that though they seem utterly opposed they are really complementary. The first is the positivist's, who demands that the philosopher should <u>narrow</u> his field to certain very limited (but answerable) problems lying on the borderland of science. The second is the one advocated in this book, namely that the philosopher should <u>broaden</u> his field till it includes the whole territory of science and art and religion. + Both remedies reduce the pretensions of philosophy --- the first by the method of abstraction and exclusion, and the second by the method of concreteness and inclusion. The first is the philosopher's Selfdenying Ordinance, the second his act of generous acceptance and outgoing: and each needs the other. It is the present business of philosophy to find out what she, can hope to do in her own very restricted depart× I accept the positivist dictum "that material things are reducible to sense contents" (in so far as they are material things). See Ayer, <u>Op. cit</u>. p. 69.

° My point here is not that science and common sense take no account of long periods of time -- obviously they do recognize them -- but that, beyond a certain rather arbitrary limit, they ignore the internal unity and continuity of such periods, their Bergsonian 'duration'. We allow light waves, atoms, molecules, and even men, that minimum of undivided time each needs to weave its characteristic pattern : but inconsistently we stop there. And so large aspects of the universe escape us.

* <u>Op. cit</u>., p. 33.

In Logische Aufbau der Welt, Carnap argued that talk on any subject is reducible to talk about our sense experiences; but he realized later that there is no sense in regarding talk in terms of sense experience as somehow primary, and that it is not always necessary to translate statements about physical objects into statements about sense contents only. Wittgenstein also departs, in his later teaching, from the uncompromising position he took up in the Tractatus. Nevertheless it remains a fundamental positivist criterion that, in the last resort, a factually significant statement must mean some difference in the content of actual experience.

+ The distinction I make here roughly corresponds to William James' celebrated distinction between the 'thin' philosophies which are mainly verbal and critical and devoid of empirical content, and the 'thick' philosophies which are the opposite of all this. (<u>A Pluralistic Universe</u>, pp. 136 ff) The former lack body, while the latter are apt to lack rigour. Ideally, the two types are united. Alexander's <u>Space, Time and Deity</u> is a modern instance which comes within measurable distance of such an ideal. ment, and what she can hope to do as the general liaison officer between all the great departments of human endeavour.

The second of these tasks is beset by a pair of formidable difficulties -of language, and of human capacity. (1) My aim is always to cut across, to imitate the processes of a universe which is no respecter of departmental boundaries, to bring together regions of human experience that have become increasingly isolated. ° But each region, just because of its isolation and its own internal needs, has developed a language and thought-habits of its own: its intellectual fauna, so to say, are Australasian. The consequence is that, in our age, a symposium consisting of, say, a physicist, an artist, a philosopher, a psychologist, and a theologian (to include no others), could only begin to make sense if all agreed to speak in the lay lingua franca of everyday life, and thus to abandon innumerable professional subtleties. Indeed we are so departmentalized that even two of the same profession -- two psychologists or two philosophers -- if they should happen to belong to different schools, are likely to find each other almost unintelligible. (2) And it is not only this appalling confusion of tongues which makes the labour of integration so difficult --- as well as so desirable. A further impediment is the vast discrepancy between the work and the workman: obviously the volume of modern knowledge is so great that its unification has to be a long-term co-operative enterprise, to which no individual can make more than a modest contribution.

Is the attempt, then, hopeless? We cannot know the answer in advance, a priori, without ourselves trying to find it. To say the very least, the experiment in cosmology must go on. But its limiting conditions -particularly the linguistic -- must never be forgotten. The inter-departmental lingua franca, which I have adopted for this inquiry, has all the defects of imprecision that are inevitable in such a medium. But plainly the unifying purpose of this book demands a certain verbal neutrality: it cannot be written in the language of any one particular department or level, and certainly not in the highly specialized language used by logical positivists. For the topic determines the medium of its discussion, and only very abstract or very circumscribed themes can be treated with logical strictness. * Not surprisingly, the concrete and many-levelled universe -- sublimely mad, as it often seems -- declines to be coaxed into any of our standard linguistic strait jackets; but that is scarcely sufficient reason for pretending that it does not exist, or that if it exists it is not a seemly topic for discussion, or that its study -- cosmology, that word of current philosophic abuse -- is a solecism, analogous to astrology, perhaps, or to the shadier and grubbier varieties of occultism. What this book is about, the hierarchy, is no figment, and it lends itself to empirical study -- on its own terms. Refusal to accept these terms is not a comment upon the thing or its study, but upon human ineptitude; and it is no more scientific than a denial that man exists qua man, on the grounds that he is not retained on the mesh through which physical science passes him.

Accordingly my aim is to bring together, whenever possible, the most diverse testimonies --- of poets and mystics and even of primitive man, no less than of philosophers and scientists. But it is essential to remember that these juxtapositions do not imply that a work of imagination,

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° The perilous and absurd situation, to which over-specialization has led us, is surveyed with admirable clarity in Dr. Joad's <u>Decadence</u> (see particularly pp. 375-6) More than ever before, we need a philosophy which performs its traditional task, and presents "a plan of the cosmos as a whole to the construction of which the moral intuitions of the plain man, the insight of the artist, the verdict of the historian and the testimony of the saint, no less than the results achieved by the special sciences, have contributed. Our outstanding need at the moment is for a clearing house of knowledge..."

Whitehead's observation that exactness, in the discussion of concrete objects, is a fake, was not less true for being a measure of self-defence. As another brilliant Gifford lecturer says: "No doubt you will detect errors, even contradictions, in my reasoning. I comfort myself by remembering that no thinker of my acquaintance, however eminent, is free of them. Not the mathematically-minded Plato or Spinoza, not Descartes, nor Kant nor Leibniz. Their works, one and all, sparkle with contradictions of the most flagrant, delightful and encouraging variety." (W. Macneile Dixon, The Human Situation, p.16.) And that, of course, is just the point which logical positivists and their friends are always making, in their criticism of the large-scale systems of the past. Logical confusion in all its shocking variety is doubtless the occupational disease of the system-maker; though I doubt whether the system-breaker does not catch it. But (to leave that question aside) does the positivist seriously suppose that all the philosophical labours of the past which do not conform to his logical standards have no more than cautionary value, and that now and henceforth no large-scale systems will be attempted, or (if they are attempted) are worth consideration; that the grand tradition, of which Ward and Alexander and Whitehead are recent exemplars, is dead and buried and never likely to rise from the grave; and that future humanity will be all the richer, and not miserably poorer, on that account? Is not the only sane, the only reasonable, the only generous course to allow the two types of philosophical endeavour -- the analytical and the synthetic -- to flourish side by side, and to see what comes of it?

* "Exactness must not be looked for in all discussions alike, any more than in all works of handicraft.....The educated man will seek exactness so far in each subject as the nature of the thing admits." Aristotle, <u>Nicomachean Ethics</u>, 1094. And, as Goethe remarked, we know accurately only when we know little. and a work of piety, and a work of science, enjoy the same status, or that the methods and results of any one of these three has any unmediated relevance to the others. + Each is, in one sense, self-contained. And it is precisely on this account --- precisely because the honest scientist does not allow his aesthetic and religious preferences to sway his professional judgement, because the true artist is not primarily out to instruct or improve us, because the genuine mystic and the saint are not, as such, concerned to further our science and art --- that the delivery of each is, in the end, so relevant to the others. As in the departments of science, so here: temporary separation makes the eventual reunion ten times more fruitful. * To the degree that science and art and religion suffer no mutual dilution, to that degree is their evidence, when at last it converges (and this, as I shall show, is very often) trebly powerful. There has been a minimum of collusion.

In any case, whether explicitly or unexplicitly, the synthesis has to be made. ° In so far as a man is a <u>mere</u> scientist, or artist, or saint, he is a monster; in so far as the scientist, and artist, and saint, hold aloof from one another in him, he is not one person but three, an unholy and unhealthy trinity; in so far as they are hopelessly mixed up, he creates nothing; in so far as they are distinct but united, poles which can neither merge nor part, he approaches creative completeness. I take the question not to be whether the synthesis which I seek in this book, is possible, but rather how far our daily and hourly versions of it shall remain imperfectly conscious, and haphazard.

At least it is worth while considering whether the mutual separation of the intellectual and aesthetic and religious sides of our life has not now reached a stage where each is thereby seriously distorted, and whether, in particular, our thinking does not become increasingly unrealistic and trivial as it engages less and less of the total personality of the thinker. I beg leave to doubt whether he thinks well who only thinks, whether the philosopher can transcend the man, whether it would not be useful to ask once more that our teachers should be all-round or balanced men, whether there are not, perhaps, important aspects of the universe which are misapprehended to the degree that they are apprehended by the mere specialist. In any case, if we wish to call a halt in our intellectual journey, on the grounds that the path of reason by which we have come does not lead onwards by itself, but is joined by others of a different class, we would do well to tolerate the few who want to go on -- just in case there is anything worth finding. It is not impossible that, after all, there should be something in the 13th century Augustinians' conviction that "there is no field that belongs to reason alone", and that the unity which reason seeks transcends reason. × Besides, there is the practical question. D.H. Lawrence ϕ wrote: "If we do not rapidly open all the doors of consciousness and freshen the putrid little space in which we are cribbed the sky-blue walls of our unventilated heaven will be bright red with blood." Whether this is true or not, it would be unwise to defer the consideration of such matters till every logical nicety has been cleared --- up, that is to say, till doomsday. If philosophers refuse to contemplate the universe, it is liable to force itself upon their attention in ways that

+ Dr. Joseph Needham, in <u>Materialism and</u> <u>Religion</u>, has much to say that is relevant here, on the creative autonomy of the religious and artistic and scientific modes of experience. "The spiritual tension developed by their antagonism within the individual soul is the most fructifying thing in the modern world.... In the business of living they must be taken together; not fused, for that is impossible; but incorporated into a harmonious human character. This strain, this tension, is the matrix out of which the character is born." (p. 20).

* The possible objection that I ought, in that case, to write at least four books -- one on science, a second on religion, a third on poetry, and a fourth to combine their conclusions -- scarcely needs an answer, unless it is to say that the first three have been written again and again, and this book is a contribution to the fourth.

° Goethe is, of course, an outstanding example of successful synthesis. As L. A. Willoughby well says of him, Goethe had "a sure conviction that all phenomena, animate and inanimate, spiritual and material, are intimately related and governed by the same general laws. Thus what he discovered about the universe by observation and reasoning confirmed what he had intuitively felt to be true, and he consequently experienced none of that confusion and conflict which must inevitably arise when our scientific view of the world, is at odds with our subjective ideas about it. That is why his scientific writings and his poetry consistently endorse and complete each other instead of being at loggerheads. The poet and the scientist in him were never kept in watertight compartments; they ran fluid one into the other." (The Listener, Sept. 1, 1949.) Can the powerful diversity-inunity of Goethe himself be separated from this world-view of his, or our often pathologically divided personalities from our refusal to attempt anything of the kind?

We cannot know in advance, but only by the method of trial and error, how much there is in the words of Lactantius: "When philosophy and the worship of the gods are so widely separated, that the professors of wisdom cannot bring us near to the gods, and the priests of religion cannot give us wisdom; it is manifest that the one is not true wisdom, and the other is not true religion. Therefore neither is philosophy able to conceive the truth, nor is religion able to justify itself." Institt. IV. 3.

× Etienne Gilson, <u>The Philosophy of St.</u> <u>Bonaventure</u>, pp. 114-6.

φ'Nemesis', Pansies, p. 106.

are unpleasant. If the captain of the fire brigade goes on demanding an accurate survey of the nature and extent of the conflagration before he will budge, then he is liable before long to find the fire station itself in flames.

Among those who use the technique of logical positivism, writes Dr Joad, "philosophy has become a closed preserve, closed, that is to say, to all but initiates. As practised within this preserve, philosophical thinking is no longer an instrument by means of which men can liberate themselves from bondage to nature, from servitude to abstractions, from the tyranny of circumstance or the injustice of man; it is not even a torch to light up the dark places of the universe and so to reveal man's place and function within it. It shrinks into a technique for ensuring that, whenever philosophers try to use it for its traditional purposes, they will be trapped in the meshes of a net of verbal contradictions and so reduced to philosophical helplessness." Decadence, p. 20.

PART I

To understand everything except one's own self is very comical.

Kierkegaard, Unscientific Postscript, p. 316.

I will see if I have no meaning, while the houses and ships have meaning.

Walt Whitman, 'By Blue Ontario's Shore'.

If thou desirest peace of mind and true unity of purpose, thou must put all things behind thee, and look upon thyself.

Thomas A'Kempis, Imitiation of Christ. II. 5.

I will confess then what I know of myself; I will confess also what I know not of myself. <u>St Augustine, Confessions, X. 5.</u>

Wonders are many, and none is more wonderful than man.

Sophocles, Antigone.

We are the miracle of miracles.

Carlyle, 'The Hero as Divinity', I.

The awful ultimate fact, which is the human being.

A. N. Whitehead, Religion in the Making, p. 16.

The great Pan of old, who was clothed in a leopard-skin to signify the beautiful variety of things, and the firmament, his coat of stars, -- was but the representative of thee, O rich and various Man! Thou palace of sight and sound, carrying in thy senses the morning and the night and the unfathomable galaxy; in thy brain, the geometry of the City of God. Emerson, 'The Method of Nature'.

Man is man's A.B.C. Francis Quarles, 'Hieroglyphics'.

However high Our palaces and cities and however fruitful are our fields, In Selfhood, we are nothing, but fade away in morning's breath.

Blake, Jerusalem, II. 45.

Mountain, hill, earth, and sea, Cloud, meteor, and star Are men seen afar. Blake, 'To Thomas Butts'. You cannot shun Yourself.

Troilus and Cressida, III. 2.

I have perpetrated human nature.

Christopher Fry, The Lady's not for Burning.

CHAPTER I

THE VIEW OUT AND THE VIEW IN

O the riches of thine infinite goodness in making my Soul an interminable Temple, out of which nothing can be, from which nothing is removed, to which nothing is afar off; but all things immediately near, in a real, true, and lively manner.

Traherne, Centuries of Meditations, I. 92.

Was somebody asking to see the soul? See, your own shape and countenance, persons, substances, beasts, the trees, the running rivers, the rocks and sands.

Walt Whitman, 'Starting from Paumanok'.

There is in the universe an Aura which permeates all things and makes them what they are. Below, it shapes forth land and water; above, the sun and the stars. In man it is called spirit; and there is nowhere where it is not.

Wen T'ien-Hsiang (trans. H.A.Giles).

In being aware of the bodily experience, we must thereby be aware of aspects of the whole spatiotemporal world as mirrored within the bodily life.

A. N. Whitehead, Science and the Modern World, p.113.

<u>Matter</u> is where the concentration of energy is great, <u>field</u> where the concentration of energy is small.

Einstein and Infield, The Evolution of Physics, p.256.

I have seen my head (grown slightly bald) brought in upon a platter.

T. S. Eliot 'The Love Song of J. Alfred Prufrock'.

I felt no dross nor matter in my soul, No brims nor borders, such as in a bowl We see. My essence was capacity, That felt all things; The thought that springs Therefrom's itself..... It acts not from a centre to Its object as remote, But present is when it doth view; Being with the Being it doth note Whatever it doth do.

Traherne, 'My Spirit'.

As a beauty I am not a star, There are others more handsome by far, But my face -- I don't mind it For I am behind it. It's the people in front get the jar.

Attributed to Woodrow Wilson.

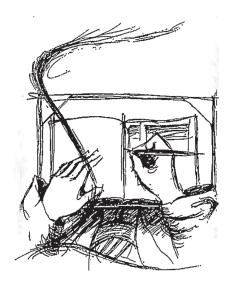
"Now, I give you fair warning," shouted the Queen, stamping on the ground as she spoke; "either you or your head must be off, and that in about half no time! Take your choice!"

Alice's Adventures in Wonderland.

1. THE MISSING HEAD.

What am I? That, for every thinking being, is the question. Let me then try to answer it as truly and simply as I can. I shall try to forget the readymade answers, and discover what I am to myself at this moment.

My common sense tells me that I am a man very much like other men (five-feet-ten tall, thirty-eight years old, weighing about eleven stone, and so on) and that I am now sitting at my desk writing a book about "It is an extraordinary blindness to live without investigating what we are." Pascal, <u>Pensées</u>, 495.



myself. Common sense isn't concerned with philosophical subtleties, but is quite certain what it is like, here and now, to be me, writing on this sheet of paper.

So far, surely, nothing can have gone wrong. But has common sense really described what it is like to be me? Others cannot help here: only I am in a position to say what I am. And what I find is that common sense is utterly wrong in supposing that I am much like other men. For I have no head! There on the desk are my hands; there are the sleeves of my jacket, and between them hazy areas of my sweater and tie; if I look under the desk I shall find my feet --- but what has become of my head? It is missing. I am headless. And I had never noticed the fact.

What exists in place of my head? Let me attend carefully, and with an open mind, to what I may find. I find that there are, instead of my head, a brown desk-top, some sheets of white paper, a fountain-pen, an ink-bottle, the carpet and walls and chairs of the room, a window, some lime trees and grey-brick houses, and a patch of cloudy sky above them. My head has gone, and in its place is this vastly different collection of objects. They have happened to me. ×

It seems that to be me is to be unique, the one man on earth, and surely the one creature in the universe, who is built to this astounding plan: -- where the rest carry small rounded body-terminals, fairly constant in shape, and furnished with hair and eyes and mouth, there is for me a boundless, lively, and infinitely varied world. I alone have a body which fades out so that the only hints that remain of it above my shoulders are a pair of transparent shadows thrown across everything. † (I am in the habit of calling the shadows my nose, but surely a nose is not a fuzzy transparent object, quite detached from any face, that can be swung from side to side almost as if it were a trunk? If this is a nose, then I have one -- or a pair of them. If it is not, then I have no nose.)

Common sense suggests a simple explanation. A man cannot look out of the window of his house at the street, and at the same time see his own house with the window in it. This inability of his to face both ways, however, does not mean that he has no house. In precisely the same way, the reason I cannot find my head is not that I lack one, but that I happen to be looking out of it.

Is this commonsense explanation good enough? Where am I, where do I actually spend my time? Do I inhabit a house of flesh and blood, and gaze out upon the world through openings in its walls? Do I live inside an eight-inch ball, enjoying the view that can be had through its pair of portholes? And if I do, what am I, the ball's tenant, like? Have I a little head of my own, with another pair of eyes, and a still tinier tenant to peer through them? And so on, indefinitely?

No. It is certain I am not shut up in the gloomy interior of any object, and least of all in a rather small tightly-packed sphere, somehow managing to live my life there in its interstices. I am at large in the world. I can discover no watcher here, and over there a thing watched, no peep-hole out into the world, no window or window pane, no barrier, no frontier. ° I do not <u>detect</u> a universe. It lies wide open to me. At this moment

 \times <u>Alizon</u>: Show me daffodils happening to a man!

Richard: Very easily.

These lines from Christopher Fry's play recall J. B. Leishman's translation of Rilke's 'Der Tod des Dichters':

"For these: these shadowy hills and waving grasses

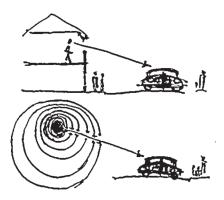
And streams of running water were his face."

In place of my head, not even a <u>caput mor-</u> <u>tuum</u>. And it is not only my head that is sublimated: Rumi, the Sufi poet, needlessly exhorts me:

"Dissolve your whole body into Vision: become seeing, seeing, seeing." (R. A. Nicholson, <u>Rumi, Poet and Mystic</u>,

p. 38.)

† In Professor J. B. S. Haldane's story <u>My</u> <u>Friend Mr. Leakey</u>, one of the characters, having been made invisible, remarks: "Everything looked slightly odd, and at first I couldn't think why. Then I saw that the two ghostly noses which I always see without noticing them were gone."



° When we are coming out of an anaesthetic we are liable to experience a curious identification of the seer and the seen. This is lost at the level of ordinary waking life, but may be regained, in a different manner, at the level of St Bonaventura's epistemology: "All knowledge indeed is, in the strict sense of the term, an assimilation. The act by which an intelligence possesses itself of an object to apprehend its nature implies that this intelligence likens itself to the object, that for the moment it clothes itself with its form, and it is because it can in some way become everything that it can also know everything." Gilson, The Philosophy of St Bonaventure, p. 145.

ink marks are forming on this sheet of paper. They are present. There is nothing else now but this blue and white pattern, no screen here (where I imagined I had a head) upon which the pattern is projected, no aperture through which it is glimpsed. * There is only the pattern. My head, eyes, brain --- all are a fiction. It is incredible that I ever believed in them.

How is it that for thirty years and more I had never noticed that between myself and other men there is literally a world of difference? I have for a head this tremendous universe, of which they are particles. I can move the sun at will, obliterate the universe, turn the world upside-down, make all things revolve about me; they can do none of these things. At least, when I watch a man shut his eyes, or stand on his head, or turn round, I fail to discover any notable changes in the rest of the universe. And no wonder --- he is only one man, body and head, whereas I bear upon my shoulders all the world of men and things. I am Atlas and his burden; the other man is a fraction of that burden. Between myself and my fellows there is an absolute distinction. This is not matter of argument or of theory, but of observation. A discrepancy that is so startling (once it is seen) ought surely to have been evident every second of my life, from early childhood onwards. + But in fact I realize it with difficulty, and only for a few moments at a time. Then back I am again in my old habit, and as unconscious as ever I was of the plain fact that I alone amongst men carry no head on my shoulders, that I am another species of animal, another order and class and phylum altogether, and indeed right outside the animal kingdom in a realm all my own. I am as unlike these things with heads that are called animals and vertebrates, mammals and men, as it is possible to be. To give the same set of names to me and to them is the grossest misuse of language. I have been properly taken in, and by nobody else but myself. What reason can I have for thus suppressing the facts about what I really am?

Here, surely, is the biggest hoax, the greatest illusion, the silliest farce --- that a man should scrutinize the world for a lifetime and never once see that his own head is missing. It is said that a wasp takes so little notice when his abdomen is snipped off that he will go on drinking syrup as if nothing had happened, while the liquid collects in a globule at his waist. The insect has lost its abdomen and his vivisector has lost his head, and neither is the wiser. The cleverest are deceived. Descartes, recounting the things he holds "true because perceived by the senses", begins: "Firstly, then, I perceived that I had a head…" ° It is odd that one of the acutest of minds, with all the world to choose from except one spot, should alight on just that spot --- as odd as the fact that Chesterton, parodying our latter-day prophets, should complete his list of crazy future wonders with the crowning absurdity: men without heads! *

2. THE HEAD FOUND

Common sense cannot let this portrait of myself as a headless body pass. Admittedly there are big differences between myself as I am to myself and myself as I am to others; nevertheless the fact remains (says com* Many primitives regard the soul as a mannikin inhabiting the head or some other part of the body. (See Frazer, <u>The Golden Bough</u>, Abridged Edn., p. 179.) The same notion is implied in Walt Whitman's line: "As I have lived, as I have looked through my windows my eyes". ('Song at Sunset')

Ernst Mach ('The Analysis of the Sensations -- Anti-metaphysical', <u>The Monist</u>, i, p.59.) makes a drawing of himself as he sees himself through his left eye: "In a frame formed by the ridge of my eyebrow, by my nose, and my moustache, appears a part of my body, so far as it is visible and also the things and space about it." See also Karl Pearson, <u>Grammar of Science</u>, II. 12.

+ Donne was aware of this discrepancy, but regarded it (I think perversely) as a defect. He wrote:

"Thou art too narrow, wretch, to comprehend Even thyselfe: yea though thou wouldst but bend

To know thy body."

'The Second Anniversary'

° <u>Meditations</u>, VI.

* The Napoleon of Notting Hill, I. 1.

mon sense) that in neither case can I do without a head. Or, if I can, what is a headache? And where do all the sensations belong that go with the play of the muscles, of my eyes, and tongue and face, if not in my head? What does my voice issue from? What do my hands feed? ---- No, my head does not "stand so fickle on my shoulders" that a philosopher can talk it off. I am not off my head, nor am I going to lose it, says common sense.

No doubt common sense is right thus far --- that something is going on where I thought I had a head. It is equally certain that this something is not a head. Whatever they are and wherever they are, these aches and tastes, these sensations of warmth and cold and pressure, are not furnished with hair and eyes and ears. They are not spherical and eight inches across. They are wholly different from the dictionary definition of a head. $^{\circ}$

But I can always reassure myself (common sense replies) by looking in a mirror.

So I have found my lost head --- not here on my shoulders where I thought it belonged, but over there in the mirror, and in every reflecting surface within range. Thus, while I have no head at all where I ought to have one, I have innumerable heads in places where I ought to have none. What is more, these heads have apparently been tampered with: they are twisted back to front; they are smaller than the head I thought I had; they shrink and swell unaccountably. I am a decapitated body watched from the middle distance by its severed head, now made elastic, turned round to face its trunk, and multiplied times without number.

It is true, of course, that I cannot find the missing head wherever I look, but that seems to be because it is concealed rather than absent. If I give the thing I happen to be looking at a polish, there is my head in it. I can only suppose that it was somehow there all the time, and that the polishing brought it out. (Is this, perhaps, no less than the overworked Freudian explanation, the point of the story of Aladdin and his wonderful lamp? And are not we who, unlike Aladdin, find no magic in the polished and reflecting surface, the victims of a profounder illusion than his?) *

Common sense inquires about objects that will not take a polish.

Well, a man is such an object. And he will prove to me, in words or in sketches if need be, that he no less than my mirror has my features in their minutest detail, with all their subtle and momentary changes of expression. He has them where he is; concealed from me, they are open and evident to him. In fact, the face with which he confronts me is a mask for mine, he cannot take off this mask, but be can tell me what it hides.

Common sense has a further objection. These things that either reflect light or are alive are special cases. The rest, dull and dead things, hide no missing heads. Consider this sheet of paper on which I am now writing: does it contain my head?

Certainly it does. But it contains much else besides. If I can keep out

^o "<u>Head</u>. Anterior part of body of animal, upper part of man's body containing mouth, sense-organs and brain...." <u>Concise</u> <u>Oxford Dictionary</u>.



* These preliminary remarks concerning the mirror will be corrected and amplified in Chapter III.

Of the sun and heavens, trees and mountains, as seen in a mirror, Traherne says: "Which were it not that the glass were present there, one would have thought even the ideas of them absent from the place." <u>Centuries of Meditations</u>, II. 78.

Not going from itself; but eye to eye oppos'd

Salutes each other with each other's form: For speculation turns not to itself, Till it hath travell'd, and is mirror'd there Where it may see itself.

Troilus and Cressida, III. 3.

The beauty that is borne here, in the face, The bearer knows not, but commends itself

To others' eyes: nor doth the eye itself (That most pure spirit of sense) behold itself,

most of these other irrelevant things by putting a box, with a small hole in it, over the paper, then my head will appear. Now all I have done to the paper is to shield it. I have revealed the presence of my head by subtracting from the paper's condition, not by adding anything to it. Why then should I not say that my head was there all the time, blurred by the other things that were there along with it? Make a hole in any box, point the box at me, and you have my head trapped inside --- a head perfectly formed, though very likely no bigger than a pea. And remember that your camera is hardly likely to fake anything. It is honest about that part of me which it contains. It cannot be credited with the power of grasping what is going on elsewhere; it reveals what happens in the place where it is. If it could describe me as I really am, here, it would, as a camera, be a failure; for its photographs of me would show me beheaded, with a camera mounted on my shoulders.

(In fact there is precisely such a camera, whose business is to behead the subject. When the device, sometimes known as the first-person camera, is used in the making of a film, the audience sees, not the actor, but what he sees. A good example is the scene in the film <u>Mine Own</u> <u>Executioner</u>, where the airman starts to trek through the jungle, but is captured by the Japanese; the audience shares the airman's visual experience --- including his arms as he thrusts aside the obstacles in his path, and later his legs as he is dragged along the ground by his captors. But not his head. The body with which the audience is to identify itself is headless. The effect is startling in its realism, but very few cinema-goers can be aware of how it is achieved. In the film studio, either a headless dummy is used, with the camera placed where the head should be, or the camera has to be mounted as near as possible to the living subject's head, and to face the way he faces.)

This business of detachable heads is not common sense, but it is not far from being common knowledge. There is in man a deeper apprehension which grasps the essential point. For example, according to a work of the fourth century A.D., there lived to the south of China a people whose heads could leave their bodies, and, using ears for wings, could fly to great distances. There is an account of a certain female slave whose head flew about in this fashion every night, returning to the trunk at dawn. + Plato has a famous description of the head, before it was given limbs, rolling about on the ground, and finding itself unable to climb out of hollow places. × Flying heads -- often they are vampires -- appear in the folklore of a number of peoples, and headless monsters, or "men whose heads do grow beneath their shoulders" ° were commonly believed to inhabit outlandish parts of the earth. * Perhaps also the mediaeval fondness for martyrs who walked (even if they did not, like King Charles, talk) after their heads had been cut off, owed something to the unconscious knowledge that we are all in much the same condition.

3. THE HUMAN REGION AND ITS CENTRE.

When I am being photographed the camera is in the place where I keep

Cf. Coventry Patmore, <u>The Angel in the</u> <u>House</u>, I. xi. 2; II. iii. 2: "Become whatever good you see, Nor sigh if, forthwith, fades from view The grace of which you may not be The subject and spectator too.

With whatsoever's lovely, know It is not ours; stand off to see, Or beauty's apparition so Puts on invisibility."



A headless monster from <u>T'u Shu Chi</u> <u>Ch'eng</u>, after G. Willoughby-Meade, <u>Chi-</u> <u>nese Ghouls and Goblins</u>.

+ Willoughby-Meade, <u>op. cit.</u>, p.11. Cf. J. A. MacCullough, <u>Celtic and Scandinavian</u> <u>Religions</u>, pp. 33, 57, 112.

× <u>Timaeus</u>, 44 D.

° <u>Othello</u>, I.3.



St. Denis, from a painting on the roodscreen, Grafton Regis, Northants. After Francis Bond, <u>Dedications of English</u> <u>Churches</u>.

* "There are men with no head", a voice says to Paphnutius, in Anatole France's <u>Thaïs;</u> "Can you honestly believe that Jesus Christ died for the salvation of these men?" my head. The camera has to adopt certain of the peculiarities of its location, of which my head is one. For to visit space that is saturated with my head is, in some fashion, to take on my head. Not all space is thus saturated. An approaching camera comes to places where my head gets bigger and bigger, then to places where my head gets vaguer and vaguer, and finally to places where I have no head at all --- neither camera nor photographer will register it. They have reached my inner headless region. Conversely, when they recede from the centre, they come to regions where I keep my smaller heads. These eventually shrink to nothing. Photographer and camera have reached my outer headless region. Here I no longer make my presence felt.

It is as though this mysterious centre which I call <u>myself here</u> were a magician who casts a spell over the surrounding space, whereby visitors entering it are in some degree transformed. All who come near obey his conditions, and his system of magical defences is perfect. The spell, however, is neither arbitrary nor of unlimited range. It works only inside a belt extending from a few inches to a few hundred yards of the centre, and only near the inner rim of this belt is the spell really binding. +

"Just as a stone flung into the water becomes the centre and cause of various circles..... so each body situated in the luminous air is spread out circle-wise and fills the surrounding parts with infinite images of itself and is present all in the whole and all in every part" \times --- except (Leonardo should have added) at the centre itself. Not here, but out there, I am an ordinary man-with-a-head. Or rather I am innumerable such men, and they are not so ordinary after all: they are giants and dwarfs and homuncules, two-eyed and Cyclopean and eyeless, sometimes with four limbs, often with only two or three, occasionally with none at all. Each specimen of me that fills the 'luminous air' has its own peculiarities, which the camera will record. This is what it is to be a man --- in detail a menagerie of monsters or an asylum of cripples; in general conformation a hollow sphere °; in dimensions far exceeding the whale; in substance as airy and penetrable as a cloud, so that my whole frame is laid wide open to all comers. Or, if common sense objects that this spellbound sphere is not my human shape, but only the region which that shape haunts, I shall not disagree; I shall merely point out that I remain infinite in number, telescopic, and protean. Either way, to be what common sense is pleased to call an 'ordinary' man, a man-with-a-head, is evidently no common-sense matter. *

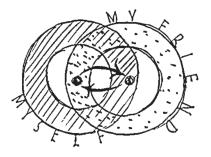
But I have only begun to discover the complexities of the situation. The spell I cast over those who enter my human region has the peculiarity that they shall disown its influence, and shall reflect back on to me at the centre the effects that radiate from me. The friend who tells me how well I am looking can only get his information from the place where he is. But this he denies, claiming that he describes the state of affairs where I am at the centre. It is useless for me to tell him that only I am in a position to know what is here, and that all his comments apply to the regional me. He insists on applying them to the centre of the system. And, of course, I am equally stubborn about the spell he casts over me. Though it is true I register his head because I am where he keeps a head, I am quick to return it to the spot where I consider it belongs. And this



+ The magic circle and the sacred circuit are found in the folklore of many lands. Protection against evil may be had, for example, by drawing a circle about oneself to the right; against this the devil in his various disguises dashes vainly. (See, e.g., J. G. Campbell, <u>Superstitions of the Highlands</u> <u>and Islands of Scotland</u>, p.247.) In this, as in many 'superstitions', there is a good deal of sense. Cf. Knuchel, <u>Die Umwandlung in</u> <u>Kult, Magie und Rectsgebrauch</u>.

× <u>Leonardo da Vinci's Notebooks</u>, (trans. McCurdy) p.56. See also pp.117, 217, 218. Leonardo's doctrine resembles the lonian theory of sense impressions, particularly as it was developed by Epicurus. The latter taught that an object sends out in all directions a stream of images, which impress themselves upon our sense organs. Whether or no he arrived at the idea independently, A.E. suggested that everything in nature is "a continual fountain of phantasmal effigies of itself". <u>The Candle</u> <u>of Vision</u>, p. 110.

° In the <u>Nibelungenlied</u>, Wotan places round the sleeping Brünnhilde a protective ring of fire, which anyone who approaches her must penetrate. The fact is that Brünnhilde typifies us all: each of us is similarly extended and protected.



* Alternatively, I may describe myself as an elastic globular cavity with a coloured and noisy lining -- one of Eliot's "Hollow Men", but without their stuffing, or "headpiece filled with straw".

I do regardless of the fact that if I were to check my opinion by moving towards that spot I should soon find out my mistake. As I approached he would vanish, like Eurydice in the underworld when Orpheus looked to make sure of her presence ø, or like a faint star when we gaze directly at it. My friend (and all the world besides) exists for me because I do not push home my inquiry into his existence. And I exist for him because he does not inspect me too closely. Each of us realizes the other in himself, and himself in the other. To look for the self in the self, or for nature in nature, is to come up against a blank, because they belong in each other. "For the division of man from the world is his division from himself, and when he shuts himself up within his own soul, he finds there nothing but emptiness and vanity." +

Many philosophers and poets have known this. John Scotus Erigena (for example) taught that, since knowledge and being are one, to know a thing perfectly is to become it. In knowing himself a man knows the essence of all things: they are 'divine apparitions' within his mind. \times A millennium later, Walt Whitman begins a poem with the words:

"There was a child went forth every day, And the first object that he look'd upon, that object he became."

Everything in the world is elsewhere, out on a visit. It is the universal calling day, but nobody meets anyone because nobody stays at home to be met. We keep our distance by changing places.

"Unheard-of thing," Victor Hugo exclaims, "it is within us that we must look for the external. There is in the heart of man a deep and sombre mirror. Therein is the terrible chiaroscuro." ° What then am I? And where am I? If, on the one hand, I take myself as I am to myself, I find sky and clouds, trees and houses, furniture, this sheet of paper and its inkmarks; and all of these, though primarily belonging here at the centre, I scatter as if by a centrifugal machine, leaving the centre itself unoccupied. If, on the other hand, I take myself as I am to others, I am a host of creatures of all shapes and sizes; and all of these, though they belong out there, I pull in to me here as if by a centripetal machine, leaving not one of them at large in the world. Which of these two pictures, equally odd and yet (it seems) equally unavoidable, is the true portrait of me?

Each is a half-truth. My condition is that I am not simply all the world except that tiny central fraction of it which bears my name, nor am I simply that fraction: I am both at once. I am not simply here at the centre, nor simply out there in the surrounding spaces, but in both places simultaneously. In Emerson's words, "everything refers". * It is impossible to pin me down to one spot, or to describe me as one thing. When I am located I do not stay for closer inspection, but retire elsewhere, like a rainbow or a mirage. The world is the field in which this game of hide-and-seek is played; in it I have room to get sufficiently away from myself to be myself. The content of the centre is despatched to the circumference, and the content of the circumference is drawn in to the centre. Pascal's "It is not in Montaigne, but in myself, that I find all that I see in him", † is no more than half the story: what I find in Montaigne is in-me-from-him, but also in-him-from-me. Objects are always somewhere else. Everything is inside-out.

ø Or like Hera, when Ixion went to embrace her, and found himself embracing a cloud.

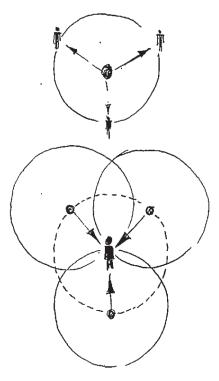
Cf. H. H. Price, <u>Perception</u>, p. 319: "An individual sense-datum, though it is an event.... happens <u>nowhere</u>....The characteristic of being an event in Nature, like the characteristic of having a spatial position in it, is a <u>collective</u> characteristic which no individual sense-datum can possess."

+ Edward Caird, <u>Hegel</u>, p.205.

× Richard McKeon, <u>Selections from Medi-</u> eval Philosophers, i, p.103.

As Bradley points out, though I disclaim these 'external', things, I cannot do without them, and any serious change in them upsets me. Their alteration may produce a self-estrangement that kills me. See <u>Ap-</u> <u>pearance and Reality</u>, p.80.

° Intellectual Autobiography.



* 'The Method of Nature'.

† <u>Pensées</u>. 64.

Common sense says I cannot be in two places at once; reflection says that is the only way I can be anything at all. I must be the nothing in the middle of the web of regions, with my whole existence poured out upon the fly caught at the web's edge; I must be the nothing at the web's edge, with my whole existence poured out upon the spider at the centre; and I must be spider, fly, and web at once.

There are, Bergson tells us, "two profoundly different ways of knowing a thing. The first implies that we move round the object; the second that we enter into it." + When that object happens to be myself, I do both. For I do not live here at the centre only, contemplating the objects which (as I imagine) are around me. Equally I live out there at the centres of those objects, contemplating the view towards this centre. As Whitehead puts it, I see myself as mirrored in other things. × Indeed there is a sense in which I am far more at home out there observing my human shape through other men's eyes, than I am at home here observing myself as the world mounted on the fragments of a human trunk. Reversing Burns' prayer, the gift I need is the power to see myself as I see myself. "Could a greater miracle take place than for us to look through each other's eyes for an instant?" Thoreau asks °. In fact we do so all the while, and the real miracle occurs when for a moment we look through our own.

Here, then, are the makings of a new portrait of myself. It is not what was expected, but it is drawn from the life. What if it were to become for me a living reality, instead of an occasional insight or a mere intellectual puzzle? How would it be to live in the realization of the fact that this place, of all the places in the universe, is the one spot from which I am absent? How would it be to know that all the world is in me, and I am in all the world \emptyset --- and to know this not as I know the binomial theorem, but as I know the lay-out of the furniture in this room? Common sense may find this self-portrait too surprising to be true, and cold reason may find it too true to be surprising. But only when I find it both true and surprising at once, does it come home to me. Real knowledge is half wonder. \dagger

4. THE VIEW OUTWARDS FROM THE CENTRE.

Sir Thomas Browne says: "The world that I regard is my self; it is the Microcosm of my own frame that I cast mine eye on.... Men that look upon my outside, perusing only my condition and Fortunes, do err in my Altitude; for I am above Atlas his shoulders. The earth is a point not only in respect of the Heavens above us, but of that heavenly and celestial part within us." * To say so is one thing, to know is another. Realization does not come for the asking. Meantime I can at least fill in some of the details of this sketch portrait. I shall begin with the view outwards from the centre. What do I find presented for inspection?

I find a world, rich, confused, in a turmoil of change. Within this wealth of material I distinguish certain relatively permanent objects, which I sort out into trees and houses, stars and men, and so on. Now According to the Schoolmen's doctrine of 'intentional inexistence' it is of the essence of the soul that it shall <u>refer</u> to something other than itself. We can only know ourselves in terms of other things. In the 19th century this doctrine was adopted and developed by Bretano, in his <u>Psychology</u>.

+ <u>Introduction to Metaphysics</u>, p.1. In other words, we may look upon a thing as an It which is bounded by other Its, or as a Thou which is boundless.

× <u>Science and the Modern World</u>, p. 185. Whitehead (in the same book) distinguishes between the intrinsic and the extrinsic reality of an event -- the event as it is in its own prehension and as it is in the prehension of other events.

° <u>Walden</u>, 'Economy'.

"If water is in a state of tranquility, then it shows up the hairs on a man's chin and his eyebrows.... If still water remains clear, how much more with the things of the spirit in relation to the mind of the sage! He is the reflection of heaven and earth, the mirror of all creatures." <u>Chuang Tzu</u> <u>Book</u>, XIII.

ø "All things to Circulations owe Themselves; by which alone They do exist; they cannot show A sigh, a word, a groan, A colour or a glimpse of light; The sparkle of a precious stone, A virtue, or a smell; a lovely sight, A fruit, a beam, an influence, a tear, But they another's livery must wear: And borrow matter first, Before they can communicate." Traherne.

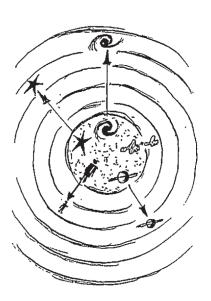
† "The sense of wonder is the mark of the philosopher." Plato, <u>Theaetetus</u>, 155 D.

* <u>Religio Medici</u>, II. xi.

these objects may be arranged according to many types of order, but the type that concerns me at present is their order in depth. Somehow (just how remains to be seen) I am able to sort objects in respect of what I call their distance from me here at the centre. Thus I relegate a certain whitish patch to a distance of twelve inches and describe it as my hand, another to a distance of eighteen inches and describe it as an ink-bottle, another to a distance of a mile and describe it as a cloud. Tonight I shall probably relegate a large number of whitish spots to distances of many millions of millions of miles. In every instance the thing presented here is pushed out, by some almost irresistible agency, to what I take to be its proper station in outer space. And clearly the nature of the object has much to do with the length of its journey. Everything despatched to a distance reckoned in billions or trillions of miles is a star or starlike; everything despatched to a distance reckoned in millions of miles I call a member of the solar system. If a man is to present himself to me as a man, he must keep his distance --- not too many yards nor too few. If he comes nearer than a yard or two of me, he turns into a head or a hand; nearer still (provided I am equipped with the necessary apparatus) into a community of living animals, which I call cells. Then, so science assures me, he turns into molecules, and atoms, and electrons. In the end, little, if anything at all, remains of the object, and if I want to find the man again I must retire from him. Even outside the looking-glass world there comes a point when, to get to the Red Queen, Alice has to walk in the opposite direction.

I am 'bounded in a nutshell' and yet I am 'a king of infinite space'. This universe of cells and men, of planets and stars and spiral nebulae, is concentrated here at the kernel, yet scattered in all directions. + It seems that I am able, without committing gross errors, to put these things where they belong. (In details I go wrong, but not to the extent of supposing that the stars are stuck on the window-pane, or that the tree-tops are brushing the moon.) My guests -- an ill-assorted company -- refuse to stay. Do I see them home, so that my boundaries include all their destinations to the furthest visible nebula? Or do I stay behind here, content to see them off, after having made sure that their labels are properly attached? It is too soon to try to answer these questions definitely, but at least it may be said that, centred on the place I know as <u>here</u>, is a system of zones or belts which contain the home addresses of the beings I entertain here; and that the class distinctions I discern amongst my guests correspond to residential distinctions. The superior ones live in the outer suburbs of the universe. If you are a star, you belong in my star-belt and nowhere else. If you are a man, you cannot go far away. There is no trespassing, no social climbing. °

Of all the spheres or regions which have me for centre, there is one in which I take a lively interest --- the sphere of men. If I do not accompany the stars home, at least I see human beings to their destinations, since I am able to turn round when I get there and share their view of me. In this human sphere I am very much at large, thanks to my ability to get into the homes of its inhabitants. As for the other spheres, there is nothing except poverty of imagination to prevent me from taking my stand in them and observing myself, and the world in general, from their re-



Do I see things there where they are, or here where l am? Language, faithful to experience, gives the cue: I see them there, from here.

+ Cf. Bergson, <u>Matter and Memory</u>, p.127: "Reflective perception is a <u>circuit</u>, in which all the elements, including the perceived object itself; hold each other in a state of mutual tension as in an electric circuit, so that no disturbance starting from the object can stop on its way and remain in the depths of the mind: it must always find its way back to the object whence it proceeds."

And Traherne, <u>Centuries of Meditations</u>, II. 78: "And no man would believe it (your soul) present everywhere, were there no objects there to be discerned. Your thoughts and inclinations pass on and are unperceived; but by their objects are discerned to be present: being illuminated by them. For they are present with them and active about them."

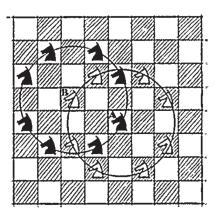
° Cf. the doctrine of St Bonaventura: "The more powerful a being is, the more the effects which it can produce are by nature separated from one another, and the more it is able to establish a certain communication, order and harmony between such different things." Gilson, <u>The Philosophy of St Bonaventure</u>, p. 201. Aristotle's distinction between celestial and terrestrial matter has (in spite of Galileo and modern physics) a basis in fact: celestial objects are remote or they are not celestial, and as remote they have very different characteristics from those of all earthly things.

spective viewpoints. For the most part, however, I enjoy the company of my non-human guests without inquiring closely into their home life. My business is their accommodation here. * And I am all accommodation. My life is the life they live in me. Take away these visitors of mine and I disappear; alter the least of them and I am altered. The fluctuation of a variable star is a fluctuation in me. I am different because of the cloud that is now sailing past my window. For the cloud is not white, or swift, or beautiful, in itself, but in me. To be beautiful is to beautify. Do I not own the stars that become stellar within me here? Can a picture, a face, a poem, a symphony, a universe, come to themselves in any other way than this way --- the way they arrive in me? Without some such lodging, or home-from-home, they amount to nothing. Truly I forget in what my wealth lies, and how inexhaustible it is, and how poor I am apart from these riches that are so abundantly showered upon me from outside.

They are mine to enjoy, and in some degree mine to use. I seem to exercise a certain curious power over the objects that I accommodate. I can bring one or another of them into vivid and clear existence, and dismiss the rest into obscurity. I can obliterate them all for a time. Over some I seem to wield a precise and detailed control. For instance, I am at this moment initiating very complicated movements in a leaf-shaped object, a large pink cinquefoil at the end of a bending branch that springs from the central trunk --- I say, of course, that I am 'moving my hand', but this is only my way of deceiving myself that I know what is really happening. And this same mysterious power of mine (particularly if I have some money to spend) is extended over other and remoter portions of the world, so that I can move them much as I move my nearer branches. (Or so it appears --- I suppose I should not rule out the possibility that I am merely acquiescing in what is occurring.)

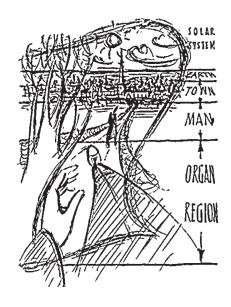
It is useless for common sense to point out that these limbs of mine are privileged parts of the scene, uniquely permanent, uniquely obedient, uniquely sensitive. The line I draw between my body and the world is no more than a convenient fiction °, for I am more liable to feel the pinch in my goods than in some portions of my flesh; I have more control over my dog than over my circulation; my town is a more permanent organ of my life than my hand is. There is no valid criterion whereby my body may be marked off from my world. If, then, as I consider the view out from the centre, I have a body at all, that body extends indefinitely in all directions, embracing all things upon which I depend, and all things which I can affect. In one of its aspects, the world is for me a set of branches or limbs radiating from headless trunk, limbs that are increasingly numb and increasingly beyond my conscious control as they recede into the distance.

Certainly I have a peculiar body. And perhaps the oddest thing of all is how its limbs are all drawn in to the centre, yet immensely protractile. This greater headless body is all gathered into the place where the head would have been, and at the same time it is thrust out into every region of cosmic space. I own it all, and I disown it all. It is all here, and it is all there.



* Even a chess-man obeys much the same rules. A piece may be said to be where it acts. It is present regionally in the squares it covers; while centrally, in its own square, it becomes accommodation for other pieces. Thus the white knight on square A covers a circle of 8 squares, one of which is square B, on which the black knight stands. In effect, the knights' regions overlap in such a way that the pieces change places --- just as if they were real men. Chess is an exercise in double location. I suggest that part of its fascination lies in its ontological character. It is a schematic version of the universal constitution of things. After all, Alice's "It's a great huge game of chess that's being played --- all over the world", is very sensible nonsense.

° The continuity of body and environment will be fully discussed in later chapters, but perhaps I should say here that in one sense there is no such continuity. My act of distinguishing a limb is an act of amputation: perceived body is, in fact, environment for the time being. What John Webster calls "that curious engine, your white hand", must cease to be anything of the kind before it can become really your own.



5. THE VIEW INWARDS TOWARDS THE CENTRE.

My common sense tells me that this self-portrait is strange only because I am facing the wrong way, and that if I turn about and look towards the centre, I shall see that I am not so mysterious and unusual after all, but an ordinary human being. And (common sense goes on) it is because I take this sober view of myself -- the view inwards -- to be the true one, that I am so much out there, looking at myself through my observers' eyes. The view outwards is arbitrary, irrelevant to my nature, and for ever changing -- one moment I accommodate a galaxy, and the next a speck of dust -- whereas the view inwards is constant. It alone is true of me, representative, of practical importance. By it I am known. Whether I am contemplating an elephant or a mouse, a star or an atom, makes no difference to my tailor. Philatelists do not take smaller hats than astronomers. In short, according to common sense, the view out is the accident, while the view in is the essence of me.

But <u>is</u> it a fact that I always look more or less the same to the outside observer? Is the view in practically constant? Let me call in a really efficient witness. Here I am seated at my desk, writing. He moves round the room. Every position reveals a new me: there are large discrepancies between front view and side view and back view --- not to mention the views from the ceiling and the carpet. Which of these is true, and by what criterion?

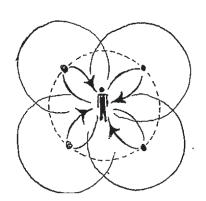
The problem is not a difficult one, common sense explains. What the observer has to do is to combine all his pictures of me in a composite portrait. I am what I seem to be from every viewpoint.

In that event my observer is free to add to his points of view by travelling as he pleases, provided he does not take his eyes off this place. This time, therefore, instead of moving round me, he moves away from me. He retires out of the window into the garden and the street, into the world at large. What does he make of me now?

I dwindle. I lose my shape and my colour. I turn into a house, then a street of houses, then a suburb, then a town. My observer has unlimited travelling facilities. Very soon I appear as England, then the earth, and eventually as a star --- that developed star known as the solar system, or the sun with all its planets. If he still goes on, I become the galaxy, our own island universe, which in its turn shrinks to a point of light in space and perhaps vanishes altogether.

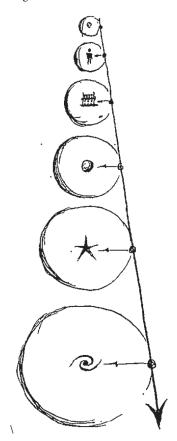
Common sense protests that this will not do at all, and that the only true aspects of me are those which lie near at hand --- the nearer the better. Our language has the right idea: to find the truth your inspection must be close, and indeed <u>penetrating</u>; you must <u>go into</u> the thing.

My observer takes the hint. Instead of rotating around me or retreating from me, he approaches. What is his story this time? First I lose my limbs, then my trunk. Only my head is left. For him I am now a bodiless



"The perfect man," said Wu Jên, "soars up to the blue sky, or dives down to the yellow springs... without change of countenance." (Giles, <u>Musings of a Chinese Mystic</u>, p. 58) But this, I add, is only true for the observer to whom Wu Jên is stationary.

At its most general, the principle of relativity means that one thing (or event or system) has as many aspects as it has observers, and that each aspect, however unlike the others, is a part of the truth about the thing. Physics cannot ignore the subject for whom the object exists, and the 'object in itself and apart from any observer' is a meaningless form of words.



head, just as I am for myself a headless body. I become an eye, or a patch of skin. From now on, he provides himself with instruments that enable him to get a clear view of me at a distance of inches and ever smaller fractions of an inch. Thus fitted for his task, he continues to come closer, and presently reports that I have become several extremely primitive animals, then one such animal. The picture is getting increasingly obscure, and my observer has to supplement his meagre sense-data with theoretical constructions. Now his tale is of molecules, of atoms, and electrons. In reality (he explains) I am not limbs, or cells, or even molecules, but something imperceptible, and indescribable --- in words, at least. Finally my observer 'makes contact', and there is no view of me to be had. I have gone. Like the ingenious cockroach that escaped from the tortoise by taking refuge inside its enemy's shell, my observer removes himself from my presence by making for the very centre of it, and the one place in the universe where it does not exist.

"I think I'll go and meet her," said Alice....

"You can't possibly do that," said the Rose: "I should advise you to walk the other way." This sounded nonsense to Alice, so she said nothing, but set off at once towards the Red Queen. To her surprise, she lost sight of her in a moment....

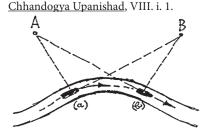
Whether my observer moves away, or draws near, the consequences are much the same. I am transformed into a series of objects, as unlike the common-sense version of myself as possible, and I end as a blank, an emptiness.

6. SOME COMMON-SENSE OBJECTIONS ANSWERED.

The travelling observer (says common sense) is as unsatisfactory as the Guard in <u>Through the Looking Glass</u>, who looked at Alice "first through a telescope, then through a microscope, and then through an operaglass. At last he said 'You're travelling the wrong way,' and shut up the window and went away." That is not the way to inspect anybody seriously. When my observer registers my cells or my molecules, or on the other hand my country or my planet, he has ceased to register <u>me</u>: he has left my presence. I have disappeared. I have been superseded, and to be superseded by something is emphatically not, in common sense's opinion, to become that thing.

But observe common sense's method. Having settled in advance that I cannot change into something else, then having been shown just that transformation, common sense insists that the something else cannot be me --- because, of course, I cannot change into something else! Anyhow, am I really superseded by my town and my country, my planet and my solar system, if I still lie at their centre, and if countless centrifugal and centripetal processes unite and maintain the whole? It might as well be argued that the acorn cannot become the oak, because the oak is a different sort of thing altogether, which can only replace the acorn. Or it might as well be argued that, because two observers tell two utterly different stories about my speed along a winding road, they must be watching two motorists. Actually they are both right, and the truth combines

"Out of all the visual magnitudes of each known object we have selected one as the 'real' one to think of, and degraded all the others to serve as its signs. This real magnitude is determined by practical interests." William James, Textbook of Psychology, p.344. Much the same is true of the 'real' shape of the object, and the innumerable other shapes which we choose to regard as less real or as unreal. Whatever additional meanings are read into the following anonymous nursery rhyme (from Walter de la Mare's anthology Come Hither) it represents with incomparable charm the experience of the 'approaching observer' who finds, at the centre which is his goal, emptiness: but emptiness which is found to be accommodation for a beautiful object. "This is the Key of the Kingdom: In that Kingdom is a city; In that city is a town; In that town there is a street; In that street there winds a lane; In that lane there is a yard; In that yard there is a house; In that house there waits a room; In that room an empty bed; And on that bed a basket ---a Basket of Sweet Flowers: Of Flowers, of Flowers; A Basket of Sweet Flowers." And the 'retreating observer' ---"Flowers in a Basket; Basket on the bed; Bed in the chamber; Chamber in the house; House in the weedy yard; Yard in the winding lane; Lane in the broad street; Street in the high town; Town in the city; City in the Kingdom ---This is the Key of the Kingdom. Of the Kingdom this is the Key." Cf. the well known nursery rhyme about a walnut, beginning: "There was a little green house, And in the little green house There was a little brown house ... " Also Wilfred Rowland Childe's 'A Song of the Little City', in The Oxford Book



of English Mystical Verse, p. 606; and

When I am at (a), observer A reads my speed as 30 m.p.h., but B reads it as nil. When I get to (b), their readings are reversed.

their stories. The difficulty is not that my common-sense self is too stupid to grasp the point, but that it is altogether too clever. It will not humble itself before the facts, and take them as they are given. The vision of me growing into a town, a planet, a star, a universe, is impossible only if I have made up my mind beforehand that it is impossible. If common sense could find something immutable about me, some clearly defined object that is myself once and for all, then, indeed, the case would be altered. But the truth is I am not the man I was a second ago, nor identical in blue light and in red, nor the same to one person on two occasions, nor the same to two persons on one occasion. In what sense can the man be said to have been the baby? Am I certain that the self who gets up in the morning is the self who went to China in his dream, and that both are identical with the foetus of thirty-nine years ago? If I am going to be thorough in this matter of self-identity, let me be really thorough, and admit that change is of my essence, and that it is sheer prejudice to lay down in advance just how much change is permitted in me before I am said to disappear. *

Unpersuaded, common sense makes another point: consider the observer's behaviour. He is not content to watch. He acts, putting distance between himself and his object. Then he makes the mistake of attributing to his object the consequences of his own action.

This argument will not do either. If my observer may move round me to find out what I am, why may he not also move away from me, or towards me, for the same purpose? Besides, he would be entirely justified in assuming that he is motionless, and that it is I who am rushing away from him or towards him. I for my part am equally entitled to the opinion that I am motionless and he is moving. In fact, there is nothing to choose between us: we are both right. And precisely what, in any case, is the act of putting distance between oneself and another, but the observation of certain changes in the other? What is this distance that common sense is so sure is something? My observer does not register it. He registers only me, and I am as open to his inspection at thirty million miles as at thirty inches. It is as if nothing intervenes. For something that comes between observer and observed, distance is singularly unobtrusive and self-effacing. But my observer does not speculate about anything so elusive. What he is sure of is that first there was a man, then a series of remarkable metamorphoses, and in the end nothingness.

Common sense, constrained by science, cannot altogether reject the observer's picture of me. At least the near view is allowed some validity. It can hardly be denied, for instance, that I am atoms. Why then reject the far view, and deny that I am the solar system? Atoms and solar systems have a good deal in common, and they are equally unlike the ordinary notion of what I am. Surely it is unreasonable to accept the one version and reject the other. Common sense will retort, of course, that the solar system includes so much that is <u>not</u> me. My observer might be tempted to reply that the atom excludes so much that <u>is</u> me, and that the sin of omission is as serious as its opposite. But that would be to fall into the trap which common sense is always setting for itself: it would be to allow a preconceived idea of what I really am to come between the observer and me his object. So far, his report is this --- I am not a man

The mutability of the observed object is well brought out in Berkeley's <u>Alciphron</u> (IV):

"Euphranor. Tell me, Alciphron, can you discern the doors, window and battlements of that same castle? <u>Alciphron</u>. I cannot. At this distance it seems only a small round tower. <u>Euph</u>. But I, who have been at it, know that it is no small round tower, but a large square building with battlements and turrets, which it seems you do not see. <u>Alc</u>. What will you infer from thence? <u>Euph</u>. I would infer that the very object which you strictly and properly perceive by sight is not that thing which is several miles distant.

Alc. Why so?

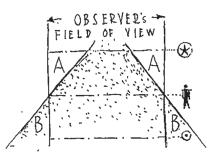
<u>Euph</u>. Because a little round object is one thing, and a great square object is another."

* The problem is a very old one. See Plato, <u>Symposium</u>, 207-8, on the mutability of all temporal things, and in particular of man, who, though called the same person, is every day a new creature: body and soul, he is always changing, for ever ebbing away and being renewed.

My receding observer might well make use of Whitehead's dictum: "Space-time is nothing else than a system of pulling together of assemblages into unities." <u>Science</u> and the Modern World, IV.

We can hardly, says Professor H. H. Price, treat Space as if it were an object or substance --- "the truth surely is (to put it paradoxically) that there is no such thing as Space but only spatial objects." <u>Percep-</u> tion, p. 109.

"Empty space --- space without some quality (visual or muscular) which in itself is more than spatial --- is an unreal abstraction. It cannot be said to exist." F. H. Bradley, <u>Appearance and Reality</u>, p.38.



A-A represents that part of the solar system which (according to common sense) is not me. B-B represents those of my molecules and atoms which the nearer views leave out.

who is more than atoms and less than the solar system, but I am, in some queer fashion not yet revealed, at once atoms, and man, and solar system, and a great deal besides. +

A man is a partial view of something more, and the way to discover that something more is to take up new positions. Common sense already recognizes this principle in saying that I am more than front view, or back view. Who is to say that this place and not that place in the universe shall qualify as an observation-post for the investigation of my nature?

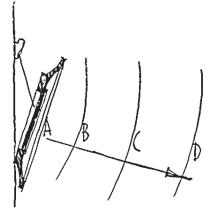
But if all things (says common sense) are in fact what they seem to every beholder of them, and nothing has just one status, the danger is that all individuality, all distinctions, will vanish in a universal fog of opinion.

My answer is firstly that the differences made out by the various regional observers, so far from being arbitrary and chaotic, are the very architectonics of nature, the prime structural principle of the universe. Secondly, though it is true there are two viewpoints where every object loses its separateness or individuality altogether (I refer to the nearest observation-post and the furthest, to the observer's terminuses), the intermediate viewpoints are what make all the difference. The experience of the receding or approaching observer is full of varied possibilities (lying within the system of regions), even though he is bound at the start and at the finish to find what all observers of all objects find. Every finite object marks out a unique path front centre to circumference, and it is that long trail of observation which establishes the object's individuality. But if I am asked why the view along one path differs so much from the view along another, I have to confess my ignorance. The scenery has to be accepted with natural piety. Why the track from one centre should reveal a stone, from another a tree, from a third a man, before all three merge into a planet, I do not know. What I do know is that each centre has its system of regions (partly shared with other centres, partly its own) conforming to a general and ordered geography, and that no peculiarity discoverable in the regions may be simply attributed to some peculiarity of the centre. For the centre is in itself without peculiarities.

7. <u>THE VIEW INWARDS AND THE VIEW OUTWARDS BROUGHT</u> <u>TOGETHER</u>.

I have now filled in, subject to correction later, a few of the details of the two portraits. At first the one contradicted the other; in fact it was precisely what the other was not --- what have a bodiless head and a headless body in common except their need of each other? But note the fundamental likenesses that have now been brought out. Looking at me, and looking with me, come in the end to much the same thing. The two portraits are built up along the same general lines. Both are based upon a set of concentric spheres which embrace the universe. It will be my task in Part II of this book to define these spheres, and the inhabitants by which they are known, much more exactly. For the present I have

+ Cf. A. N. Whitehead, Principles of Natural Knowledge, 61.9: "Our experiences of the apparent world are nature itself." And The Concept of Nature, p. 185: "Nature is nothing else than the deliverance of senseawareness." Whitehead loyally accepts what is given as what veritably is. C. H. Richardson, Spiritual Pluralism, p.100, discusses the question whether a thing can be defined as the class of all its appearances, or of some of them. Bertrand Russell's Our Knowledge of the External World (III) is one of the most important of the many studies of the subject. From Mill's Examination of Sir William Hamilton's Philosophy onwards, phenomenalists have defined an object as a system or 'family' of regional sense-data (actual or experienced on the one hand, and possible on the other), and have dispensed with a nuclear solid, or central physical object. (Cf. C. D. Broad, Scientific Thought.) My only criticism is that the phenomenalists do not push their own methods far enough. A 'family' is very much larger than they realize; its members are more widely scattered, and their status is more varied. To pick out a small part of this cosmic organization and treat it as the whole will not do.



At A there is nothing to be seen, but the observer travelling to D discovers a picture. Where, then, is the picture? At D? But without A (and B and C) there is no picture. The picture is at D from A. In Whitehead's phraseology, the picture is not simply where it is perceived at D, nor simply where it is perceived as located at A. It is present at D, with mode of location in A. Cf. Lloyd Morgan, <u>Emergent Evolution</u>, p. 49. indicated a rough lay-out, ranging from the electron region very near the centre to the remote galactic region, with the human region midway.

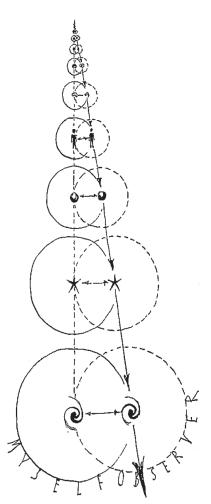
The two versions of myself involve one system of regions, but put them to different uses. There is two-way traffic between centre and circumference. Looking outwards, my regions are the places upon which the characteristics of this centre are projected; looking inwards, they are the places from which similar characteristics are projected upon this centre.

There is another most important difference. Whereas the view inwards from the regions reveals me and mine -- <u>my</u> head, <u>my</u> human body, <u>my</u> house, and so on -- the view outwards into the regions reveals what is other than me and not mine -- <u>the other</u> man's head, body, house.... Of course I get glimpses of my head and my body and my house (all allocated to their proper regions) but I cannot see these things whole from here. Here at the centre lie all men but myself, all planets but this planet, all things but my things. I have all save what I claim. The view out completes the view in. So far from cancelling one another, the two portraits demand one another.

Let me then combine them. I have recorded my observer's impression of me: what about my impression of him? Suppose I am watching him as carefully as he is watching me. We experience one another first as heads, then as men. Provided conditions are favourable, when he has arrived at the town across the valley he is for me that town, just as I am for him this town. Continuing his journey, he arrives (say) at the moon. We are now a pair of heavenly bodies. And so the tale goes on. When my travelling observer sees me as a star (that is, as the sun with its planets) he is a star to me; when he sees me as a galaxy or island universe he also is a galaxy or island universe.

If, instead of retreating from one another, we had approached, our findings would have been in principle the same. However near, however far apart, we are always equal --- that (as I shall show) is the great law. I deal only with individuals of my own rank. The more I find in things the more I have in me. The status I attribute is my own, and I adjust my grade as each occasion demands. I am like one who, to avoid all offence, is all things to all men, simple to the simple, great to the great, learned to the learned; or like a king travelling incognito, who adopts the appearance and the manners of the people he happens to be among. I can only meet another on equal terms. If I am where he is human, then he is where I am human. My centre, my here, lies in his human region, as his lies in mine. If I am centred in the place where he is molecules, he is centred in the place where I am molecules. This rule of symmetry is never violated. Only stars can see stars; no man has ever seen such a thing. * "You can only behold that which you are", says Evelyn Underhill (echoing the great mystics), and this is doubly true. For you are what you behold inasmuch as you accommodate and own it, and have no other possessions; and you are the equivalent of what you behold inasmuch as every view out implies an analogous view in. The doctrine of equality is more than a political catchword, more even than a religious dogma: it is basic. I see what I bring to my seeing, and swell and shrink with my

"How could I have seen you save from a great height or a great distance?" asks Kahlil Gibran. "I hunted only your larger selves that walk the sky." <u>The Prophet</u>, 110-1.



"We think not <u>better</u> of Others, than we do of our selves." Whichcote, <u>Aphorisms</u>, 716.

The principle that what interests us is the key to what we are, is recognized by Marcus Aurelius. The common people (he says) admire inanimate things, mere goods; a higher grade admire animate things, as flocks and herds; a still higher grade are interested in men as skilled in the arts; best of all are the men whose concern is with men as reasonable souls. <u>Meditations</u>, VI. 13. "Like can only be known by like" is (<u>pace</u> Leonard Hodgson, <u>The Doctrine of the Trinity</u>, p.139) no mere <u>a priori</u> dictum, but has an empirical basis.

* The first line and title of one of Siegfried Sassoon's poems (in <u>The Heart's</u> <u>Journey</u>) is "In the stars we have seen the strangeness of our state". object. The saying of Plotinus that the eye cannot behold the sun unless it be sunlike, + is true. As Traherne is never tired of insisting, "Objects are so far from diminishing, that they magnify the faculties of the soul beholding them. A sand in your conception conformeth your soul, and reduceth it to the size and similitude of a sand. A tree apprehended is a tree in your mind; the whole hemisphere and the heavens magnify your soul to the wideness of the heavens; all the spaces above the heavens enlarge it wider to their own dimensions." \times

Qualifications and elaborations will follow in their place; meantime it is the principle that matters. I see myself in things because they fill my 'soul', and I am nothing without them; I see my equivalent in things because the view out and the view in are symmetrical. All my looking is looking in a mirror --- in a mirror which has the trick of showing me, not <u>this</u> face, but its likeness, which is often by no means human. My arm is too short and my hand-mirror is too small: I cannot hold it out in the spaces beyond the region where I am a man, to discover what I am there. Nor, seemingly, can I ask of the stars and the planets their estimate of me. If I could do so, I should not need to call in my travelling observer, and my earth-hood and sun-hood would be as obvious to me as my manhood. But all I really need is that other sort of mirror -- simple sight -- to tell me, in terms of others, what I am. + Cf. Plato, <u>Republic</u>, VI. 507 ff; Plotinus, <u>Enneads</u>, I. vi. 9; Inge, <u>The Platonic Tradi-</u> <u>tion in English Religious Thought</u>, p. 59.

× <u>Centuries of Meditations</u>, IV. 73.

Cf. W. Macneile Dixon, <u>The Human Situ-ation</u>, p.70: "The universe slumbers in the soul.... In proportion as we come to know it we come to know ourselves."

According to I John, III. 2., the reason "we shall be like him" is that "we shall see him as he is." Empedocles taught that a man recognizes Fire by the fiery element in himself, Water by means of the watery element, and so on. The Aristotelian doctrine of the 'sensible species' involves some assimilation of the eye to what it sees, ----These are a few of the many variations on the theme of equality.

8. THE ELASTIC SELF.

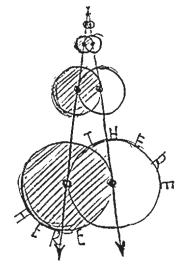
At this point I find my common-sense self (C) and my philosophical self (P) arguing thus:

C. When I cease looking through the window at the sun, and attend instead to a speck of dust on the window-pane, the changes I detect in myself are trivial. If I am what I seem to myself to be, then I remain a man. My objects may expand and contract, but I do not. My <u>there</u> is elastic, my <u>here</u> constant.

P. Consider the word <u>here</u>. What do I mean by it? When I tell my dog to come <u>here</u>, I want him to come to the spot where I am standing; when a football team comes <u>here</u>, it comes to this town; when a foreigner comes <u>here</u>, he comes to this country; if Martians were to invade the earth, I should say they had arrived <u>here</u> even though they were to alight in Australia. In short, my <u>here</u> is infinitely elastic, swelling to gigantic proportions and shrinking again to next to nothing in an instant. It always matches my <u>there</u>.

C. Our language is full of ambiguities. °

P. Language is commonly wiser than its critics, and in this instance it certainly is. Do I not identify myself with my telescopic <u>here</u>? A single conversation may find me taking up the viewpoint of my solitary human self, of my family, of my nation, of my race, in turn. My <u>here</u> is what I have behind me in my dealings with the objects there. It is the 'backing' I take to be mine, and it is on a par with what I am 'facing', or 'up against'.



° Mr. C. S. Lewis has pointed out the 'ambiguity' of the possessive pronoun (and deplored it): thus I say <u>my</u> hand, <u>my</u> town, <u>my</u> country, and even <u>my</u> God, subsuming all these in the same class, as if they were comparable objects. I say that here is just one more eloquent witness to the elasticity of the self. "It is never safe", C. C. J. Webb well says, "for the philosopher to neglect the testimony of ordinary speech." <u>God</u> and Personality, p. 110. In other words, I have the body fit for the work in hand --- a body that is sometimes much less than a man's and sometimes much more than a star's. "Let the Human Organs be kept in their perfect integrity," says Blake, * "At will Contracting into Worms or Expanding into Gods." +

C. It is one thing to associate yourself with a person or a group, but another to become that person or group.

P. How is it that I take to myself so unquestioningly the praise, and resent the blame, and suffer the humiliations, and enjoy the triumphs, which belong to the more inclusive wholes? I am always feeling, and thinking, and speaking for them --- or as them. If the hero who dies for his country or for mankind does not count the larger body more his than the smaller body which he sacrifices, then what is the point of the sacrifice? Of course I do not permanently become any one of my many bodies large or small, for it is my nature to spend my time passing from one to another of them. I am not less a man for being also a planet that contains the man, and a star that contains the planet. On the contrary, my manhood, instead of forbidding me to become much more and much less than a man, positively demands that I shall do so. And the recipe is simple: subject equals object. In other words, my 'body' (by which I mean that taken-for-granted part of the world in which I am, for the moment, ubiquitous) is made to the measure of my 'mind' (by which I mean that not-taken-for-granted part of the world which, for the moment, I exclude and contend against). \times

C. I might agree that my body grows to become more than human, but not that it shrinks to become less than human. While I may possibly take on more body, I cannot shed this human minimum of mine and still live.

P. I am always losing limbs and regenerating them --- in this art even the reptiles have little to teach me. I am now observing the hand that is writing this sentence. Where is it? It is there-from-here, externalized, projected away from that taken-for-granted nucleus which is my body for the time-being, amputated. What remains here is then something less than the whole human body. A pain in my hand does not stay here at the centre, but is referred out there. Even a general feeling of well-being or discomfort, in so far as I become aware of it, is felt as somewhere: it is regionally located. The here is by nature a blank, but an infinitely capacious blank. It is my cap of invisibility. It is the top hat of a master magician, from which every conceivable object is produced (to become something there), and to which it is returned (to become nothing here again). In other language, organism becomes environment; environment becomes organism. They are relative terms. Every region of mine is capable of incorporation and extrusion. I wrap it around myself as a cloak of nothingness; when I wear it I include it in my own nonentity; I abolish it along with all that is here. The one infallible way of escape is to become the menacing object. In this fashion I can take on all men and all life, the earth and the solar system, the galaxy itself, placing myself at the centre of each in turn, and bringing it to naught. How can I do this? Only by occupying myself with the other, the not-self, at every level --- with my fellow men, my fellow species, my fellow planets, and so on. It is for

* Jerusalem, 55.

+ Thus I am in one sense always travelling at immense speeds throughout the universe (by expansion and contraction); while in another I never budge, for I am a worldwide nest of concentric sieves whose contents -- stars, men, atoms, and so on -- always keep their places.

Pope, in his <u>Essay on Man</u>, uses the 'regional diagram'. The human soul, he says, "Must rise from individual to the whole. Self-love but serves the virtuous mind to wake,

As the small pebble stirs the peaceful lake; The centre moved, a circle straight succeeds,

Another still, and still another spreads; Friend, parent, neighbour, first will it embrace;

His country next; and next all human race; Wide and more wide, th'oerflowings of the mind

Take every creature in, of every kind."

× Cf. James Ward, <u>Essays in Philosophy</u>, p.303.

Modern physics, with its doctrine of matter as an unlimited field of energy, confirms the view that I fill all space: Traherne and Einstein are agreed here. Moreover, according to Petrucci, <u>Natural</u> <u>Origins of Ownership</u>, an object must be looked upon as the true owner of the space it occupies. this alone that I make myself nothing, that they may come to themselves in me.

C. This is all far too vague, far too much a matter of unverifiable feeling, to be taken seriously. If only there were objective evidence, of the sort that science can recognize, showing that I can nullify the effects of an object by transferring it from my <u>there</u> to my <u>here</u>.....

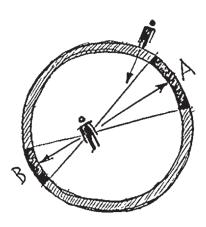
P. There is plenty of such evidence. Consider Newton's hypothetical hollow sphere. A man on the outside of it is subject to its gravitational pull, but once he goes inside the pull ceases. In effect, the sphere no longer exists for him. He does not fall in any direction, but remains poised wherever he happens to be.

C. But note that the man, to abolish the sphere, has to shift centre ---which fact brings me to one of my main objections. The observer retiring from me, and reporting at intervals what I have become, is dishonest. For he alters, from time to time, the direction of his gaze. It is centred upon a cell, a man, a planet, a solar system, a galaxy, in succession, and at each stage the compass-bearing of the new whole shifts; sometimes more and sometimes less, according to the eccentricity of the previous part. (For instance, if the cell chosen for inspection happens to be on the left side of my body, the observer will, when the whole man comes into view, turn somewhat to my right. At a later stage there will be a similar shift from the centre of the planet to the centre of the solar system, and another from the centre of the solar system to the centre of the galaxy.) But if this is so, the observer can no longer be said to be <u>my</u> observer. He has allowed his attention to be diverted from me.

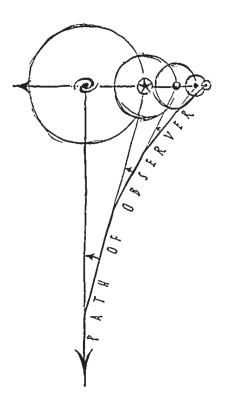
P. The turning of my observer's attention from one centre to another is a fact; but it is a fact that, instead of disproving my thesis, lends it valuable support. My observer sees truly when the mutations of his object force him from the centre of the part to the centre of the whole, and again to the centre of a still more inclusive whole. For that is precisely my own experience here. The view in matches the view out. When for a time I abandon my private interest, and identify myself with my town, or district, or country, or with some international organization, I do, in fact and in feeling, transfer my allegiance. I acknowledge new headquarters, and the larger the unit to which I am attached the more remote its headquarters are likely to be. Initially eccentric, I can only grow by correcting this condition, and shifting centre. My observer finds this out in his own fashion, as I do in mine.

C. Sometimes I do not have this sense of reliance upon a distant centre, but seem to be at the very heart of the greater whole that commands my loyalty. In other words, it may happen that I am posted to headquarters. But in that case my observer, with his centre-shifting methods, does not see me as I am.

P. Why not? He can always bring two of my centres into line, making them -- so far as he is concerned -- coincident. There is no eccentricity so great that it cannot, by lateral motion on the part of my observer, be entirely overcome. He is a reliable observer, and he sees me truly. Whether he sees me as the offshoot of some greater whole, or as contained within



Newton's hollow sphere: the man inside does not fall towards A or towards B, because A's pull is the same as B's. A's mass, thought greater than B's, is offset by A's greater distance from the man.



it, he sees aright --- man is at once the very hub of the world and the rim; central, yet a mere excrescence. On the one hand, philosophers like Nicolas of Cusa and Bruno tell me that the centre of the universe is just where I happen to stand in it; on the other, scientists are constantly reminding me that I am peripheral, or rather without privileged position of any kind. Both are right. To ignore either aspect is to misunderstand my nature.

C. There is still some danger that I shall think more of myself than I ought to think, and entertain illusions of grandeur.

P. Any tendency that way is checked by four considerations: first, that my base, to which I must always return, is my merely human phase; second, that if I am more than human I am also less than human; third, that it is only by sinking myself in my object that I attain its status; and fourth, that while the not-me (being there from here) is something, the me (as only here) is nothing but room. Cardinal Bérulle describes the greatness and the nonentity of man when he says of him: "He is a nothingness surrounded by God, indigent of God, filled with God, if he so wishes." + To say the least of it, any high estimate of myself at this stage would be premature. I am a decapited body on the look-out for a head. The choice is unlimited. I may imitate Bottom the Weaver, or the masked devil-dancers of Tibet. I may place on my shoulders heads divine or human, animal or diabolic, vast as universes or mean as pin-heads, as sublime as the heavens or as mundane as a pork chop. Every one of them fits as perfectly as if it had grown there. Having the whole world for a head comes as naturally to me as having another man's head, or a mountain, or a tree, on my shoulders. The condition is that it shall be on loan to me. I may have whatever I like --- so long as I really do like it, and do not merely like myself. The moment my attention wanders from my object to myself and my equality with my object, the spell is broken, and I revert to a lower status. Self-congratulation is self-defeating. ×

9. THE DEPTH OF THE PICTURE.

And, after all, there is nothing obscure about these basic facts of my nature, nothing that a child cannot comprehend. If I am in difficulties it is because I am vitiated with learning, full of preconceived notions, too sophisticated to notice what is staring me in the face. The world is, primarily, <u>flat</u>. My field of vision, to the ideally innocent eye, is two-dimensional. Objects are <u>present</u> to me and not absent, <u>presented</u> to me here and not over there. Nothing comes between us. Yet it is true, of course, that the depth and the distance of things are just as real to me as their breadth and their height. Depth is a secondary or derived dimension which, though attaining equal rank with the others, is unique in the way it reveals itself to me. When I turn this pen through an angle of 90 degrees, it shrinks from a long rectangle to a small circle; yet I have no fear of losing my pen --- it has been absorbed only for a time by this mysterious third dimension, and will presently be restored intact to me. Why this curious procedure? Why is depth given so differently from the

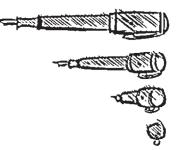
"Here we're as dull as unwashed plates; out there We shine. That's a consideration. Come Close to paradise, and where's the lustre? Minarets, gasometers, and even I Fall into space in one not unattractive Beam. To take us separately is to stare At mud; only together, at long range,

We coalesce in light." Christopher Fry, <u>Venus Observed</u>, I.

To the common-sense objection that I have exchanged an ordinary head for an absolutely swelled head -- for a species of cosmic onion -- it may be replied that I have in fact exchanged it for an absolutely empty head, for a hat which fits every head but mine, for a pillow on which all others may rest.

+ Cf. William Law: "God Himself cannot make a creature to be in itself, or in its own nature, anything else but a state of emptiness. The highest life that is natural and creaturely can go no higher than this; it can only be a bare capacity for goodness and cannot possibly be a good and happy life but by the life of God dwelling in and in union with it. And this is the twofold life that, of all necessity, must be united in every good and perfect and happy creature."

× It has several times been pointed out (e.g. by William James, <u>The Will to Be-</u><u>lieve</u>, pp.97 ff.) that there are two kinds of world-view --- the naive, which ignores the world-viewer, and the philosophical, which finds a place for him. A defect of the former is that the subject is unaware of his equality with the object. A defect of the latter is that the subject, becoming aware of that equality, is apt to become self-occupied, destroying by his insistence the very thing he insists upon.



other dimensions? It is not as if the distance of things were somewhat beyond my capacity, as if it were only arrived at with great difficulty and were easily overlooked. On the contrary, the astonishing fact is that I do not ordinarily notice any peculiarity about depth, and my estimate is for most practical purposes almost as adequate as my appreciation of height and breadth. What, then, is the significance of this peculiar mode (so apparently simple in operation, yet so complex in analysis) of presentation?

Common sense suggests that the uniqueness of depth may be coincidental. Or, more probably, that it arises out of the necessities of the case: there is (so to say) no room for depth, which has to fit itself into the picture as best it can, by means of every kind of innuendo. It is difficult to imagine how depth could have done otherwise, and contrived to manifest itself to the beholder at the same time and in the same manner as the other two dimensions.

It is a sound rule to regard few things as coincidental, none as impossible, and all as improbable. Familiarity with a two-dimensional field is no explanation of it, and a hundred-dimensional field is no more improbable. The fact that I cannot picture my field with the depth of its contents given just as their height is given, is no more to the point than the fact that I cannot imagine a dozen primary colours. What I actually find has to be accepted in a spirit of humility, and some significance extracted. And the significance here is indeed tremendous. Not without awe, I realize that any distance which separates me from my object is distance of my own making. A line turned endwise to the eye (as Hylas remarks to Philonous) is for that eye no line at all. A more striking demonstration of the hereness of my objects could not be imagined. I am Fortunatus with his wishing-cap, triumphing over space. + Between a pair of stars I see an interval, but between myself and them there is no interval. I have no need to check this fact by means of a tape-measure, because it is obvious that, end-on, it would not cover an inch. The speck on the window-pane coincides with the star

> "A man that looks on glasse, On it may stay his eye; Or if he pleaseth, through it passe, And then the heav'n espie."

And the moral that George Herbert draws is that "All may of Thee partake". \times Or, as I would say, the whole is here. $^\circ$

Distance is no object. At least it is not objective to the degree that shape and number (for example) are objective. Leaving aside the question as to how far depth is given and how far it is inferred, it is clear that I share responsibility for my object's range, in a way that I do not share responsibility for its form. If I do not actively put distance between us, making myself (and it) scarce, at least I am party to the deed. Its range is our range, whereas its height is not our height.

We cannot live in a flat world, but must impute depth. We do not do so as automatically as might be supposed. Consider how seldom a view is mentioned by classical writers, or how many centuries of primitive painting preceded the discovery of the principles of perspective by Leonardo and others. The depth of our world is normally very slight,

Aldous Huxley, <u>Time Must Have a Stop</u> (p. 294), has an interesting passage on the "unspeakable mysteriousness" of the third dimension of depth. The first notable attempt to explain the perception of depth was Berkeley's New Theory of Vision (1709), in which he holds that distance is suggested by such 'ideas' as the sensation arising from turning the eyes, the apparent magnitude and clearness of the object, the straining of the eye, etc. Since Berkeley, much research has been devoted to the question. One school (the Gestalt psychologists) reacting against the view that we infer distance (or reach it by a process of association based on past experience) try to show that the total primary brain-response to the situation gives the facts directly. But experimental psychology in general cannot thus dispose of the problem. At present the tendency is to stress the visual cues of distance, rather than the tactile-kinaesthetic. See Woodworth, Experimental Psychology, p. 680

+ The 15th century book of <u>Fortunatus</u> is a collection of tales about the adventures of Fortunatus and his son, with their inexhaustible purse and wishing-hat --- the wearer of the hat, wishing himself anywhere, found himself there. An instance of truth embodied in a tale.

× 'The Elixer'

° Professor H. H. Price writes: "It is obvious that all visual sense-data have the characteristic of depth or 'outness'. This characteristic of them is just as much 'given' as colour or shape, whether we can explain it or not." Perception, p. 218. I would qualify this. Only the data of one narrow belt seem to have their depth given with any discrimination. Collapse of planes is the general rule --- nebulae, stars, planets, and even the light on the hill, are all lumped together; and microscopic data are generally not stereoscopic. Yet we construct an elaborate system of depthregions, into which objects are suitably projected. I say that both the 'method' and the depth of the projective activity are relative to the hierarchical grade of the subject-object; and that the lowest grade do not project at all. In our stellar capacity, we relegate stars to their region; as human, we relegate men to their region. But initially all are here.

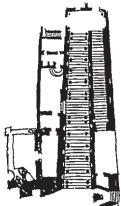
with the result that our lives are impoverished. The people living in the neighbourhood of Everest and Kinchinjunga are markedly indifferent to their surroundings. And even Dr. Johnson and his contemporaries considered mountains uncouth objects, while precipices were 'horrid'. But our forbears knew the value of the third dimension in the nearer regions. In architectural design, the approach has always been reckoned important. The long avenue of sphinxes leading up to the Egyptian temple, the Gothic nave converging upon the high altar, the colonnaded piazza and Trasparente and Scala Regia of the Baroque, with their faked perspectives, the vista of trees before the country house, the corridor-like chamber designed to put one in awe of the functionary presiding at the far end of it --- these are a few of the means by which a man is made to read depth into the picture. In order that he shall attribute the right degree of otherness to the object, there is arranged between him and it a graduated series of subordinate objects which serve, like the figures in the foreground of a Turner landscape, to stimulate his depth-creating activity.

Why (common sense asks) all this machinery of deception --- if it is deception? What is the truth of the matter? Is depth illusory, or is it real?

It is not illusory, neither is it the final fact. There are three 'moments' or stages, all of them necessary: --- (1) the flat world here, undifferentiated from myself; (2) the same world projected over there, seen in relief, made other than myself; (3) the same world seen as both here and there, both myself and other than myself. Without the second stage (of selfalienation) the first stage (of self-identity) is null and void. Again and again in this inquiry I shall come across the paradox of the self that can only recognize itself when it is wearing the disguise of the not-self. The self self-occupied is really a cipher. ° The failure of the flat or non-regional world of the centre is that the varying status of its contents is unrealized: there is no distinction between the star and the candle, between the moon and green cheese. The failure of the projected or regional world, on the other hand, is that the distinctions between its contents are emphasized at the expense of their unity here in me. The first stage suffers from an excess of oneness, the second, from an excess of multiplicity; the third corrects both by uniting them. It sees centre and regions as implicated in one another. ø

It is not enough that I live in a room with a view painted on the window; the prospect's depth is indispensable. Scenery that is on top of me does not satisfy. I must lose it to gain it. In thrusting away from myself these fields and clouds and sunsets and stars, I do not surrender them; on the contrary, I make them my own. John Cowper Powys rightly says that "there is a primeval necessity, harsh, inhuman, rugged, formidable -- not in the least 'artistic' or sentimental -- about keeping our eye upon sun, moon, earth, sky, sea, and letting our nature grow 'native and indued' to these solemn powers." + And the reason is that we are not ourselves without them.





The Royal Staircase in the Vatican Palace, designed by Bernini, c. 1665. Not only does the staircase narrow in plan so as to exaggerate the apparent length, but the height of the vault decreases. Such devices were commonly used by Baroque architects.

° "The Soul without extending, and living in its object, is dead within itself." Traherne, <u>Centuries of Meditations</u>, II. 56.

ø Cf. Lotze's dictum that "it is not we who are in space, but it is space which is in us." <u>Outlines of a Philosophy of Religion</u>, p. 53

+ Philosophy of Solitude, p. 122.

In more than one sense it is true that, as Emerson says, "The health of the eye seems to demand a horizon. We are never tired so long as we can see far enough." 'Nature' (1836), III. On the intolerable strain of focussing upon near objects all the while, and the lack of remote perspectives in our life, see Gerald Heard, <u>Pain,</u> <u>Sex and Time</u>, pp. 220 ff.

10. EPILOGUE TO CHAPTER I.

I have outlined the self-portrait which later chapters will fill in. Many features will need amplifying and correcting. To mention only a few, I have so far ignored all the senses but vision, left unexamined the paradox of the mirror, been intentionally vague about the number of regions, and glossed over many seeming exceptions to my generalizations. My references to such 'higher wholes' as planets and stars need much explaining. Above all, I have not yet done justice to the dynamic and purposeful character of man: he is much more than the passive contemplator of presentations which some parts of this chapter, taken alone, would suggest. All in good time --- every picture has to begin somewhere, and no artist can be (or, for that matter, should be) fair to details from the start.

(On the whole, I think it is better to begin an inquiry of this kind with a large-scale sketch whose bold lines are corrected and filled in later, rather than to try to build up the picture by the slow accumulation of details that are correct from the start. It is true that the method I have chosen lays me open to severe criticism on many issues by experts. There are, for example, many questions concerning sense-data, perception, and the like, which I may be said to have improperly avoided. But there is a good deal to be said for this omission. (1) I doubt whether I can usefully add to the immense literature which treats directly of such problems. ° At least there is the possibility that the indirect and unorthodox method of this book will contribute something fresh and of value. Accordingly I become involved right away in cosmological questions, so that my epistemology is from the beginning cosmological (so to say). This procedure is not so illogical as it may seem, however. For even the most cautious students of sense-data and perception make metaphysical and cosmological assumptions which are apt to pass unexamined; and, in any case, it is quite impossible first to lay a safe foundation of pure epistemology, upon which to rear, storey by storey, the philosophical superstructure. Not only is work going on at all floor-levels at once, but every change at the higher levels requires some alteration in the foundations: indeed, you cannot design the foundations till you have designed the building that is to stand on them. And your methods are likely to work better if you are honest about their lack of precision. (2) The results of the orthodox approach to problems of sense-data and perception, though often important and stimulating, are certainly not conclusive. In fact, while some philosophers make sense-data (patches of colour, raps of sound, and so on) the basis of all experience, others deny that they exist at all, and declare that they are a philosophers' invention, or entirely artificial abstractions. \times So long as the discussion stays on a high philosophical plane, and ignores the concrete data of science, there seems little chance of settling anything; but once we determine to make full use of science, co-ordinating its findings (concerning which even philosophers are frequently in agreement) into something like a cosmology, the prospects for philosophy in general, and for epistemology in particular, are markedly improved. This would be 'putting the cart before the horse' only if, in philosophy, carts were incapable of becoming horses. (3) The justification of my method -- or lack of it -- must lie in the results, which I think will be found (as this inquiry goes on) to co-ordinate very large

^o Notable works are C. D. Broad's <u>The</u> <u>Mind and Its Place in Nature</u> (particularly Section B), and H. H. Price's <u>Perception</u>.

× Idealists hold as a rule that there is in experience no datum that is presented by itself or self-containedly; but all that is found is already the product of mind or interpretation. It is suggested that the analysis of experience into sense-data etc. is a part of the general tendency of modern man to break up the whole into fragments that become more and more empty and unreal as their vital interconnections are cut. See H. J. Paton, <u>The Idea of the</u> <u>Self</u>, University of California Publications in Philosophy, vol. viii, pp. 76-77; and H. H. Price, <u>Op. cit.</u>, pp. 5-6.

William James wrote to one of his correspondents: "I am a-logical, if not illogical, and glad to be so when I find Bertie Russell trying to excogitate what true knowledge means, in the absence of any concrete universe surrounding the knower and the known. Ass!" and diverse areas of our experience. This remains to be seen. But I may perhaps anticipate the results by mentioning one of them. It is that 'perception' and 'sensation' become relative terms --- relative, that is to say, to hierarchical grade: roughly speaking, what an individual of a certain grade 'senses' is 'perceived' by its subordinates, ° and our experience involves experience at every hierarchical level. The process of perception, which is generally discussed as if it happened 'horizontally', is for me essentially 'vertical', many-levelled: it is cosmological, and can only be understood as such.)

° More accurately, what may be called 'pure sensation' occurs only at the lowest level, and completed 'perception' only at the highest, while intermediate levels are concerned with 'working up' the data. This does not mean that man, as half way, is capable only of middle-grade perceptions: for he is capable of moving up and down in the hierarchical scale, But it is too soon to discuss these matters in detail.

CHAPTER II

MY KNOWLEDGE OF THE OUTSIDE WORLD

But of vision alone is a separate science formed among philosophers, namely perspective this most beautiful science. To be sure some other sciences may be more useful, but no other science has such delightfulness and beauty of utility. And therefore it is the flower of all philosophy.

Roger Bacon, Opus Majus, 'On the Science of Perspective', I.

Light is something holy and is the universal bond.

Victor Hugo, Intellectual Autobiography. (Postscriptum de Ma Vie).

What we are, that we gaze at; and what we gaze at, that we are.

Ruysbroeck, The Sparkling Stone, IX.

And does it (the eye) not possess the power which it has, by the sun's dispensation, as an effluence from it?..... Then the sun is not sight, is it; but, being the cause of sight, it is seen by the same?

Plato, Republic, VI. 508.

Whenever there is daylight round about, the visual current issues forth, like to like, and coalesces with it and is formed into a single homogeneous body in a direct line with the eyes, in whatever quarter the stream issuing from within strikes upon any object it encounters outside.

Plato, Timaeus, 45 C

If I see the sun and it makes me blink, what I see is not 93,000,000 miles and eight minutes away, but is causally (and therefore spatio-temporally) intermediate between the light-waves striking the eye and the consequent blinking.

Bertrand Russell, Physics and Experience, p. 21.

This made me present evermore With whatsoe'er I saw. An object, if it were before My eye, was by Dame Nature's law, Within my soul. Her store Was all at once within me

The sun ten thousand legions off, was nigh: The utmost star, Though seen from far,

Was present in the apple of my eye.

Traherne, 'My Spirit'.

1. THE SCIENTIST IS CALLED IN.

What am I? In the previous chapter I tried to answer this question by direct inspection, using hearsay as little as possible. And I discovered a mass of paradoxes.

A possible reason for this, and a remedy, suggest themselves. The reason is that I left the firm ground of common sense for the airy and bound-less speculations of philosophy; the remedy is that I go back to common sense, and to science, which is only common sense developed.+ Science, for example, gives a careful and detailed account of the way I see things --- an account that is always being proved in practice.

Let me then call in the aid of the scientist. What has he to say about the way I come to see this sheet of paper and this pen, and the hand that holds the pen? Here is this pink leaf-like object --- vivid, obvious, + Actually the philosopher, starting with the experience of a subject, is in some respects more empirical than the scientist who treats the object as if it were independent of himself and of the knowing relation. As Bradley says "The physical world, whether it exists independently or not, is, for each of us, an abstraction from the entire reality." <u>Appearance and Reality</u>, p. 261.

Of course many scientists are aware of these (necessary) limitations. Eddington, for instance, wrote: "those who in the search for truth start from consciousness as a seat of self-knowledge with interests and responsibilities not confined to the material plane, are just as much facing the hard facts of experience as those who start from consciousness as a device for reading the indications of spectroscopes and micrometers." <u>The Nature of the Physical</u> <u>World</u>, pp. 288-9. indubitable, unmediated. And yet, I am informed, there is an immensely complex mechanism by which this perfect lucidity is secured. What, briefly, is that mechanism, and how reliable is it?

2. THE SCIENTIST'S ACCOUNT OF VISION --- LIGHT.

Light is now travelling from my hand to my eye, where it forms a little inverted picture of my hand. The picture gives rise to certain impulses which pass along the optic nerve to the brain. The result is that I see my hand. That (in the smallest possible compass) is the familiar story, the story which I think I understand, which I imagine makes sense --- until I take the trouble to examine it.

Actually the train of events does not start here and now, but 93 million miles away and eight minutes ago in the sun, when certain parts of that body detached themselves and set off on their journey to my hand. In other words, seeing my hand is an item in the expansion (at 700 million miles an hour) of a star. Any tendency to be surprised at this fact is at once dispelled by using the magic word light, or (better still, because more 'scientific') photons. Light is more than a mystery: it comes near to being the mystery. And the mystery does not only or chiefly lie in the contemporary puzzle as to how light can behave both as waves and as particles, nor in the way one set of these waves or particles is unaffected by innumerable other sets traversing the same space, nor in the paradox that the speed of light is the same whether the light-source is approaching or receding from its observer. The deeper problem is suggested by such questions as the following: -- What is the real relation of these three: the object, its light, its observer? Is the object present in the light that radiates from it? Is sunlight the sun itself, as the expression 'sitting in the sun' would imply? If it is not, how can I see the sun? If it is, what is the nature of this solar omnipresence, and how does my hand come to be involved in it?

Whatever sunlight really is, the scientist says that some of it (after filtration by the earth's atmosphere) is absorbed by my hand, and some of it is rejected. And a part of what is rejected travels to my eye, passes through its lens, and makes a small inverted picture of my hand on the retina --- the sensitive screen at the back of the eye. In short, I see because I am a camera.

There is a further difficulty here --- a host of difficulties. First, since light takes time to get across to my eye, I see the hand I once had, not the hand I have now. Second, while I say unthinkingly that I see a <u>hand</u>, the truth is that light (like a taxidermist for whom only the skin counts) reveals only the surface, and less than half of that at a time. Third, if my hand's light is only borrowed sunlight, is it really the sun that I see, or what my hand does to the sun, or what the sun does to my hand? The scientist's tale is that it is the light which my hand <u>rejects</u> that comes on to my eyes; what it accepts goes no further. ° That is as much as to say that my hand is pink because it refuses pink light, and my tie is green



Horizontal section through human eye. The eyelid (not shown), iris, lens, and retina correspond respectively to the shutter, stops (or iris dia phragm), lens, and film of a camera. But whereas in the camera focussing is accomplished by altering the distance between the lens and the film, in the eye the shape of the lens is altered to give the same result. The lens of the one is of glass; the lens of the other is an immense population of transparent animals.

^o It is much the same story in the sun itself. The radiation which comes to us from the sun's deep interior has to pass through the upper absorption layers, which obstruct radiation of certain wavelengths. Always the object is known by -- and, in a sense, <u>is</u> -- the light it refuses to absorb, or keep to itself. because green is the one colour which my tie will have none of. Is the information passed on to me by light always a lie?

My hand is in one place; and in another place, a foot or so away, is the inverted picture on my retina. What goes on in that twelve-inch interval? I am assured that neither my hand, nor a replica of it, nor a flock of such replicas, fly through space to my eye. But if what does make the journey is quite different from what lies at either end, many baffling questions arise. It is as if my hand had to be taken to pieces, or turned into code, or somehow made portable for the journey, and then put together again, or de-coded, or unfolded, on arrival. How anything resembling this is possible, and how mistakes and distortion are avoided, are riddles not easily solved. I do not say that my doubts and difficulties are altogether unanswerable, but only that the answers which science has so far given me raise questions no less formidable than the old ones.

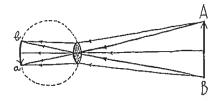
3. THE SCIENTIST'S ACCOUNT OF VISION --- NERVES AND BRAIN.

Let me put to one side all these difficulties, and consider the picture of my hand -- shrunken, upside-down, and right-side-left -- which I am told is present in my eye. The question is: how do I get to know this picture?

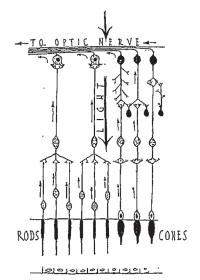
The answer is no secret. My retina is a mass of many millions of separate receptors --- nerve cells specialized for their task. These cells (in particular, the rods and cones, which lie at the back of the retina), when suitably stimulated, initiate electrical impulses which pass along the optic nerve to the brain. But between the light that falls on the retina and the nervous impulses that lead out of it, is a third term --- chemical processes. Photo-sensitive substances (associated with the rods and cones) are decomposed by the action of the light, and apparently it is this decomposition, and not the light itself, which gives rise to the impulses that are transmitted to the brain.

How perfectly designed to draw a veil over the facts are these little words --- light, eye, cell, nerve, brain! When I use them how natural and comprehensible the story seems! But observe the effect of retelling it in cruder, unscientific language (at some cost in accuracy, it is true). I am to imagine an immense herd (more than 100 million of them) of blind and tethered animals. Not I, but these creatures, see my hand. And each sees only a tiny portion of it; and in fact does not see that tiny portion but tastes it; and in fact does not taste it but tastes instead certain chemicals very remote from my hand. And even the word <u>taste</u> is a metaphor for facts still more obscure, and must not be taken too seriously.

Certainly it is nothing like sensations of taste (or the bleaching of the visual purple, or light waves) which passes along the nerve cells that link my retina with the visual areas of my brain, but a series of electrical impulses. And a notable fact is that there seems to be no significant difference between the kind of impulses in one bundle of nerve fibres and those in another. The important thing is the route of the message, the



Diagrams like this (illustrating the passage of light between the object A-B and its inverted image b-a) are useful, but they have the disadvantage of suggesting that we know what is going on, and what light is.



Layers of the retina (diagrammatic). The retina has several layers of cells lying above the rods and cones, which are the actual receptors. The rods are used for seeing in semi-darkness and do not distinguish between colours; the cones are used for daylight vision.

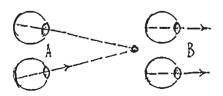
The nature of retinal processes is a large subject, with an ever-growing literature. In particular, a great deal of research has gone into the chemistry of the visual purple (rhodopsin) which is the photosensitive pigment. See, e.g., R. A. Houston, <u>Vision and Colour Vision</u>, and S. L. Polyak, <u>The Retina</u>. connexions that are made in the brain.

When I say that I am observing my hand, I imply that electrical impulses are travelling, at more than express-train speed, along the attenuated bodies of myriads of animals lying end to end. By various routes these impulses arrive in the part of my brain called the visual cortex, where (seemingly and to some extent) the spacing of events corresponds to the pattern of my hand on my retinae. ° If this is indeed so, the scientist is back where he was at the start; rather he is worse off, for he is literally in the dark --- what, for instance, has happened in the unlit interior of my head to my hand's pinkness, to its lights and shadows? Even if the impossible were to happen, and a surgeon operating on me at this moment were to find embedded in my brain a perfect replica of my hand, with all its varied tints and innumerable surface details, with its proper structure of tissues --- even such a discovery would do nothing to explain how I come to see my hand. It would simply mean beginning all over again, with the added inconvenience that the object is now only a copy of the original, and that I have neither eyes nor other sense organs in my brain to enable me to perceive it.

Such is the scientific story of how I come to see my hand. I have abridged it drastically. Vision involves far more of my body than retinae, optic nerves, and the visual area of the cortex. Somatic (or internal) and non-somatic (or external) sense-data are inextricably mixed. The eye-movements as I trace my hand's outline, the accommodation of the eye-lenses as they keep the hand in focus, the convergence of the eyes upon their object, the associated movements of my head and neck, --- all these activities mean that nerve impulses are passing between the muscles concerned and various part of the brain, and making their contribution to my seeing. × Even my ears have something to add: impulses from the labyrinths of the inner ear tell their part of the story. Again, though certain parts of the brain are specially linked with vision, it is generally agreed that in some sense the brain functions as a whole: events in it are thoroughly co-ordinated. * And one of its most important functions is the <u>selection</u> of incoming material: even in the matter of seeing my hand I am no helpless receiver of impressions. General interests determine what I shall see. Above all, it is essential to remember that vision is a twoway process, of which the outgoing or afferent half is just as important as the incoming or efferent. Seeing is a mode of reacting. I behave towards my object, and this behaviour cannot be omitted from any adequate account of how I come to know that object.

Science deals in abstractions. The only question is what particular set of abstractions suits the purpose. And a specially useful set is the incoming train of events that connects the sun, the world around me, my retinae, and the visual area of my cortex. This selection from the facts is found to be important in practice. For if this train of events is interrupted anywhere (as when at night the sun is darkened, or my hand is in my pocket; or my eyes are shut, or I have a cataract, or my optic nerves are injured, or certain parts of my brain are diseased) then I do not see my hand. The essential thing is that the train of events shall get through to its terminus in my brain. ° See e.g., Köhler, <u>The Place of Value in a</u> <u>World of Facts</u>, p. 132, and Petermann, <u>Gestalt Theory</u>, p. 304; also W. E. Le Gros Clark, in <u>New Biology</u>, i, (1945), and W. Russell Brain, in <u>Philosophy</u>, July 1946, p. 137.

"No valid theory of the body-mind relations is possible until the old theories of matter are abandoned and the whole question thought out afresh" said Professor A. D. Ritchie at the 1949 meeting of the British Association. "No kind of physical or chemical process in the nerve or anywhere else is in the least bit like feeling a pain, hearing a sound or seeing a colour."



Convergence: A, axes of eyes converging upon a near object; B, axes parallel when seeing a distant object.

× To take another example, if I open my eyes in a dark room, the blackness seems to retreat from my eyelids to the space beyond. This projection is presumably associated with nervous impulses proceeding from the muscles whereby I open my eyes.

* For a statement of the view that the cortex functions as a whole, see K. S. Lashley, Brain Mechanisms and Intelligence. (My own point of view is that 'brain' and object are correlative, and that how much 'brain' is involved is a question of the level of the activity under consideration. When my behaviour as cells is in question, neurones are the relevant units; when the behaviour of the whole animal is in question, the whole nervous system, or rather the whole body, must be studied; when specifically human behaviour, involving for instance moral questions, is being considered, society, and still more inclusive wholes, must be taken into account. In short, how much 'brain' I am using depends on how much of the world I am dealing with. The law of equality holds. I cannot quarrel with J. B. Watson's dictum that a whole man thinks with his whole body in each and every part (still less with Donne's line "That one might almost say her body thought", in 'An Anatomy of the World'); provided the body is not taken as a fixed quantity, but is scaled up and down to match the object of its endeavour.)

4. THE UNKNOWN OUTSIDE WORLD.

If the foregoing account is in the main correct, I know only my brain or a part of my brain. All the rest is inference. Only the end term matters. An infinitely clever surgeon, stimulating my nerve fibres appropriately, could produce in me all the sense experience that I now enjoy by more normal means, and could create for me new worlds unhampered by reference to any outside reality. °

> "In a little house keep I pictures suspended, it is not a fix'd house, It is round, it is only a few inches from one side to the other; Yet behold, it has room for all the shows of the world....." +

But I am never allowed outside the picture gallery, and can never know whether any of its exhibits bear the slightest resemblance to the outer world.

What and where is the hand I am now observing? One attempt at an answer is to say that when my brain is excited in a certain way I have an 'idea' or 'mental image' of my hand. Hitherto I have been dealing with objects that occupy space, but this 'idea' of my hand takes up no room and has no position. It is not smaller than my idea of an elephant or bigger than my idea of a pin. It is not a five-fingered idea, or a pink idea. It does not lie east of my idea of New York or west of my idea of Tokyo. It is not situated in my physical hand, or in my physical head, or in some third place. * It is nowhere. Nevertheless it is perfectly real. It belongs in the spaceless world of the mind.

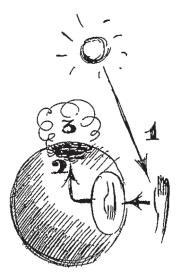
Does this sound a likely tale? Does it solve the problem? Does it not, in reality, create fantastic new problems, such as the problem of how my brain, which is an insignificant material object in space, gives birth to an entire non-material and non-spatial universe? Is this contemptible fragment, which will soon rot away, capable of making a copy of the world itself, of the infinite complexity of nature? Is a colony of microscopic and lowly animals, shut up and sealed in a little bone cage, equal to such a Godlike task? Surely this mental world, as something distinct from the physical world of which it is supposed to be a reproduction, is useless myth.

The difficulties for mind-body theories of this sort are indeed formidable. For the theorist has three disparate items on his hands: (1) events in the external physical world; (2) events in the internal physical world of the brain --- events which (heaven knows how) are the equivalent of (1), or represent it; (3) consciousness or ideas or a mental world which, though of an entirely different order from (1) and (2), must be true to both. The difficulty (not to say the absurdity) of supposing that (2), which is only a microscopic part of (1), can yet copy it, is almost as great as the difficulty of attributing to (2) the magical power of creating (3). Nevertheless it is science itself which, seemingly, would force us towards some such fantastic 'solution'. Sir James Jeans wrote: "Reflection shows through how many intervening stages our knowledge of it (matter) must ° When the visual areas of the cortex are stimulated by the application of a weak electric current, the subject does not report pain, but rather visual experience. In one case he saw flames, stars, butterflies, and persons. (See Robert S. Woodworth, <u>Psychology</u>, (1946) pp. 273-4.)

+ Walt Whitman, 'My Picture Gallery'.

It is noteworthy that modern Western philosophy is generally reckoned to date from the dualism of Descartes, which sharply divides mind from body, spirit from matter. The mind's attribute of thought, and the body's attribute of extension, are irreconcilable. Having thus cut reality in half, philosophy must put it together again.

* Cf. Plato, <u>Theaetetus</u>, 153 D: "First, to take the case of the eyes, you must conceive that what you call white colour has no being as a distinct thing outside your eyes nor yet inside them, nor must you assign it to any fixed place."



come -- matter, events, effect on our senses, travel along our nerves, passage over the mind-body bridge -- before it reaches our minds. For this reason the matter in which events originate may often be very different from the matter we think we see or hear or feel." \times In a similar vein (but much more cautiously than Jeans) Bertrand Russell says: "It is not to be supposed that 'perceiving' an object involves knowing what it is like Certain inferences, of a highly abstract character, can be drawn from our perceptions to the objects perceived; but these inferences are at once difficult and not quite certain." + Science, I suggest, shows the difficulty to be practically insurmountable.

My 'ideas' about the outside world arise at the terminus of the train of events, in my brain. The scientist cannot see them or measure them. † He has then a fourfold choice. He may say that they do not exist; or that they do exist, but as a by-product of no consequence, an epiphenomenon of the real physical events in my brain; or that they are founded on outside fact, which however they can only distort or misrepresent; or, finally, that they are (subject, perhaps, to mutual correction) true copies of the outside world. And the only alternative of these four which the scientist can choose without self-contradiction is the last, for science's very existence is a confession of faith in our ability to know the world outside our bodies.

But it is on his own showing that the scientist's faith is blind, a leap in the dark. Consider all the hazards of the journey from the atoms in the sun to the atoms in my head; consider the variety of the vehicles and how little is known about them, the transformations involved in changing vehicles, the disparity between the universe at one end and the brain cells at the other; consider above all the fact that every bit of information, including all scientific knowledge (including, moreover, the sun-lighteye-nerves-brain story itself) is confined to the end term of the process --- consider all this and say what kind of faith it is which nevertheless believes that somehow the truth about the world gets through to the observer. It is science itself which asserts that the whole sequence, from sun to cortex, may well be a colossal fiction. If the generally accepted account of how I see my hand is in all respects right, then it is rash of me to believe in anything at all out there; to believe I see it truly is an act of blind faith; to believe I know exactly how I see it is sheer craziness. In brief, science trying to explain how it comes by its knowledge is science attempting suicide.

As a matter of fact, science generally tries to compromise. It tells me that the vivid and meaningful world I experience is the flimsy construction of my mind, erected on the foundations of a real world, which is a silent, colourless, scentless, impalpable energy-system. + "I think that these tastes, odours, colours, etc. on the side of the object in which they seem to exist, are nothing else than mere names, but hold their residence solely in the sensitive body; so that if the animal were removed, every such quality would be abolished and annihilated." ° Yet Galileo (whose words these are) did not doubt that he had knowledge of the real object that lay behind these sensible appearances. As Locke would say, an object's primary qualities (as extension, figure, motion, and number) are inseparable from it, whereas its secondary qualities (such as colour and × <u>The New Background of Science</u> pp. 12, 13.

+ <u>Outline of Philosophy</u>, p. 72. Cf. Eddington's <u>Science and the Unseen World</u>, pp. 22 ff., where the problem as to how true information about the outside world can get through to the observer is strikingly put. In my view, the mistake of Jeans and Eddington (and Russell is not free from it) is their attempt, foredoomed to failure, to preserve some equivalence between the two ends of the train of events. The truth is that the contrast between what the object is over there in itself, and what it is here in me, cannot be exaggerated.

† Nor is it relevant to point to certain correspondences between 'outer events' and 'brain events': to the fact, for instance, that one may tell the periods, by looking at an electro-encephalograph, of a flickering light seen only by the patient whose brain is under examination. Both the encephalograph and what the neurologist sees are, like the flickering light, peripheral to the patient; and all they can hope to discover are significant correspondences between events situated in the concentric system whose nucleus is the patient.

⁺ Thus Newton says of light: "For the Rays to speak properly are not coloured. In them there is nothing else than a certain Power and Disposition to stir up a Sensation of this or that Colour." <u>Opticks</u>, I. 2.

^{° &}lt;u>Il Saggiatore</u>: quoted by E. A. Burtt, <u>The</u> <u>Metaphysical Foundations of Modern</u> <u>Science</u>.

sound) "are nothing in the objects themselves, but powers to produce various sensations in us by their primary qualities." *

But this compromise will not do. If the colour of my hand is illusory, its shape and mass and motion may, for the same reasons, be illusory. The motion of my hand is not less doubtful than its pinkness, or its atoms and electrons less hypothetical than its cells. Too easily we forget that space-time and wave motions and quanta, and the entire super-structure of modern physics, are inferred from and built upon ordinary sense experience. They are secondary constructions, and they stand or fall with their foundations. The physicist must start by taking the apparent world on trust, and he can never undermine that world without bringing down his own. +

5. THE SENSES OTHER THAN VISION.

Common sense inquires at this point whether some of my difficulties are not due to the fact that I have limited myself to one sense, namely vision. It is not sight, but touch, that convinces doubting Thomas. Surely the reality of the outside world is vouched for by the combined evidence of all the senses. × In spite the diversity of their interests they appear to tell a consistent tale, and when witnesses so independent agree, may not their evidence be presumed true?

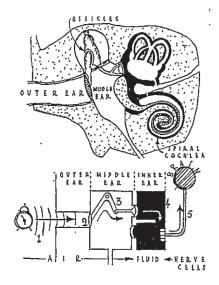
Let me examine the credentials of these new witnesses. First, take hearing. I attend for a moment to the ticking of the clock in this room. The sound is as clear, as given, as much beyond argument, as anything I can ever experience. But what is the scientific story?

The striking of metal on metal in the clock sets up waves in the air, which cross the room to my ear and beat on my ear-drum, causing it to vibrate. Behind the drum is the middle ear, and then (constituting the inner ear) a series of complicated chambers full of fluid and containing the actual sensory cells, with their hairlike projections. An arrangement of bony levers in the middle ear passes the vibrations of the ear-drum on to the fluid contents of the inner ear, so disturbing the hair-cells. These are linked with nerve fibres which lead to the parts of the brain concerned with hearing. The stimulation of the hair-cells gives rise to nerve impulses (of the same kind, it seems, as are involved in vision) which are passed on to the cortex, but the frequency and the nature of these impulses are quite different from the frequency and the nature of the vibrations in the ear-drum and the outside air. The kind of sound I hear is a question of which of the many fibres in the auditory nerve are conducting impulses.

Such, in so far as it concerns this inquiry, is the story of how I hear. It is the story of how I see, with minor alterations. Where is the ticking sound that is now so clear and distinct for me? Not, I am assured, in the clock, not in the air of the room, not in my ear-drum or the fluid contents of my inner ear. Thus far there are only silent waves, mere matter in motion. Nor are the fibres of my auditory nerve noisy with the metallic * Essay Concerning Human Understanding, II. Viii. 10.

+ There is an illuminating discussion of this topic in L. Susan Stebbing's <u>Philoso-</u> <u>phy and the Physicists</u>, II.

× Cf. J. B. Baillie, in <u>Contemporary British</u> <u>Philosophy</u>, (Ed. Muirhead), 1St Series, p. 39.



Vertical section through human ear, with a model (based on one by Beatty) to show the five stages: -- (1) air waves, (2) vibrations of ear-drum, (3) motion of ossicles, (4) motion of fluid of inner ear, (5) nerve impulses -- which intervene between the events in the clock and the events in my brain.

ticking of the clock on the mantelpiece. The scientist tells me that I cannot hear a sound until the nerve impulses reach the auditory area of the cortex. What happens there in or among the atoms?

How does a world of sound arise out of their silent evolutions? When I listen to a Beethoven symphony, is their dance producing its own accompaniment, which is the music I enjoy? One thing is clear: it is futile to appeal to what I hear for information about the outside world.

But it is touch for which common sense claims a special validity. How does this claim stand?

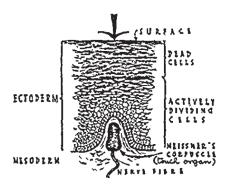
Actually there is not one sense of touch, but a number of allied senses. Over the surface of the body, or rather just beneath the surface, are distributed nerve endings sensitive to pain, others sensitive to cold, others sensitive to warmth, others sensitive to contact. (Thus I do not feel an object touching my eyeball till it begins to hurt; this is because the eyeball has pain receptors but is short of contact receptors. Conversely, parts of my cheek are well supplied with contact receptors but short of pain receptors --- I can prick my cheek in some places without feeling pain.) These different senses all have the same sort of bodily apparatus: there are the sense organs near the surface, and nerve fibres which connect these with the central nervous system, leading eventually to the brain. And in each instance, if the nerve is cut at any point on its way to the brain, there is no sensation. In fact, a regularly used though drastic method of killing local pain is to cut some of the nerve fibres that lead from the painful area to the brain. +

A man who has lost his leg may go on feeling pain 'in his foot'. Apparently I am no less mistaken when I suppose that my hands are warm, and my feet are cold, and my back itches. All this happens at the terminus. I can only have cold feet in my head, and all aches are headaches. If I am in touch with anything, it can only be with certain portions of my brain, and even these do not reveal themselves to me as tissues or cells, but as something utterly different. About my skin and what it is touching, about my hand and what it is handling, I know nothing. The feel of things out there tells me no more than the look and the sound of them. It does not even guarantee their existence outside my experience of them.

The remaining senses are no better off. As for their combined deliverance, it can hardly be more valid than the separate stories. A consistent tale told by a number of witnesses is no more likely to be true than the unsupported statement of one, if all are ignorant or liars by nature, and have had years together in which to cook up their story. To sum up then, my seeing and hearing, my touching and tasting and smelling, may be taken as true insight into what the world is --- at one particular spot. The rest of the universe may be no more than a superstition.

As Dr. W. Russell Brain points out (in Philosophy, July 1946, p. 136.) "according to neurophysiology, the observer is like a deaf housemaid who sits in her kitchen and watches the indicators of the electric bells. There are different bell-pushes (receptors) outside the front door and the back door and in the various rooms, but similar currents travel along similar wires and the only difference she can detect is that different indicators move." According to E. D. Adrian, The Basis for Sensation, (1928), the quality of the sensation depends on the path of the nerve impulses, and this is apparently true where the difference between a sound and a colour and a scent is in question; there is little or nothing else than this to distinguish the messages originating in one sense organ from those originating in another.

+ This treatment is applied to <u>tic dou-</u> <u>loureux</u> --- a very painful kind of facial neuralgia.



A microscopical section (diagrammatic) through the outer layers of the human skin, to show the remoteness of the touch receptor from the object 'touched'.

6. AM I ALONE?

Before going on with this inquiry it is worth while to stop and ponder

the question: is there really anything but myself? * At best, science cannot show me that I am not alone, the sole reality. The only course for one who will not go beyond the evidence is to refuse to make up his mind.

Though there can only be one solution to the problem this side of sanity, I shall forgo a curious experience and shall skip a stage in intellectual growth, if I never seriously doubt the existence of everything but my own consciousness, if it never occurs to me that perhaps, like the Red King, I am dreaming the universe. Schopenhauer went so far as to say: "He to whom men and all things have not at all times appeared as mere phantoms and illusions, has no capacity for philosophy." And in this general scepticism must be included the doubt, not merely as to whether other selves exist, ° but as to whether I exist as a self. There is at this moment a pink patch moving, there is another larger patch which is white with blue markings, there is a faint grating sound, there is a louder ticking sound, there are warmth and pressure and a number of vague sensations. Or rather there is that first-hand experience for which these inadequate words stand. About a Person who writes, or about a Hand, or about a Page, over and above what is now being presented, there is no certainty. There is only faith.

7. SHALL I REJECT THE SCIENTIST'S STORY?

As Whitehead noted, the real problem is not to fit my perceptions to the world but the world to my perceptions. × If I were both scientific and consistent, I would regard the problem as insoluble. For science, basing its whole enterprise on the independent existence and knowability of an external world, proceeds to transfer item after item from that world to the internal or subjective world (the world of the terminus) till nothing external remains --- not even my body or nervous system, my brain or its cortex. Some writers mistakenly suppose that I have better evidence for the existence of matter in my head than for the existence of remoter objects. If the outer physical world goes, my body (which is of a piece with it) goes also, and I cannot exempt my brain from the criticism which I apply to the rest of the universe. • Science, in short, attacks its own premises.

Does this mean that I can afford to ignore what the scientist has to say (seeing that he contradicts himself) and can rely on metaphysics, or intuition, or some other source, for information as to my real nature?

This would certainly be inconsistent of me. For my behaviour, if nothing else, is a permanent demonstration of my profound belief in science. If a brain tumour blinds me, I place myself in the hands of a surgeon who knows where to operate with the best chance of success. If I cannot see this page clearly, I go to the oculist, in the knowledge that he will prescribe for me the right sort of spectacles without recourse to trial and error. If the room is about to be darkened by a solar eclipse, my morning paper has already made me aware of the hour and the minute of it. Whatever I may say to the contrary, in practice I believe in the scientist's * "Everything astonishes me, Myself most of all. When I think of myself I can scarcely believe my senses. But there it is,

All my friends tell me I actually exist And by an act of faith I have come to believe them."

(Christopher Fry's Chaplain is here sounder than the philosopher who is not so sure of others' existence as of his own. If I am anything at all, only my companions are in a position to make the discovery. <u>Amicum habeo, ergo sum</u>.)

^o There has been much recent controversy about the basis of our knowledge of other persons. See e.g. C. D. Broad, <u>The</u> <u>Mind and Its Place in Nature</u>, pp 319 ff., Bertrand Russell, <u>Human Knowledge -- Its</u> <u>Scope and Limits</u>, pp. 501 ff., and discussions by Professors Aaron and Price, and Dr. J. R. Jones, in <u>Philosophy & Proceedings of the Aristotelian Society.</u>

As Bertrand Russell gloomily but justly observes, "It is obviously possible that what we call waking life may be only an unusually persistent and recurrent nightmare." (<u>Our Knowledge of the External</u> <u>World</u>, p. 94.) And there are the wellknown lines of Tennyson, in the poem 'The Ancient Sage':

"Thou canst not prove that I, who speak with thee,

Am not thyself in converse with thyself, For nothing worthy proving can be proven,

Nor yet disproven "

× Aims of Education.

• Bradley (<u>Appearance and Reality</u>, pp 262 ff.) is one of the philosophers who points out that naturalism, having reduced the universe to a state of my brain, cannot stop there. "If the outer world is not real, our organs are not real."

Cf. Whitehead, <u>Science and the Modern</u> <u>World</u>, p. 113: "Some people express themselves as though bodies, brains, and nerves were the only real things in an entirely imaginary world. In other words, they treat bodies on objectivist principles, and the rest of the world on subjectivist principles."

It is for making this mistake that L. Susan Stebbing took Eddington and Jeans to task in her <u>Philosophy and the Physicists</u>, II. vi. As John Laird points out (<u>A Study in</u> <u>Realism</u>, p. 30) it will not do to be a naive realist inside the laboratory, and a subjective idealist outside. account of how I see my hand, and in his account of the world in general.

Of course this proves nothing. My belief, and the evidence on which it is based, may be no more than a relatively coherent part of my worlddream. But even if science were simply the weaving of a subjective pattern, the pattern is wonderfully interesting, and well-knit, and consistent, and not less worthy of attention than the other patterns which I weave. Even if (despite my conviction to the contrary) this inquiry were a dream within a dream, it could afford to ignore no dream material that seemed promising --- and science has a wealth of material, much of it quite unused, to offer. I shall therefore take seriously the conclusions of science, and in particular its account of my sense experience. A philosophy which refuses to do so is not likely to be taken seriously itself. The fact is that philosophy unfertilized by science withers, while science lacking roots in philosophy grows rank. The thinker who neglects the scientific knowledge of his time neglects inspiration. +

My problem, accordingly, is twofold: first to reconcile the scientific story of this chapter with itself by removing some of its internal contradictions, and second to reconcile it with the conclusions of the previous chapter. It is obvious that I shall have to be content with a very modest measure of success. ×

8. THE CONFUSION IN THE SCIENTIST'S STORY.

The scientist tells me that my world is 'in my head'. At once a rather startling fact, and one that promises well for this inquiry, emerges: this conclusion of science is essentially the conclusion of the previous chapter. There, too, it was found that my world is 'in my head', (or rather it is where I imagined I had a head) and not over there in the distance where I thought it was. The scientist only confirms the philosopher's view. What I experience I experience here. I see the sun because I am in the place where it (whatever <u>it</u> may be) is the sun. I see my hand because I am in the place where it is my hand. *

In other matters there is not the same agreement. For example, whereas the philosopher of the previous chapter says that I have here on my shoulders <u>either</u> a head (as others report) <u>or</u> a world (as I report), the scientist of this chapter implies that I have both at once. He overcrowds the spot I call <u>here</u>, forgetting that there is (so to say) not enough room on my shoulders for my world and my head at the same time. † Robert Hooke, the 'experimental philosopher', who believed that there was a material storage of ideas, claimed that the microscope revealed ample room in the brain for the two million or so of them which (by his reckoning) a man acquires in a lifetime. We are guilty of the same absurdity when we lump together in one place our brain events and our experience. James Ward, who made no such mistake, wrote: "corresponding to the brain that for the physiologist is but a <u>small part</u> of the external world and continuous with it, there is for the psychologist the presentation to an active subject, distinct from it, of <u>the whole</u> of this external world + Cf. J.B.S.Haldane, Daedalus, p. 28-9.

× Some realists, while not denying that sensations depend on nervous events, make the latter more or less irrelevant -- a matter of machinery -- as the wiring of a radio set is irrelevant to the music it produces. I propose, on the contrary, to treat the scientist's account as philosophically relevant throughout. The theory which I am advancing in this chapter has much in common with the double-aspect theory as expounded by the American Critical Realist C. A. Strong in <u>Why the Mind has a</u> <u>Body</u> (1903) and <u>The Origin of Consciousness</u> (1918).

* I do not say that there are no other conditions to be fulfilled, but that this condition (of being in the right place) is the primary one.

† H. H. Price points out that "if sense-data are literally inside the brain we are committed to the conclusion that sense-data are always <u>smaller than</u> the things to which they belong", or, alternatively, to the conclusion "that our own head is very much larger than it appears from touch to be." <u>Perception</u>, p. 128. --- except, of course, that small part, the brain, presented only to the physiologist." ° The confusion arises whenever the physiologist, instead of remaining content with his own function, tries to combine it with the psychologist's. He superimposes the picture of me as I am to myself upon the picture of me as I am to him, with the result that both are spoiled. His story and mine, though equally true, will not mix, and their value lies in keeping them apart. My head and my percept are incompatibles. Vision is not a question of an organ here and an object there, plus an idea of the object here; it is a question of an object here and an organ there, with no additional idea of the object anywhere. + Here I am, eyeless, nerveless, brainless, headless --- without so much as an atom or an electron of my own. All are crowded out by my world. I keep these organs of mine out there in my regions, for my observers to appropriate. "What the physiologist sees when he examines a brain is in the physiologist, not in the brain he is examining", says Bertrand Russell. × In fact it is in both. The surgeon operates upon the brain that is mounted upon his own body, though he calls that brain mine. For my world and my brain belong in entirely different places. And, after all, this is only common sense. Manifestly my head could not draw near to the sun and survive; much less could it contain the sun. When I see the sun, I am not aware of the solar nature of my brain, any more than, when I smell a bad odour, I am (in Bradley's phrase) "aware of the stinking state of my nervous system". The smell is here, my nervous system there. I am where the sun is, not where my brains are. • I see what isn't there, with what isn't here.

It is extraordinarily easy to fall into the trap. Jeans wrote: "the atoms of a human body have the special capacity of conveying impressions through our senses to our minds. These atoms affect our consciousness directly, while all the other atoms of the universe can only affect it indirectly, through the intermediary of these atoms." * Even if the atoms of my brain could find some modus vivendi here with the universe I experience, it is impossible to conceive how they can be responsible for it. Do atoms and universe, then, keep house together in my head, on equal terms? The notion is fantastic. The whole question has been most thoroughly dealt with (though from another angle) by Bergson, in his inquiry into the question whether memories are stored in the brain. † He decides that they are not. The brain is an 'image' (I use his term) like the rest of the world of images, and cannot contain them. And indeed Bergson is here only saying what Bishop Berkeley said two centuries before: "The brain being a sensible thing, exists only in the mind. Now, I would fain know whether you think it reasonable to suppose, that one idea or thing existing in the mind, occasions all other ideas." + For Bergson the brain is merely a kind of telephone exchange. And the metaphor is peculiarly apt, seeing that it is part of the essence of a telephone exchange that, at the centre, there shall be a hiatus, a nothing, where the switch-over is made. The brain is an "instrument of analysis in regard to the movement received, and an instrument of selection in regard to the movement executed." I would add that the analysis culminates, and the selection starts, here at the centre, where nothing whatever is left of me.×

One of the consequences of trying to crowd my world and my brains into one place is that one or other of them has to be sacrificed. Gener-

° <u>Realm of Ends</u>, p. 462.

As early as the 3rd century B.C. Strato grasped the essential point that the stimulus is transmuted into a sensation in the mind, and not in the bodily organ. Bertrand Russell has said that we perceive a part of the stuff of our brains, not of tables and chairs. This is 'overcrowding'. Less objectionable is the description of the brain as the physical <u>background</u> of perception; for the motif or subject of the picture, and its background, are in different planes, different places.

+ On the fact that it is no accident that the eye cannot see itself, see H. F. Hallett: 'The Essential Nature of Knowledge' in <u>Philosophy</u>, Nov. 1945.

× Analysis of Matter, p. 320. Russell goes on to say that a part, at least, of the brain contents consists of percepts, thoughts, and feelings. And, since the brain consists of electrons, some of the events composing them are likely to be mental states (or parts of mental states) of the man to whom the brain belongs. Similarly Whitehead (Science and the Modern World, p. 91.) speaks of "our own psychological field, as it stands for our cognition" as "the selfknowledge of our bodily event". These are instances of what I call overcrowding. My bodily event, my brain, the electrons of my brain, are not to be confused with my percepts or my psychological field. They are regional, not central.

- Cf. H. H. Price, Perception, p. 127.
- * The Mysterious Universe, V.

† Matter and Memory, pp. 3 ff.

⁺ Hylas and Philonous, 2nd Dialogue.

^{× &}quot;Ixion's fate reversed is mine, Authentic Juno seems a cloud;
I feel a blessed warmth, I see A bright circumference of rays, But darkness, where the sun should be, Fills admiration with amaze;
And when, for joy's relief, I think To fathom with the line of thought
The well from which I, blissful, drink, The spring's so deep I come to nought."
Coventry Patmore, <u>The Angel in the</u> <u>House</u>, II.viii. 2.

ally it is the former. My world has to be spaceless because room cannot be found for it in my head, where is it supposed to belong. But I know better. I have only to look to see that there is plenty of room here for my hand, and this page, and all else besides, and that no head stands in the way. One world will do for me. I am not driven to the desperate expedient of first doubling it, and then depriving one version of its qualities and the other of its space. There is one hand, not a physical system there plus a mental system here. This hand, and page, and pen, that are present to me now, are the real ones. Freed now from all competition with eye and nerve and brain, they have perfect liberty to be themselves here.

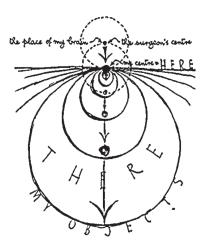
There is no inscrutable thing-in-itself, ° but only the thing-in-others and others-in-the-thing. The 'real' thing is the totality of what it comes to in other things, and what they come to in it. Thus the object is not the cause of my perception --- it is my perception. More accurately, what it is to me is an important part of what it veritably is. To doubt this is to rush into absurdities. The question: how can I possibly perceive the outside world? is really pointless, because in the attempt to answer it I have to commit the material fallacy of petitio principii, and assume the existence of sense organs and nerves and brain. The only reasonable thing to do is to accept what is given. My hand is what it seems to be. With the plain man I say that roses really are just as red as they appear to be, and birds really do sing when I hear them sing, and toast and marmalade have a flavour of their own. Here, at any rate, philosophy begins with paradox and ends with common sense, while science begins with common sense and ends with paradox. * Redness, a sequence of musical sounds, a bitter-sweet taste, are not various ways of misinterpreting the facts; they are the facts, the sort of stuff that reality is made of. And the reason why science suggests the contrary view is that science mixes the immiscibles --- my brain and my world.

But surely this mistake can be corrected without losing any of science's positive achievements. What prevents the working out of a philosophical science (or a scientific philosophy) whose naive ideas of where things really are have been reformed along the lines suggested in Chapter I?

9. THE SCIENTIST'S STORY REVISED --- THE INWARD JOURNEY.

I cannot afford to ignore science's story of the train of events from the sun to my brain, but I can retell it thus:

Light from (1) the SOLAR SYSTEM (in particular from the sun) reaches (2) the EARTH (in particular its atmosphere) and eventually (3) my HUMAN BODY (in particular my hand) from which it is reflected to (4) my HEAD (in particular to my eye) some of whose (5) CELLS are especially affected. Since cells consist of molecules, + and molecules of atoms, and atoms of electrons and protons, the story should then go on to show how the changes wrought in my cells are reducible to changes in and among these progressively smaller units. ×



° Neither is there a 'nuclear solid'. Some realist philosophers try to keep a central something-or-other which, besides being the source of a regional family of sense-data (visual and auditory, thermal and olfactory), is the 'thing that can be touched', or central 'obstacle'. This I believe to be a mistake. The 'feel' of the pen in my hand is not over there at the centre of its regions, but here at the centre of mine. Its character as a 'solid obstacle', though perfectly genuine, is one of its regional characters: centrally, it is nothing of the kind. When the observer, travelling through his object's regions towards their centre, actually arrives there, all trace of solidity and touch-ability, in both of them, has vanished; and so have all their other characteristics. (Cf. C. D. Broad, Scientific Thought, pp. 342 ff.)

* And here philosophy agrees, moreover, with etymology: to <u>perceive</u> a rose is, literally, to lay hold of it, to capture and seize it, and not to hover round it tentatively, like some irresolute insect. I apprehend a rose, not an eye that apprehends a rose: Schopenhauer is guilty of 'overcrowding' when he says that his immediate object is his body, and that what he knows is not a sun, but only an eye that sees a sun. (<u>The World as Will</u> <u>and Idea</u>, trans. Haldane and Kemp, 1. pp. 3, 14.)

+ For the sake of convenience, I do not use the term <u>molecule</u> in the strict sense, as the smallest portion into which a substance may be divided without losing chemical identity; I add the proviso that it shall consist of at least two atoms..

× It has, for instance, been suggested (Adrian, 1949) that the essential activity of a nerve cell consists of a surface change during which some of its molecules momentarily escape

Note, first, how this story agrees with the story of the approaching observer of Chapter I. In fact, the scientist who sets out to describe this train of events is such an observer. His account of how I come to see my hand is inevitably an account of his journey through my regions --- that concentric system to which all who would approach me must conform. In other words, to describe my vision is to describe my essential structure. Vision is more than a sense, and light more than a volley of particles or a procession of waves. My light -- the light I am seen by -- is the chief mode of my presence in others, as my vision is the chief mode of their presence in me. Robert Grosseteste described light as the form of corporeal things, spreading spherically to the firmament which is the limit of its rarefication. + "The changes of Bodies into Light," says Newton in his Opticks, "and Light into Bodies is very conformable to the Course of Nature which seems delighted with Transmutation." The truth is that regional transmutation is of the essence of bodies, and their light is themselves (in one of their principal aspects) taking on new forms, expressing their nature in its immense variety. This ought to be evident: light does not come to me as mere light, by itself and in abstraction from things, but as a star, a cloud, a man, a hand, a page of writing. Light is for us just such luminous objects, in their regional manifestations.

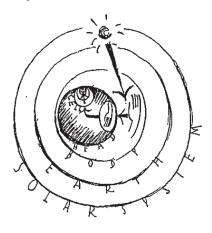
Note, next, that there are three respects in which the observer's account of the train of events from the sun to my brain is quite inadequate: he overlooks the unity of his object, his own behaviour, and half the view.

(1) The observer overlooks the unity of his object. His picture suggests things in a row, with light bouncing like a ball from one to another. This picture is misleading, because in fact each object contains the next; at each stage the observer passes from the consideration of a whole to the consideration of one of its parts; --- the solar system contains the earth, as the earth contains my body, and my body contains my head, and so on. The process he is investigating is an internal one --- internal to that developed star which we call the solar system. That is to say, it is a 'physiological' process of my greater body, and conforms to the hierarchical constitution of that body. It is an important part of the body's 'katabolism', or the orderly breaking down of the whole to its ultimate constituents. °

(2) In his anxiety to record the behaviour of his object, the observer overlooks his own. When, for instance, his attention passes from the earth to that portion of the earth which is my body, and from my body as a whole to my head and my eye, he is shifting his position. He approaches me rapidly, and what he sees (namely a planet becoming a man, a man becoming a head, a head becoming cells, and so on) is largely a consequence of what he does. No doubt it is only by travelling so fast and so far in my regions that he is able to collect the material for his story, and no doubt the story is in the main a true one. His fault lies, not in his method, but in his unconsciousness of his method.

(3) The observer overlooks half the view. His unawareness of our relative motion would be excusable, or even of no consequence, if he were a really observant traveller, who looked all around him. * But he ignores a good half of what is given. If, in his pursuit of the train of events to the Light and space are valuable but dangerous abstractions from the concrete reality, which is the great society of mutually immanent hierarchical individuals in a system of regions. In <u>Out of the Silent</u> <u>Planet</u> (p. 36), Mr C. S. Lewis has a fine passage on the unreality of the dismal abstraction of dead space.

+ <u>On Light, or the Commencement of</u> <u>Forms</u>. According to Grosseteste, when light, having arisen at a point and spread throughout the universe, reaches the firmament, it is reflected back towards the centre, giving rise in its passage to the nine celestial spheres. (See McKeon, <u>Selections from Medieval Philosophers</u>, i. p. 261.) The doctrine of regions is certainly no new thing, and though many of its old forms are to us fantastic, they embody truths that we are apt to forget. (Cf. <u>The Opus Majus of Roger Bacon</u>, ed. J. H. Bridges, ii, 'On the Science of Perspective'.)



° There are distinguishable within this process what Professor H. H. Price has called 'standing conditions' (e.g., sun, eyes, optic nerves) and 'differential conditions' (e.g., the actual disposition and lighting of objects around me). Cf. <u>Perception</u>, p. 69. My own way of describing the situation is to say that my seeing is an aspect of certain 'vertical' processes whose route varies in detail, but whose main stages are constant because they are hierarchical stages. Nothing less than the entire hierarchical process can be described as the real 'cause' of my seeing.

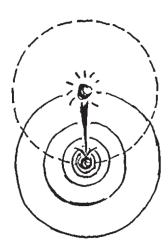
* "Modern physics", Russell has said, "reduces matter to a set of events which proceed outward from a centre. If there is something further in the centre itself, we cannot know about it, and it is irrelevant to physics." (<u>An Outline of Philosophy</u>, p. 163.) My comment is that we can know nothing else, and that it is (<u>inter alia</u>) physics! Only to make this discovery we must turn round and look <u>out</u> at the universe, instead of <u>in</u> at nothing. terminus in my brain, he were to look over his shoulder, he would notice that the movement which involves the breaking down of one heavenly body -- the earth -- into its minutest parts involves the building up of another --- the sun. Thus he starts off by noting sub-atomic and atomic events 'in the sun'. As yet he is a long way, however, from the region where the sun as a whole exists. Nor does he take notice when he comes to that region, for he has turned earthwards. He sees the planet become a country, the country become a town, the town become the body of a man --- at least he would do so, if he were sufficiently observant. Drawing nearer still, he comes to the regions of smaller and smaller particles. The train of events has arrived at its destination, and the essence of his report is that the journey has been my undoing. But, all the while that he has been facing me, things have been happening behind his back. Let him now turn round and look in the opposite direction, and he will see with me that my unmaking has been the sun's making, that my loss has been my world's gain. To one who looks at me here I am nothing; to one who looks with me I am the sun and all things. And the only way to understand how I come to know the world is to look both ways, combining the attitudes of cox and crew. In this matter, the efficient observer is like the mythical bird which flies backwards to see where it has come from, as well as like the ordinary bird which has eyes only for where it is going.

In other words, the train of events which science describes may, and indeed must, be read in two utterly different ways. If this duality is ignored there is bound to be endless confusion. Light is at once the breaking down of its recipient to nothing, and the building up of its source from nothing. I see the sun because I give way to it and make place for it, becoming nothing for myself so that the sun shall become everything for me. It is here in me that the sun acquires genuine sun-hood ---- its increase is my decrease. + As Heraclitus taught, the upward and the downward paths are the same, yet opposite. Science's limitation is that it neglects the former. The complete observer finds it necessary to grow eyes in the back of his head. For I am two-directional, and will baffle every observer who does not conform to the same pattern. *

10. THE INWARD JOURNEY CONTINUED.

So far, I have glossed over the near end of the train of events, from my peripheral sense organs to my cortex. How does the physiologist's description of what is occurring in my nervous system fit in with the physicist's description of what leads up to these occurrences? Till I can give some answer to this question there is a blank in the centre of the picture.

I must first get the observer to look again, and retell his story rather more fully. He goes back to my outer regions, and notes the condition of the planet as a whole --- the wear and tear of its crust, the distribution of its weather, the flow of its raw and manufactured materials, its wars, the manifold and shifting relations between continents and between countries. Desiring more detailed information about these tendencies, he draws nearer, and observes how they issue in the condition of a par-



"The sceptic", according to Emerson, "affirms that the universe is a nest of boxes with nothing in the last box." And so do I, adding that there is also, if you turn round, everything in the last box. "The ground of hope", as Emerson himself remarks, "is in the infinity of the world, which infinity reappears in every particle." ('Immortality')

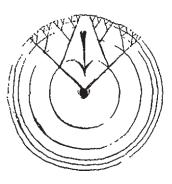
+ It is no chance coincidence that devout experience tells the same story. For example, John Smith the Platonist wrote: "this his being nothing is the only way to be all things; this his having nothing the truest way of possessing all things." See Inge, <u>Christian Mysticism</u> (1899), p. 291. Many other contemplatives, from the writer of the <u>Tao Te Ching</u> to St. John of the Cross, have taught the same doctrine. Cf. II <u>Cor</u>. VI. 10.

* In the concentric system of Plotinus, the soul falls away from the One at the Centre, to the outermost rim of being, yet leaves behind something of itself. Thereafter its business is to find its way back; but first of all to turn about, to face the distant Centre it has left. (See particularly Enneade VI. v. 7.) I try to show that there is the same need to look back over our shoulders as we come to each new region, and that the resulting vision is proportional to the distance we have travelled. Newton (Opticks, Query 21) suggested that each body is the centre of an aether whose density increases with its distance from the centre, and that gravitation is the sinking of neighbouring bodies to less dense inner regions of this aether. The regional schema of this book might be described as a fusion of these two systems -- the Neoplatonic and the Newtonian -- or their reconciliation.

ticular country. The state of the country has meaning because it is seen to follow upon the state of the earth as a whole. Still approaching, the observer sees the country's condition narrow down to the condition of the town, and then to my condition as a man, as a nervous system, as a brain, as a brain-centre. Now in these convergent processes there are marked changes in quality and in scale, but there are no breaks. Like the tributaries of a river, events in the outer regions flow into and maintain the central stream nearer home. It is impossible to make sense of what is going on where I am a man, unless events where I am more extensive are studied. For example, the sun (by its elevation) settles whether I shall now leave off this work or shall go on with it, shall sleep or wake; the planet (by its weather) settles whether I shall put on or leave off my sweater; the country (by its Ministry of Food) settles whether I shall presently eat an omelette made of fresh eggs or of dried eggs, or no omelette at all; the town (by its Surveyor) settles when I shall cease to be deafened by the roar of pneumatic drills in the street; and the house (by its occupants and routine, or lack of routine) settles whether I shall be allowed to conclude this paragraph or shall be interrupted by two boys and a dog. All these are items in the economy of one Body, and any attempt to explain the behaviour of its human nucleus apart from the rest is like trying to write the biography of a hand without dragging in the head.

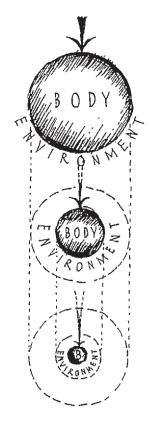
"The world" -- I quote W. Macneile Dixon -- "by our bodies is scaled down... to the measure of our powers." + It is further scaled down by our nervous systems. Bergson wrote: "As the impressions received at the periphery of this body seem to him (the psychologist) sufficient for the reconstruction of the entire material universe, to his body he at first reduces the universe." × The scientist does not stop at this point, but goes on to reduce the body to the nervous system, and the nervous system to the central cord and brain, and these to the cerebrum; and this to some particular area of the cortex. It is only the practical difficulty of pushing his researches any further that prevents him from arriving at a mere point.

My nervous system (on its afferent side) is a confluent arrangement of paths and 'clearing houses', by which regional influences, having reached my human body, go on working inwards. Its centripetal processes continue those of the world outside, and are not radically different from them. Just as my observer noted how conditions in my outer regions govern conditions nearer home, so now he notes how the latter govern conditions nearer still, in the region of my human body. The state of the world as a whole leads, by orderly stages, to the state of my nervous system as a whole, and this to the state of one of my brain cells as a whole. Truly speaking, there is but one stimulus --- my total effective environment for the time-being. And there is but one sense organ --- the whole surface of my body for the time-being, whether that body is a planet's or a man's or a cell's. The scientist's piecemeal account of visual and aural and tactile stimuli, of such separate organs as eyes and ears, or Meissner's corpuscles and Krause's end-bulbs, of this nerve impulse as distinct from that, is as misleading taken item by item as it is indispensable to the making of the complete picture. Distinct afferent impulses do not oblige





× Matter and Memory, p. 52.



The need for taking the situation as a whole is clear once examples are consid-

ered. The suicide's act is inexplicable till

(say) his overdraft and the state of trade

are taken into account. A stimulus of intense heat will normally evoke impulses

in motor neurones, initiating muscular

movements such that the man retreats from the source of the heat. But when the

heat-stimulus is combined with certain

auditory stimuli (e.g., cries for help) it may have just the opposite effect and the

man may rush towards the fire. Always it

is the total situation which evokes a total

response, in the general interest.

the investigator by coming in one after the other, like so many trains running to schedule. The process must be looked upon as spherical, and not merely linear; as a circumference seeking a centre, and not merely one point seeking another. The afferent impulses in my nervous system are not messages getting through to me: they are my destruction and the concomitant making of my object.

The self makes way for the not-self. Which of the two the scientist recognizes is a question of which way he is looking. If he is a psychologist, it is difficult for him, as he pursues the ingoing (or destructive) processes, to avoid glancing over his shoulder to see the outside situation building up to completeness. Thus Mr. C. K. Ogden (to take an example at random) writes: "The highest centres are those which have to take note of the widest and most intricate situations For reasons which are clear enough in outline they lie in the head --- in the 'cerebrum' and the 'cerebellum." + Mr. Ogden is facing both ways. But in the end, when the situation is wholly revealed, the brain centres are wholly abolished. Or, in the words of Hegel, "the infinite expansion of nature, and the absolute retraction of the ego upon itself, are fundamentally identical." ×

11. THE OUTWARD JOURNEY.

This is far from being the end of the story. The huge system of up-lines that converge upon the terminus is matched by the equally huge system of down-lines that fan out from it. In short, I act. Departures depend upon arrivals, but it is just as true that arrivals depend upon departures. I see, to do; but also I do to see. I am no mere registrar of things. My action upon the world contributes half my knowledge of the world, as its action upon me contributes the other half.

Arrived at my brain, my observer has reached the signal-box where connexions are made and broken between the incoming and outgoing traffic. So far from containing the railway system, the signal-box completes its reduction to a point. But from that point the system widens out again. Having witnessed my ungrowth, my observer now witnesses my regrowth. My action spreads, by way of afferent nerves, from my brain to my muscles and my body as a whole. What I do as a man plays its part in my town's impact on the country, and in my country's impact upon the nations; not only do I contribute to these larger activities --- I own them, identify myself with them. And so, divaricating without limit, the consequences of a connexion made here between an afferent and an efferent nerve fibre are eventually felt in my remotest regions. Nearer the centre, these effects are not more real: they are only more obvious. This sentence, this page of writing, this room with its books and pictures, this house, clearly express my nature, are eloquent of what I am. They are my response. And so (as I shall later try to show more convincingly) is the entire sequence of greater wholes to which I belong: they body forth my meaning. As my scientific observer is content to say, there is on the one side stimulus and on the other reaction; they are like the symmetrical chambers of an infinite hourglass, of which the one is useless without the + <u>The A B C of Psychology</u>, III. × Edward Caird, <u>Hegel</u>, p. 61.



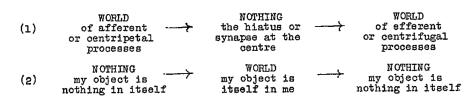
Many have noted that our experience of the world has an active or outgoing side, and for the ancient philosophers vision was no passive affair. From Plato and Euclid and Galen to Leonardo the doctrine of the visual current, going forth from the eye to meet the object, was accepted. The Schoolmen called this current the <u>lumen</u> <u>complanatum</u>. See Plato, <u>Timaeus</u>, 45; Heath, <u>Greek Mathematics</u>, i. 441; and cf. Bergson, <u>Creative Evolution</u>, p. 240, and <u>Matter and Memory</u>, p. 74.

Dr. Johnson, 'refuting' Berkeley by kicking a stone, at least had the right idea. The stone's existence for him rests as much on his actions towards it as upon its action towards him. other. Or, as I see the matter, one world is present to me here, under two aspects --- the situation as I passively apprehend it, and the situation as I actively intend it.

Note the difference between the observer's account and mine. Whereas he finds

WORLD \rightarrow NOTHING \rightarrow WORLD, I find NOTHING \rightarrow WORLD \rightarrow NOTHING.

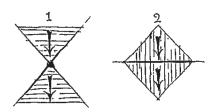
Or, in more detail:---

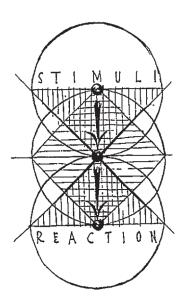


His story (1) is precisely the opposite of mine (2). And the complete story is the combined story.

Each of us should stick to his story, and avoid all premature attempts to compromise. Only when we fully admit the violence of the contradiction, does the new synthesis (which is also in some sense an explanation) begin to emerge. The synthesis may be summarized thus:--

(I) The stimuli proceeding inwards, from objects centred in my regions, are at once (a) the building up of those objects to full status here in me, and (b) my own reduction to a mere receptacle for them. (II) My reaction to these objects is at once (a) my building up from nothing here to my varying status in them, and (b) their reduction to mere receptacles for me. And these four are not separate processes, but moments within a unity.

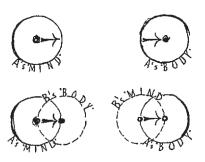




12. MIND AND BODY.

Something remains to be said about that well-worn riddle of psychology: how can body (which is material, and exhibits mass and motion, shape and position, and behaves according to physical laws) affect and be affected by mind (which is non-material, without shape and position, and behaves according to psychological laws)? Can mind interfere with the course of physical events? If so, how? If not, whence this illusion of its efficacy?

The riddle is unnecessarily baffling because it is wrongly conceived and wrongly phrased. The distinction between mind and body is one of direction, not one of content, or of essential nature. My mind is my view out, * and my body is my observers' view in. Their experience and mine are of the same order. The same data which are in respect of me physical (that is, a part of the view in to me) are in respect of my observer mental (that is, a part of the view out from him); whether these data are looked upon as body or as mind depends on whether they are being considered as mine or as his.



* I use the term <u>view</u>, of course, in the widest sense, as containing much more than visual elements.

Common sense at once objects that my mind is more than the view I take of the world. My mental contents do not always take objective form. For instance, I may feel happy or miserable in myself and without reference to any outside things, or I may be in pain. Then there is the inner core of feeling, generalized and vague but ever-present, which Bradley called "the foundation of the self". × Such experience (says common sense) is not my registration of some exterior object in whose regions I happen to be situated, but is registration of myself.

My answer (which at this stage must be brief) is that to be happy is to have a happy outlook; to be miserable is to find misery everywhere; to be in pain is to experience a painful object in a given place. To become aware of a sensation, no matter how central or vague it may be, is to objectify it, to set it over against me. Before I attend to it and after I forget it, it is no longer there for me, no longer existent --- my pain, or discomfort, or happiness, or contentment, which I do not feel, is a contradiction in terms. It is Bradley who says: "You may take your self as deep-lying and inward as you please, and may narrow it to the centre; yet these contents may be placed in opposition to your self, and you may desire their alteration." + Until they are so placed (I add) they can only have a kind of prospective reality. Doubtless some of the qualities I register here are so arbitrarily distributed, so fleeting, and so nebulous, as to suggest that they belong to me rather than to the objective world. But to experience them at all is to objectify them, and to objectify them is to place them there. It is only by pulling them out of the central void that I can make something of them.

My mind, then, is the world revealing itself in me, while my body is my self-revelation to the world. The problem of interaction remains, but it may now be re-worded. It becomes this problem: how does what my observers are here in me (my mind) affect what I am over there in them (my body), and vice versa? How do the contents of this centre affect the contents of other centres? I have your body here and call it mind; you have my body there and call it mind. The question is: how do these two pieces of mind (or pieces of body) get at one another? And this is simply the question I have been considering all along. The truth is that the mind-body problem, the problem of mind-body interaction, does not as such exist at all: it is only a badly-phrased variation of the fundamental problem of the relations of mutual observers, within their interlocking regional systems. Until I realize clearly where my body is (namely, throughout my regions) and where my mind is (namely at the centre), and until I realize clearly my social character (lacking others to observe me I am bodiless and lacking others to observe I am mindless), I shall go on creating artificial problems. The mind-body relation is not private, but spread over the entire network of individuals, and world-wide. "The concept of an organism includes", says Whitehead, "the concept of the interaction of organisms". † And the concept of the interaction of organisms includes the concepts of mind and body. Truly speaking, I have neither mind nor body: only the mesh of mutual observers has mind and body, and the two terms are interchangeable. *

What happens when 'my mind acts on my body' is that my view of my observers gives place, by a centrifugal process, to their view of me. What

× <u>Appearance and Reality</u>, p.80.

+ <u>Op. cit.</u>, p. 94.

Cf. Whitehead's dictum: "We know ourselves as a function of unification of a plurality of things which are other than ourselves." <u>Science and the Modern World</u>, p. 187. And indeed the basic doctrine is at least as old as Plato --"There is no single thing that is in and by itself". <u>Theaetetus</u>, 153 E.

My point of view here is in some respects similar to the Neutral Monism of Russell and the American New Realists. According to this theory, whether the constituents of the universe appear as 'material objects' or as 'thoughts' depends upon their context; in themselves they are neutral entities. See, e.g., Russell, <u>Outline of Philosophy</u>, pp. 214 ff; E. B. Holt and others, <u>The</u> <u>New Realism</u>, pp. 372 ff. W. K. Clifford, in his <u>Lectures and Essays</u>, has a theory of 'mind-stuff' which is somewhat similar to the 'neutral entities' of the New Realists.

† Science and the Modern World, p. 130.

* And the more advanced the mind, the wider the spatio-temporal mesh, as I shall try to show. So Rilke, speaking of our life, addresses the heaven-remote Angel: "In your gaze

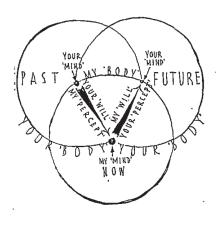
it shall stand redeemed at last, in a final uprightness.

.....So, after all, we have <u>not</u> failed to make use of the spaces,

these generous spaces, these, <u>our</u> spaces." <u>Duino Elegies</u>, VII, trans. Leishman and Spender. happens when 'my body acts on my mind' is that my observers' view of me gives place, by a centripetal process, to my view of them. Let me put the matter another way. The body-mind duality is, basically, the cognition-conation duality. If we are observing each other, you determine what I shall see and I determine what you shall see. I perceive what you will; you perceive what I will. And the process which is your action upon me is one with and the same as the process whereby I receive my impression of you: the movement which is conative for you is cognitive for me, and vice versa. The difference, again, is one of direction. Each wills his bodily expression in the other, and perceives the other's bodily expression in himself. The forms we take in each other are (as Schopenhauer puts it) materializations of our will. "The act of will and the movement of the body are not two different things objectively known, which the bond of causality unites; they do not stand in the relation of cause and effect; they are one and the same but they are given in entirely different ways, --- immediately, and again in perception." + Or, as I would say, they can be read from two directions. Body is mind in reverse, and presentation is will in reverse.

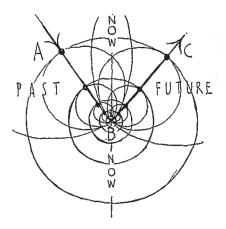
This does not run counter to Whitehead's broad distinction between the physical and the psychical, as the contrast between "what the antecedent world in fact contains" on the one hand, and on the other hand the ideal elements or new "forms of definiteness" which belong to the present moment's decision. × For me now at B, A→B is the past side of the transaction, the side of my object as physical, the side of stubborn fact, while B→C is the future side, the side of my object as something to be remade by me, the side of mentality and persuasion. The distinction between mind and body is thus a temporal distinction as well as one of direction. In my object, though it is given as a unity, may be discovered two aspects or poles, the one physical or past, and the other psychical and future. Thus it has two homes in my regions, not one. It is bifurcated --- a fact that in later chapters will assume great importance.

Meantime it will be sufficient to remember that the obscure problems of our knowledge of the outside world, of the relation of mind to body and the mode of their interaction, of the dualism of passion and action, of the dualism of cognition and conation, are all illuminated by the regional schema with which this inquiry started. They are all reducible, in principle, to that irreducible mystery --- the mutual immanence of myriads of individuals of every grade, individuals which are nothing in themselves, yet all things in each other.



+ Schopenhauer, <u>The World as Will and</u> <u>Idea</u>, i, p.130; cf. ii, pp. 482 ff.

× Process and Reality, pp. 29, 58 ff.



Appendix to Chapter II

THE REGIONAL SCHEMA AND BODILY EVENTS

To save the foregoing discussion from undue abstractness, I add here, in barest outline, some further instances of the working of the regional schema.

In a certain sense, no man ever had or can ever have a body. Wherever I go, I can never get away from <u>here</u>, which is the one place in the universe where I am utterly discarnate. For this is the spot where my body, whose status and dimensions roughly agree with those of its observer, finally makes way for him: occupied with his body, I think nothing and make nothing of mine. Now this duplicity or exchange, though seemingly so absurd, is in fact everywhere borne out. Thus, however furiously I drive my car, I can never get clear of the bottleneck which separates the vast converging road system ahead from the equally vast road system behind me; yet, seeing that I do not travel blindly, both systems are present to me here. It is a condition of my effective driving that this spot, though a mere point on the map, shall nevertheless contain the map.

Whether I am exploring the network of highways in the body politic or in the individual organism, the principle is the same --- I am caught in that curious bottleneck which contrives to find room for the bottle. Descartes ° supposed that the pineal gland was the <u>conarion</u>, the place where converging vital spirits meet and cross one another's paths, and where body contacts soul; actually, however, every locality in my body is, as often as the observer places himself there, the central crossroads where the 'physical' self narrows to nothing, and is replaced by the 'psychical' not-self. × In particular, every synapse of my nervous system, where the network ahead and behind is constricted to a mere gap, is such a junction. In general, the condition of the psychical is the extinction of the physical. But the psychical is fugitive, elusive; it cannot stay. For example, 'what I see' is present here in my retina; nevertheless it is referred away from here to the outer world on the one hand, and to the visual area of my cortex on the other. Similarly when I go on to the visual area, the object evades me again: I am referred back to the retina, and on to the rest of the brain. * (It is widely held that perception does not occur directly the incoming nervous impulses reach the visual area: they must fan out again to involve a great deal of the brain before this can happen; and indeed many would add, with Bergson, + that the act of perception includes the prolonging of the subject's active centrifugal movements right up to the object itself. The object visits me provided I see it home.)

And if, instead of going from the retina to the brain in search of the visual object, I take the opposite path and set up my observation post in the pupil of my eye, the same double ambiguity confronts me. Once more I become a mere gap or hole, an empty reception-centre for my object --- a paradox which the Latin word <u>pupilla</u> and the Greek word <u>kore</u> (both meaning 'a little girl' as well as 'the pupil of the eye'; † or,



It is worth noting that the network ahead of the traveller sooner or later joins up with the network he leaves behind; and that his object, though bifurcated, is not duplicated.

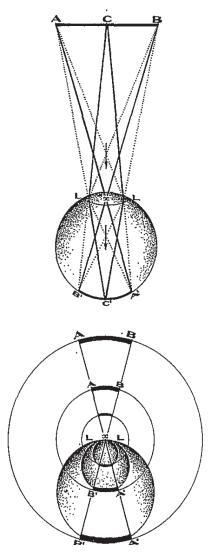
° Traité des Passions de l'Ame, I. 30. Descartes' choice fell upon the pineal gland because it is not one of those many organs which are paired, but one whose office is, seemingly, to provide a central point of union between such pairs as the hemispheres of the brain, or the eyes. × Cf. E. Graham Howe, <u>The Triumphant</u> Spirit, pp. 94 ff. (and particularly the X-diagram on p. 97) on the psychological aspect of this constriction. "The kind of work we have to do", writes Mr Howe, "is rather like Alice getting through the keyhole into her Wonderland, or the Rich Man getting into Heaven. We must get down to it, and get into it, before we can get through it. It is as if Life is pouring through little holes, the whole through the holes, the one through the many.... Large forces can only operate through such small focal points.... As 'persons' we are located at such focal points. We are the blow-holes of the spirit."

* Sir Charles Sherrington (<u>Man on His</u> <u>Nature</u>, p. 277) has drawn attention to the fact that the principle of convergence of control does not culminate in any "final supreme convergence on one ultimate pontifical nerve-cell, a cell the climax of the whole system of integration". Instead, the highest brain region is "an enormous expansion into millions of cells". This is inevitably so, unless we are prepared to attribute suprahuman and magical powers to a mere cell; yet from its own point of view each cell is the climax and centre of the entire system, the exchange where all lines cross.

+ E.g., Matter and Memory, pp. 125 ff.

† Cf. the <u>First Alcibiades</u> of Plato, and Donne's poem, 'The Extasie'. as I would say, the visual object, and a nothing) seem to celebrate. The modern observer has another way of putting the matter. He draws a diagram consisting of two contrary elements: (1) a double cone of light-rays based on the object A-B narrows to a point (x) here at the eye-lens L-L, and then expands again on the other side till it forms the retinal image B'-A'; (2) a reversed double cone of light-rays, proceeding from C in the object to C' in the image (or from A to A', B to B', etc.) has its base here at LL and its apices in the object and in the retina. His optical diagram is, to be sure, only a special case of the schema which is the topic of the foregoing chapter --- once more the object (A-B), though in itself a mere point (C), is completed here in me (L-L), provided I send it on again (to C'); and once more the condition is that I shall myself narrow down to nothing (at x).

Of course it is true that, for the outside observer, the symmetry of this regional pattern is far from perfect, and there is a great difference between the distance of the object from the lens and the distance of the retinal image; but from my point of view at the centre there is nothing to choose between the depth of the outer cone CLL, and the depth of the inner cone LLC'. In effect, my eyeball is as commodious as the universe; for the adjustment of the curvature of its lens, in order to focus the object clearly, amounts to an adjustment of the eye's depth, so that the retinal image does not belong in one of my regions, and the object in another. Nor is this a new doctrine. Aristotle, in common with other ancient thinkers, recognized that the eye must somehow conform to the thing which is seen; and long before Aristotle, Empedocles supposed the eyeball to contain a rudimentary system of cosmic regions --- namely a concentric arrangement of fire, earth, and water-vapour. ° In fact, Victor Hugo's question is a very sensible one: "Tes deux yeux ne se sont-ils jamais tout à coup emplis d'un million d'astres si bien que tes paupières étaient les deux bords du firmament?" ×



° Burnet, <u>Early Greek Philosophy</u>, pp. 231, 236.

× <u>Les Tables Tournantes de Jersey</u>. Cf. Rilke: "One space spreads through all creatures equally --- inner-world-space. Birds quietly flying go flying through us. O, I that want to grow, the tree I look outside at's growing in me!" <u>Later Poems</u> (trans. Leishman), p. 128.

CHAPTER III

PROJECTION AND REFLECTION

For I marvelled that other mortal men should be alive, since he whom I had loved, as if he should never die, was dead; and I marvelled the more that I, since I was but his other self, should be alive when he was dead. Well hath one said of his friend, "Thou half of my soul": for I felt that his soul and my soul were "one soul in two bodies": and therefore was my life a horror to me, because I loathed that only one half of me should be alive: and hence perchance I feared to die, lest he should wholly die, whom I had loved much.

St. Augustine, Confessions, IV. 6.

As a man thru' a window into a darken'd house peering vainly wil see, always and easily, the glass surface and his own face mirror'd thereon, tho! looking from another angle, or hooding his eyes he may discern some real objects within the room --some say 'tis so with us, and also affirm that they by study of their reflection hav discover'd in truth ther is nothing but thatt same reflection inside the house.

Robert Bridges, The Testament of Beauty, I.

He finds on misty mountain-ground His own vast shadow glory-crownéd; He sees himself in all he sees.

Tennyson, In Memoriam, XCVII.

We are made one for another; and each is to be a Supply to his Neighbour.

Whichcote, Aphorisms, 122.

"What's the use of their having names," the Gnat said, "if they won't answer to them?"

Lewis Carroll, Through the Looking-glass, III.

This world of Imagination is the world of Eternity.

Blake, 'Vision of the Last Judgement'.

And we are learning very slowly that there is nothing in Nature fundamentally different from what we construct on the pillow in fancy.

Douglas Fawcett, Zermatt Dialogues, p. 88.

1. ERRORS OF THE 'INSTRUMENT'.

C. There remains the most serious of all objections to the schema of the foregoing chapters: it does not allow for error, much less explain it. Who will deny that mistakes are made? There are, then, three alternatives. (1) If the observer is always right, if he cannot help registering what is where he is, × then the place with its 'contents' must somehow be subject to error and contradiction --- in which case the schema breaks down. (2) If, on the, other hand, the place with its characteristics or contents is always unambiguous and valid, the instrument must sometimes seriously distort its material; again (since to lie sometimes is to be suspect always) the schema fails. (3) The remaining possibility is even more damaging. It is that the contents of the place I call <u>here</u>, and the instrument that is supposed to record them, are both liable to error.

P. That way lies madness, or at any rate a scepticism which (if it were lived and not just said) would paralyse a man. This side of sanity, I must believe that I have real knowledge; and real knowledge means accept× Cf, Emerson's (characteristically) sweeping statement: "If there be one lesson more than another, which should pierce his (the scholar's) ear, it is: The world is nothing, the man is all; in yourself is the law of all nature in yourself slumbers the whole of Reason." ('The American Scholar') This is the Platonic anamnesis. And so is Dr. Inge's "postulate of all Mysticism, that we can only know a thing by <u>becoming</u> it.... finding it in ourselves." (Christian <u>Mysticism</u>, p. 93. ing both the genuineness of what I find here, and the ability of the instrument to register it. To doubt either is to doubt everything. In any case, the dogma of universal scepticism is self-contradictory: if I cannot know, I cannot know that I cannot know.

C. It would be as foolish to believe everything as to believe nothing. If my experience does not agree with itself -- and emphatically it does not -- then it must be partly in error. +

P. Criticism there must be, and truth cannot dispense with degrees of truth. But let me be sure just where criticism is possible. If the argument so far is in the main correct, then the instrument must be trusted. I am an infallible register of what is here, for a very simple reason --- I am nothing, an empty vessel, a blank sheet. A witness self-effacing to the point of self-extinction does not fake the evidence. "Whatever is has its being," says Royce, "only as a fact observed." × I am incapable of observing that which does not exist at all. The experience occurring in me or to me, the impressions I receive, must be taken for what they appear to be: they are the world as it comes to existence here in me, its receptacle. So much for myself as instrument, for my view out. What of my observers as instruments, and their view in? Again I am, in myself and apart from them, nothing. "Nobody is anything except as he joins himself to something." ° Remove my observers and you abolish me. Their differing estimates of me, taken in their entirety, cannot be wrong, because there is nothing here at the centre against which these estimates may be checked. Nobody, however extreme his views about me, is utterly or even partly mistaken, for I am made up of such opinions of me: I am the organization of all the views in to this centre, and every 'mistake' about me is a part of me.

C. Take an instance where error is beyond all doubt. There is no denying the fact that an optical illusion is an illusion. Two lines AD and CD really are the same length, but look different. What is the explanation?

P. The observer reports truly that the lines (as organized in the total pattern or gestalt \bullet) are unequal where he is. And he is entitled to his point of view.

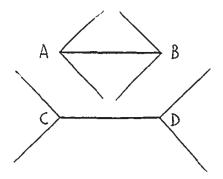
C. But note, first, that the observer probably knows that his report is not true; and, second (this is a curious and significant fact), that if the observer is mentally deficient he will probably see the two lines AB and CD as of the same length, whereas the normal man cannot do so however hard he tries. * Who, then, is right --- the defective who sees 'normally', or the normal man who sees 'defectively'?

P. They are both right. But there is a third observer --- the normal man who makes proper allowances for the 'illusion'. Of the three, it may be said that the last sees most truly because the most inclusively: in effect, he appreciates the object from the first point of view where the lines AD and CD are equal, from the second point of view where they are unequal, and from a third point of view (combining the other two) where they are at once equal and unequal. The rule is that the really enlightened man finds a place for the 'fool's' vision (and very often a place of importance), while the half enlightened rejects it. † In general, the truer

+ Thus Russell declares that, while there are no such things as illusions of sense ("Objects of sense, even when they occur in dreams, are the most indubitably real objects known to us") the inferences we draw from our sense experience may be illusory. (<u>Our Knowledge of the External</u> <u>World</u>, p.85.) I say that the inferences also are valid --- ultimately.

× The World and the Individual, i.p. 398.

° Bosanquet, What Religion Is, p. 12.



The Müller-Lyer Illusion.

• See W. Köhler, Gestalt Psychology.

* See, e.g., Victoria Hazlitt, <u>Ability: A</u> <u>Psychological Study</u>, p. 30.

† Cf. Bergson, <u>Matter and Memory</u>, p. 80: "There is one, and only one, method of refuting materialism: it is to show that matter is precisely that which it appears to be." But Bergson goes on to divorce matter and spirit --- a procedure which seems to me to be unnecessary. the view the less it excludes, and the wholly true view is one which rejects no partial view whatever. "Error <u>is</u> truth," says Bradley; "it is partial truth, that is false only because partial and left incomplete. The Absolute <u>has</u> without subtraction all those qualities, and it has every arrangement which we seem to confer upon it by our mere mistake. The only mistake lies in our failure to give also the complement". + Here Bradley follows Hegel, for whom all human error and finitude are necessary moments in the unfolding of truth: there is no truth beyond the integrated totality of defective or partial points of view. ×

C. In other words, for all practical purposes the instrument is very fallible indeed.

P. The instrument <u>cannot</u> lie --- if by 'lie' is meant report what is not true of the object as it exists in the place of the instrument. The instrument <u>must</u> lie --- if by 'lie' is meant fail to report the whole truth about the object. I am what every observer, infrahuman and human and suprahuman makes of me. The lie about me, with all the circumstances that gave rise to it and made it a lie, cannot be left out of the complete biography. What is a mistake concerning me, but a part of my total effect? ° And what am I but that effect? Nor is there anything mysterious or perverse about this doctrine of truth. Science recognizes it ungrudgingly, in its own way. Thus to the psychologist a mistake, (a slip of the tongue, an illusion, or a more deliberate falsification) is commonly more revealing than the 'correct perception', and is in that sense the very opposite of a mistake. *

C. Then each of us is imprisoned at his own 'centre', chained to his own observation post, and given a life-sentence of error --- or partiality. There is no hope of self-improvement.

P. Quite the contrary. It is natural to each observer to transcend his own private viewpoint by adding to it as many new viewpoints as he can. Refining the instrument is not doubting its deliverances (which can only result in utter nescience) but accepting them and filling them out with the deliverances of other instruments. In other words, all errors are errors of omission, and all errors of omission are failure to see things from another's point of view. Common sense is at once too sceptical and too credulous, for while nobody can be wrong, nobody (unless he has achieved omniscience by incorporating all observers) can be right. Logical positivists say that a proposition that cannot be verified by observation is nonsense. I agree wholeheartedly, but add that there is, as a matter of fact, no such proposition. For, in the last resort, a proposition is an observation, and, as such, is its own verification. Vaguely we recognize this when we say: 'he observed that there is a God' or 'she observed to me that the earth is flat'. Each of us is in a position to note what things are from his own standpoint. Of course most weight must be given to those observations which are (a) consistent with others made by the same observer, and (b) consistent with observations made by other observers; nevertheless the concrete truth must find room for the craziest imaginings, if only for the reason that they are different, not at all in kind, but only in degree, from the sanest apprehensions of reality.

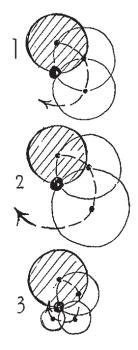
+ Appearance and Reality, p. 192.

× This doctrine receives its most detailed treatment in Hegel's <u>Phenomenology of</u> <u>Spirit</u>. See also Royce, <u>Lectures on Modern</u> <u>Idealism</u>, pp. 214 ff.

R. G. Collingwood finely said of Whitehead that he "has escaped, from the stage of thinking that the great philosophers were all wrong into the stage of seeing that they were all right." (<u>The Idea of Nature</u>, p. 170.) That philosophy is truest which is able to accept and to unify the most.

° "What seems to us for us is true. The planet has no proper light, And yet, when Venus is in view, No primal star is half so bright." Patmore, <u>The Angel in the House</u>, II. i. 5.

* See Freud's famous <u>Psychopathology</u> of Everyday Life for a wealth of instances --- such as that of the woman who, being anxious to have children, always reads <u>storks</u> instead of <u>stocks</u>. (VI. A.)



Three ways of supplementing the original instrument: (1) by adding to it similar instruments, (2) by adding to it instruments of wider scope, (3) by adding to it instruments of narrower scope.

Shelley is not mistaken when he finds a <u>place</u> for

'Dreams and the light imaginings of men And all that faith creates or love desires, Terrible, strange, sublime and beauteous shapes.'×

They are not nothing, nor are they nowhere. On this Croce insists, that imagination is the mode of knowledge by which we give shape to things, and there can be no thought unless imagination underlies it: perception is at base 'artistic', 'lyrical', 'intuitive', and the eyes of this intuition are entirely trustworthy. *

C. I cannot accept this account of truth and error without some very convincing examples.

P. There is a superabundance of them. When I look upon a man I encompass him with viewpoints. I altogether envelop him. If I were to see him only from this original station of mine, I would register a very odd creature --- a monster with telescopic limbs, with eyes and ears that are always growing and vanishing again, with a body that is always swelling and shrinking unaccountably. Somewhat thus, perhaps, very young children and certain animals see him. (It is recorded that an infant of about five months, who was used to seeing a person full-face, became frightened when for the first time he saw the person in profile; he started looking for the second eye. •) The adult human observer is a vastly improved instrument. Note how the improvement has come about. Not by denying the infant or animal outlook -- it is highly informative -- but by multiplying it. I go out of my way to see the object from all angles. In consequence, when one of my observation posts reports the amputation of a limb, another reports the regeneration of a limb; and when one observation-post reports the object shrinking to a point, another reports it swelling to fill the world. And so, on balance, my object preserves sufficient constancy. The instrument has not been refined so much as broadened, and multiplied in time and in space. It is still very imperfect: only the instrument that is ubiquitous can record the truth about anything. The reliability of lesser instruments is measured by the degree to which their deliverances figure in the total picture. "With each assertion the question is, how much will be left that assertion, if we suppose it to have been converted into ultimate truth." +

2. ERRORS OF PROJECTION (i)

C. Let it be admitted that neither the instrument, nor its material, nor both together, can be wrong. There is still another possible source of error --- projection. And in fact it is a prolific source. Supposing I am right about the data here: it does not follow that I despatch them to the right places over there. For a fraction of a second I take the fly on the window-pane for I know not what monster prowling in the garden, or the distant lamp on the hill for a rising star. Then there is <u>projection</u> in the more specialized sense of Jung $^{\circ}$ and Tansley ×, denoting a process independent of the conscious mind; also Freud's analogous term <u>displacement</u>. The mind, unprepared to admit ownership of part of its

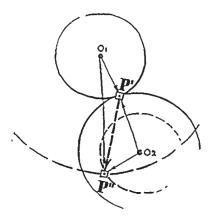
Shelley, who believed that experience of the external world differs only in regularity of occurrence from hallucination and dream, declared that he had dreamed, on three widely separated occasions, "the same precise dream".

× Prometheus Unbound, I

* See H. Wildon Carr, <u>The Philosophy of</u> <u>Benedetto Croce</u>, pp 49 ff, In <u>A Theory</u> <u>of Monads</u> (pp. 237 ff.) Carr makes the image-forming tendency, or imagination, "the fundamental activity, the basis of perception and the condition of action." Cf. Fichte's Absolute Ego, which <u>imagines</u> or posits its antithetic Non-ego as the condition of morality.

Douglas Fawcett sees in imagination the creative all-explanatory world-principle, of which finite sentients are at once the products and the agents. "The hypothesis of Divine Imagining", he writes, quoting F.C.S. Schiller, "can really afford to be what other metaphysical principles falsely claim to be, viz. all-embracing. It can be represented as including not only all reality but all unreality." (Zermatt Dialogues, p. 75.) In Fawcett's own words, "There is nothing which we discuss as an 'object' that is independent of consciring (imagining) on some level or levels." (Op. cit., p.87.)

• Charlotte Bühler, <u>From Birth to Matu-</u> <u>rity</u>, p. 58.



When P shifts from P' to P", I his multiple observer $(O_1, O_2, ...)$ readjust and recombine all my estimates of his status, to yield roughly the same total.

+ Appearance and Reality, p. 365

[°] Analytical Psychology, pp. 426 ff.

^{× &}lt;u>The New Psychology and Its Relation to</u> <u>Life</u>, p. 133

contents, yet unable to ignore them, strikes a compromise, and 'discovers' them outside itself, attached to some exterior support or scapegoat. What strikes the bad-tempered man is how bad-tempered everyone is, and the prude finds those disgraceful tendencies in others which she is unwilling to acknowledge in herself. If Chapter I is right, this projective activity is not incidental, but is on the contrary an important factor in the regional schema. Moreover, errors of projection are errors of the instrument. And again I say, if the instrument is faulty in one thing it may be faulty in all things.

P. To exist is to entertain the other, and the other is what is projected.* Ultimately, there are no errors of projection. There are only those projections which are more private and particular (we call them illusions †) and those which are less so (we call them real and true). If a sufficient number of observers project upon a centre a consistent content (or even if a single observer does so, using the right technique -- probably an unconscious one -- in the right circumstances) then similar projections are encouraged in other observers. The thing tends, as we say, to become more and more 'objectively real'. Of the statues of the gods, Maritain says: "The god did not exist; but all the cosmic and psychic forces, the attractions, the passions which took shape in him, the idea which the artist and his contemporaries conceived of him --- all that was present in the statue In our museums, this pagan content is asleep, but it is always there. Let some accident take place, an encounter with a soul itself sensitized by some unconscious content: contact is established; the pagan content will be awakened and will unforgettably wound that soul. + The object has no means of refusing that which is attributed to it by projective activities. In this lies the explanation of the 'atmosphere' of many famous buildings, the real efficacy of places of pilgrimage, such phenomena as the angels of Mons, and the 'mass hallucinations' that some witch-doctors are able to produce in their suggestible subjects. And in this lies the explanation of the <u>tulkus</u> and <u>tulpas</u>, or phantoms, which the Tibetan adept is able to create at will, \times the visions and auditions of St. Teresa and other ecstatics, as well as many of the phenomena of witchcraft and hauntings. As for mental or spiritual healing (so called), does not the healer deliberately make an 'error' of projection, which presently becomes the truth for all to see? Virtue -- projective vigour -- goes out of him. Such a healer is one who, not merely in theory but with his whole being, calls materialism's bluff. ° I know of no other explanation of the many modern 'miracles' that are both well-attested and defy any ordinary explanation. Ø

C. Half these stories may be written off as superstition, and the other half as of no consequence. Only the unperceptive find the common world so lacking in fascinating problems that they have to unearth (or invent) such dubious material.

P. Superstition there certainly is, and not least amongst those who dismiss all phenomena that refuse to conform to preconceived rules. And lack of perception there certainly is, and one form of it is failure to see in these more obscure (I do not say more mysterious) occurrences possible clues for the solution of many important problems. In the field of psychology, the abnormal has illuminated the normal past all expecta* Hell, according to Von Hügel, is where souls are only interested in themselves as themselves. <u>Essays and Addresses</u>, 1st Series, 'What do we mean by Heaven and Hell'. See also John Macmurray's chapter, 'About Unreal People' in <u>Freedom in</u> <u>the Modern World</u>: "Unreal people are egocentric. They are out of touch with the world outside them and turned in upon themselves." C. S. Lewis, in <u>The Problem of</u> <u>Pain</u> (pp. 106 ff), and other books, takes a similar line. I would say that, in the limit, total failure to project, and unrelieved egocentricity, mean non-existence.

† There may be distinguished 'hallucinations' (which lack a family), 'illusions' (which are at odds with the rest of the family), and 'perceptions of a normal kind' (which are respectable members of a complete and well-ordered family). But these three merge imperceptibly into one another.

+ <u>Redeeming the Time</u>, p. 193. Aldous Huxley, <u>The Perennial Philosophy</u>, pp. 304 ff., has a particularly interesting discussion of the function of projection in religion, and the extent to which active belief in a god creates that god.

× See With Mystics and Magicians in <u>Tibet</u>) by Alexandra David-Neel. The creation of grotesque phantoms is a part of the training of some orders of lamas, the object being (besides gaining expertness in concentration) to demonstrate that there are no gods or demons except those that are projected, and moreover that (as Fawcett says) "the sensible content of our perceptions is itself imaginal". (Zermatt Dialogues, p. 112.) But the really important point is that, once projected, the <u>tulpa</u> may pursue a life of its own, and get so far out of hand as to kill its author.

° There is a level at which materialism is true, and a level at which it is untrue. The healer, I suggest, works downwards from the latter. J. D. Beresford's novel <u>If This</u> <u>Were True</u> has much of interest on this theme.

ø But I doubt whether it is necessary to posit, underlying the mesh of 'observers' (at all stages of completeness), anything like Broad's 'psychic medium', through which M's past experience, activated by N's present interests, modifies N's present experience. Nevertheless, as I hope to make plain, the mesh of mutual observers at this level requires the finer and coarser meshes of the other levels for their interaction; these therefore serve as a species of 'psychic medium.' tion. Let us take the hint. In any event, a philosophy that leaves no room for these somewhat rare 'psychic' events is so much less a philosophy: the frequency and the familiarity of data have nothing to do with their importance for thought. I believe that the theory of projection which I am outlining here gives a reasonable explanation of much of what is still called the occult, + in addition to illustrating and developing the schema of the foregoing chapters. Projections come true because they are true. There is a French proverb which says that if you keep painting the devil on the walls, he will by and by appear to you in person. The child who on a dark night mistakes the tree-stump for a man, is only doing what the witch does more effectively and deliberately when (with the help of her waxen doll) she literally projects her evil designs upon the victim. Again, the witch is only doing, as a solitary individual, what all of us do conjointly all the while in ordinary perception --- projecting yonder that which is in the first place here. Every malicious thought is genuine witchcraft ×, and it strikes home. Projection cannot miss its mark. Of course the results are very variable, since they must come to terms with the results of all other projections upon the same centre. Often the effects are practically negligible. Nevertheless the tree will never be quite the same tree for having also been, momentarily, an old man with upstretched arms. Whereas "God works on that level where reality and imagining are one", ° man is obliged to make the distinction, not because he imagines too much, but because he does not imagine enough --- not vividly and consistently and continuously enough. In the West we have forgotten these things, but the East knows them very well: the elaborate and ancient cult of Tantrism is one of several ways of exploiting methodically the mechanism of projection.

C. Blake's Urizen conveniently seats himself upon "a rock which himself From redounding fancies had petrified". • Are all rocks like this? Is there no essential difference between a 'real thing' and a 'projection', or phantom?

P. The difference is one of degree. The 'real thing' is a centre compassed about with a great cloud of witnesses drawn up region by region, and directing upon their common nucleus an extremely varied but coherent content. The 'phantom' is the same thing on a humbler scale, or more abstractly, since the witnesses are fewer and their testimony fragmentary. Thus between what is most real and what is least real there are innumerable gradations, ranging from the private 'hallucination', through the collective 'hallucination', to the collective 'percept'. The most incorporeal of phantoms has its measure of reality, and the solidest of everyday objects has its measure of unreality. As J. S. Mackenzie put it: "the distinction between what is real and what is imaginary is not one that can be finally maintainedall existing things are, in an intelligible sense, imaginary." ° All experience is creative. Why else should the one word object do for what a man observes and for what he intends? One consequence is that nobody can afford to neglect public opinion, or any opinion. "We have so great an idea of the soul of man", says Pascal, "that we cannot endure being despised, or not being esteemed by any soul; and all the happiness of men consists in this esteem." † He who does not care, or says he does not care, what anybody thinks of him,

+ For the suggestion that the spirits of the dead are projections of the relatives' psychic energy, see Jung, <u>Contributions</u> to <u>Analytical Psychology</u>, p. 268. This may well account for the devitalizing effects of having too much to do with psychic phenomena: the living are the projection of the many, the dead of the few -- and virtue goes out of them.

× After all deductions have been made for exaggerations due to superstitious fears, the evidence that witchcraft was something of a menace in England, Scotland, and New England in the 17th century is weighty. See particularly Margaret A. Murray, Witch-cult In Western Europe; G. L. Burr, Narratives of the Witchcraft Cases; and The Trial of the Lancaster Witches, edited by G. B. Harrison. Of course I do not deny that the barbarously cruel witch-hunt, that followed the bull Summis Desiderantes of 1484 and the Malleus Maleficarum of Kramer and Sprenger, itself projected a great part of the diabolism it professed to discover.

° Fawcett, <u>Op. cit</u>., p. 111.

• The Book of Ahania, III.

The <u>Proceedings</u> of the Society for Psychical Research contain many striking and well-attested instances of collective hallucinations, a few of which are summarized in G. N. M. Tyrrell's <u>The Personality of</u> <u>Man</u>, pp. 63 ff.

T. H. Green wrote: "the common objects of experience have their being only for, and result from the action of, a selfdistinguishing consciousness Common sense is apt to repel such statements as these, because they are taken to imply that we can perceive what we like; that the things we see are fictions of our own, not determined by any natural or necessary order. But in truth it implies nothing of the sort..." (Prolegomena to Ethics, 63, 64.)

<u>e Elements of Constructive Philosophy</u>, p. 440. Cf. H. Wildon Carr, in <u>Philosophy</u>, April 1931.

"God gave way', says the Duke in Fry's <u>Venus Observed</u>," to hallucinations; you and I again."

† <u>Pensées</u>, 400.

is either deceiving himself or indifferent to what he is. "Kings are not born," Shaw tells us, "they are made by artificial hallucination." + So are playwrights, politicians, professors, and philosophical writers. So are we all; and St. Paul, warning the Romans to "Provide things honest in the sight of all men," * is wiser than the Roman Emperor who again and again tries to persuade himself that appearances really do not matter. ° Reality is keeping up appearances.

C. It is the mark of primitive people and of children that they cannot distinguish between the real and the imaginary. † To revert to their condition would be for the civilized adult a great loss and a great betrayal.

P. Indeed it would. There are three stages: -- (1) The child and the savage very properly refuse to divide sharply the 'real' from the 'imaginary'; (2) common sense very properly makes practical distinctions; (3) the reflective consciousness, agreeing with and reconciling (1) and (2), says that the 'real' is what is consistently and persistently imagined.

3. ERRORS OF PROJECTION (ii)

C. What is lacking is verifiable evidence that images are not essentially different from the objects of sense experience, or at least that imagining and perceiving are the same kind of activity.

P. There is plenty of such evidence. For example, there is the experimental work of the American psychologists Scripture and Perky. × The latter asked his subjects to project a 'mental image' of a banana on to a screen; at the same time (but without the subjects' knowledge) an assistant threw on to the screen a magic-lantern picture of a banana, in such a way that the picture was at first extremely faint, but gradually became more intense. All the 27 graduates tested took what they saw for their own creation. Woodworth comments: "No absolute difference exists between an image and a percept, and there is no sure criterion by which one can be distinguished from the other." • What is called a good eidetic subject + can describe in minute detail the picture he projects (or 'sees', as he may say); he is able to explore its intricacies and count its features just as if it were an object about whose existence the whole world were agreed. But, after all, laboratory demonstrations are hardly needed here: I have only to dream. The elephant in my nightmare is at least as real to me at the time as the elephant in the zoo is at another time, and the rats of <u>delirium</u> tremens amply make up in vividness for what they lack in universality.

C. Everyone recognizes that the visions of sleep and of delirium are illusions.

P. The waker's illusion is the dreamer's reality, and there is no third party to arbitrate. "Once Chuang Chou dreamt he was a butterfly, fluttering here and there just as if he were a butterfly, conscious of following its inclinations. It did not know that it was Chuang Chou. Suddenly he awoke; and then demonstrably he was Chuang Chou. But he does not + <u>Man and Superman</u>, 'Maxims for Revolutionists'.

* <u>Rom</u>., XII. 17.

° Marcus Aurelius, <u>Meditations</u>, II. 3; XII. 3.

† Of the ability to visualize clearly, Galton says, "There is reason to believe that it is very high in some young children, who seem to spend years of difficulty in distinguishing between the subjective and the objective world." <u>Inquiries into Human Faculty and its Development</u>. Cf. Professor Spearman, <u>Creative Mind</u>, p. 139: "Hallucinations are essentially the same thing as images, only pushed to a fuller degree of sensuousness."

I am much indebted to Herbert Read's discussion of this subject, in <u>Education</u> <u>Through Art</u>, pp. 39, ff.

 \times <u>American Journal of Psychology</u>, xxi, pp. 422 ff.

For an opposing view, which seeks (I think mistakenly) to make a firm distinction between sensation and imagery, see Charles Fox, <u>Educational Psychology</u>, pp. 81, 363.

• Experimental Psychology, p. 45.

+ See E. R. Jaensch, Eidetic Imagery.

"The vivid dream", as Hocking points out, "has all the concreteness of experience. It often exceeds reality..... We seem passive to our dreams as to our waking experience; the conscious self has little power to control the course of the dream event. Yet the dream must be, in all pictorial detail, the product of our minds, our subjective imagination." (Types of Philosophy, p. 273. "The process of imagining is, in truth, of one piece, so to speak, with the process of perceiving... the chief difference being that in imagination a relatively larger proportion of revived factors are involved." Dawes Hicks, British Journal of Psychol-<u>ogy</u>, xv. p. 131.

know now whether he is Chuang Chou who dreamt he was a butterfly or a butterfly dreaming he is Chuang Chou." *

C. "Dreams are true while they last," as Tennyson says, "and do we not live in dreams?" Ø All the same, the objects of dreams and the objects of waking life belong in different worlds. According to Professor Hocking, the space of the one and the space of the other are "not 'outside of' each other; for this could only mean that they were different regions in the same space. They are not spatially related to each other at all; for there is no line of distance between any point of one and any point of the other. The bear of the dream is not a mile from the bedpost nor ten feet from the bedpost, nor any other distance ... ° Confined to my dream-world, the bear is unreal in this world. There is no bridge from one realm to the other; therefore he is as powerless to touch a hair of my head as I am to shoot him with the revolver I keep under my pillow. Only dream-weapons are effective against dream-attack, and even they are notoriously unreliable. The dream-bear and the dream-world he inhabits lie outside this frame of reference; like Ruritania and Erewhon, Penguin Island and Nepenthe, they are right off the map (and right off the calendar too), and along with them are all the characters of fiction, all the figments of our day-dreams, all our castles in the air. In brief, the human mind is as prolific of unreal and separate worlds or worldlets as of unreal creatures to inhabit them.

P. They are neither less real than ordinary objects nor insulated from them: they are connected with the world of waking life in somewhat round-about or unusual ways--- that is all. * First, let me point out that while the dream-bear (as all agree) has no material substratum, or inscrutable non-mental substance, neither (if the argument so far is right) has the bear in the zoo. • Next, let me say that the dream-bear and his companions are well able to come across into my waking space, as the grim experience of many young children, primitives, lunatics, and alcoholics testifies. The two worlds are anything but mutually insulated. The hobgoblin of my childhood nightmares shared my address, and lived in a particular part of the coal-cellar --- there was as little doubt about his date and his place as about Sherlock Holmes' and Mr. Micawber's. No dream of mine is so chimerical that it is not packed with odds and ends from waking life, and the work of fiction that is too fantastic just abolishes itself --- the meaning lies in continuity with the rest of things, and loss of meaning is in the end loss of being. It is not as if you had on the one side a primitive, or childish, or pathological world of the imagination, and on the other a mature and sane world of reality, devoid of imagination. The realism of the hard-headed adult is imaginative through and through --- sense-data (themselves the product of 'imagination' at lower levels) are only signals for the creative effort that builds what is called the 'real world'. That certain wings and storeys of this world-structure are less accessible than others, is rather a reason for learning my way about the place, than for refusing to include them all on the same sheet of plans. At least the law of economy should warn me not to multiply spaces and times and realms till I am forced to do so.

C. There remains the causal independence of the two worlds to account for.

* <u>Chuang Tzu Book</u>, II (trans. E. R. Hughes). Cf. Pascal: "No person is certain, apart from faith, whether he is awake or sleeps, seeing that during sleep we believe we are awake... Who knows whether the other half of our life, in which we think we are awake, is not another sleep?" <u>Pensées</u>, 434; see also 386.

ø 'The Higher Pantheism'

° The Self: Its Body and Freedom, p. 30.

* Bertrand Russell makes this point in <u>Our</u> <u>Knowledge of the External World</u>, p. 85.

• On the argument from the non-materiality of dream-objects to the non-materiality of objects perceived in waking life, see McTaggart, <u>Nature of Existence</u>, 364 ff.



It is the subnormal man who is under no 'illusions' about this drawing, and fails to see in its pattern many things that are 'not there'. The merest indication is normally sufficient to conjure up the most elaborate imagery. P. Causal round-about-ness --- yes; causal independence --- certainly not. The hobgoblin who cannot 'touch a hair of my head' can in fact make them all stand on end, and even turn a shade greyer. And who of us 'real' persons can claim the social effectiveness of an Uncle Tom or a Mr. Squeers? Imagination is dynamite. So far from being ineffective, it is (taken in the broadest sense) the only real force in the world. Fantasy, Carlyle truly says, is "the organ of the God-like". + The important question is: what is the level, what is the quality, of our imagination? The truth is that in waking life the imagination is <u>more</u> active than during sleep. × It is the vigour and consistency of our imaginative effort which reveals the higher waking world to us; second childhood, sleep, and madness are a relaxation of this effort, and the revelation of lower planes of reality. And it is a part of the thesis of this book that ordinary waking life is, in its turn, mere dreaming in comparison with life at higher levels, where the imagination, strengthened and disciplined, is still more active. °

C. At least it is certain that a mob of riotous fancies will not conform to the orderly schema of this book.

P. The chaotic is another name for the unexamined. Dreams and fantasies are not, in my experience, markedly less regional than ordinary perception. * In them, also the stars are remote, men are near, and mountains lie somewhere between; the Bandersnatch is less than ten miles away and more than ten inches. Dream-objects and the objects of waking life find common ground in their regional distribution, though it is true that their lateral relationships within the region are often indirect and obscure. This degree of unrelatedness, however, is nothing new or surprising. There is no measurable distance between a high altitude and a low temperature, or between redness and middle-C, nevertheless it is unnecessary to invent a plurality of worlds to accommodate them all. Neither do I propose to invent a realm (or rather realms, for the number required would be limitless) to dream in. Instead, I shall regard this one world and this one spatial system of mine as enough for the present, though much more populous and more involved than I had bargained for. It awaits a second Newton and a second Einstein, who will take account of all its inhabitants, and not only those which can be labelled 'physical objects'.

C. Then what is it that happens when I fall asleep? Why this sudden alteration in the one space?

P. I revert from a higher level of projective activity to a lower. In other terms, I withdraw my attention from a certain set of spatial characters and apply it to a different set. (After all, this sort of thing is always happening. I stop writing this sentence, and just listen: at once a world of sounds, that my surface mind had hitherto ignored, comes into existence. The switch-over from my waking experience of my friend, to my dream of him, could not be more abrupt.) This place, this centre of mine, has riches which the dreamer in me, the thinker, the artist, + the common-sense man, and all the others, have only begun to explore ---by the method of projection. The inexhaustible content of this centre is a consistent whole, and the activity by which it is attributed to other centres is one activity. There is neither room nor reason for alien orders of + Sartor Resartus, III. 3.

× Eddington remarks that, if system is the mark of mind or the ideal, and lack of system is the mark of matter or the nonmental, then the chaotic objects of our dreams are more material than the orderly objects of our waking life! In a sense, this is quite true. (See <u>The Nature of the Physical World</u>, p. 284.)

° As Sir Thomas Browne says, "we are all asleep in this World.... the conceits of this life are as mere dreams to those of the next; as the Phantasms of the night, to the conceits of the day." <u>Religio Medici</u>, II, 11.

* To take one instance out of many wellattested ones, Miss Ina Jephson received a letter from her lawyer, stating that he was enclosing a cheque. She carried the cheque about, examining it in detail from time to time, and then lost it. When she wrote to her lawyer asking him to stop payment, he replied saying that the cheque had been left out of his letter, and that he was enclosing it this time. Miss Jephson's first cheque had been a hallucination. She says: "If cross-examined in a court of law, I would have said with complete and absolute conviction that I had seen and handled the cheque in the first letter...." (For a full account see Proceedings of the Society for Psychical Research, xxvii, p.184.) Note that the imaginary cheque was perfectly at home in its real environment, and there were no spatial discrepancies. In a paper on 'Apparitions', published in 1943 by the S. P. R., Mr. G. N. M. Tyrrell points out that the 'non-existent' body of an apparition is capable of obscuring the pattern of the wallpaper or the furniture behind it.

+ One of the most surprising and significant facts revealed by the history of art is the inability of one generation of painters to <u>see</u> what another sees. The mechanism of vision is the same, and the intention faithfully to portray is the same, yet the results (after allowances have been made for changing techniques and materials) are so different. The saying 'you have only to use your eyes' is clearly futile. See Eric Newton, <u>European Painting and Sculpture</u>, pp. 72 ff., for a recent statement. things. To pick out any item and (because its connections with the others are unorthodox or not at once apparent) to banish it to some private outer darkness, is quite unjustified, while to label it 'unreal' is absurd. The primitive who is not sure which is the more real, the world of his dreams or that of his waking hours, makes no such mistake. \times

But note this: while projection is never erroneous, it is often damaging. In fact it is because our projections are so very authentic that they are capable of doing so much harm. Hatred, fear, resentment, leading to social disorganization and to war, are projective. Of course we can always prove our point --- 'they' started the trouble; 'they' are the mischiefmakers, the menace, aggressive, the misled, irredeemable; 'they' are obviously the guilty party. We are not mistaken. 'They' are all these things because we make them so. What we attribute to them really is theirs. But if instead we were to detect, and to project upon them, a different set of characters -- positive and helpful ones -- we should find once more that (in the long run, and making allowance for other people's projections) 'they' were what we made them, and that all projection is creative. ° The first duty of the individual today is surely this --- to take upon himself the blame for the chaos he finds without, to cease attributing the world's troubles to 'them', to withdraw harmful projections however true. What is called political realism in the chief author of the real evil it discovers. Only a higher realism (a realism, which, if good triumphs, is more realistic than the other sort) can break the vicious circle of projection and reflection, and substitute a virtuous one. In this, the humblest individual may be effective, just as the tiniest flaw is effective in breaking the biggest electrical circuit. The method is simple. All he has to do is to say with Traherne: "All things were well in their proper places, I alone was out of frame and had need to be mended," • and to remember that 'I' means the elastic self of every level, the self that is much more and much less than a man.

4. PROJECTION AND REFLECTION (i)

C. This is Berkeley's 'to be is to be perceived' (without, so far, the saving clause about God as the perceiver, and so the guarantor, of all those necessary things, such as the interior of the planet, which for us are out of sight and out of mind. *) But the entities of the previous chapters were perceivers as well as perceived; they were two-sided, having a view out as well as a view in. Are there also real things that are nothing in and for themselves?

P. The answer depends upon what is meant by 'real things'. What Plato calls <u>forms</u>, the Schoolmen <u>universals</u>, and Whitehead <u>eternal objects</u> (examples are redness, love, and the number seven) are certainly real, but they are abstract. Entering into the nature of concrete individuals as indispensable ingredients, they are themselves of a different order; it may be said that they are only real by virtue of this embodiment. Think-ing is sometimes described as separating the essence of things from their existence, the 'what' from the 'that,' the quality from the thing qualified,

× For examples, see Lévy-Bruhl's <u>Primitive</u> <u>Mentality</u>.



° Jung has written much on this subject. See, e. g., <u>Psychology and Religion</u>, pp. 100 ff., where he says that anyone brave enough to withdraw negative projections becomes a serious problem to himself, because he is unable to accuse 'them' of the evil which he now realizes is in himself. But in knowing that what is wrong with the world is his own condition, he does something to ameliorate the world's condition.

• Centuries of Meditations, III, 60.

* "Sensible things cannot exist otherwise than in a mind or spirit. Whence I conclude, not that they have no real existence, but that seeing they depend not on my thought, and have an existence distinct from being perceived by me, <u>there must</u> <u>be some other mind wherein they exist</u>. As sure therefore as the sensible world really exists, so sure is there an infinite, omnipresent Spirit who contains and supports it." Berkeley, <u>Hylas and Philonous</u>, 2nd. Dialogue. the idea from the fact. + And of course the essences which thought abstracts are real enough in their way. In fact it is possible to find in the mesh of mutually immanent, concrete individuals an unlimited number of aspects or elements, having every shade of abstractness, and to award to them appropriate degrees of reality and existence. But the basis of them all, the fundamental structure on which rests such reality as they have, is the universe-wide community of individuals or selves of every grade, with their interlocking projective activities. *

C. Consider this chair. Undoubtedly it exists. Nevertheless it can hardly be credited with a view out upon the world. It is nothing for itself. Unlike the furniture which Vulcan endowed with intelligence, it is onesided and without self-hood.

P. Self-hood is of all degrees. Later on I shall discuss which things may provisionally be accorded the status of an individual self in the scale of being, and which things may be reckoned mere collections of selves; meantime it may be noted that there are no distinct dividing lines between true and pseudo-selves, and that even a chair has its rudimentary measure of selfhood. For a view in to a centre necessarily involves a view out from it. There are no single fares: a return ticket is always issued. The centre is by nature a kind of mirror, reflecting back upon the world the stream of influences that it receives. Ø Let me put the matter this way: the observer endows his object with some of his own capacity for observation. Not content with attributing to me the characters he projects upon me, he goes on to attribute to me a similar projective activity, directed back upon himself. He credits me, and indeed all his objects in their measure, with a view out upon the world. I say that he does not do so in vain. × The object becomes something in and for itself, because to be an object is to be (in however slight a degree) a subject. Subjectivity is never entirely absent where there is real and concrete being. In a word, to be is both to be perceived and to perceive --- where the meaning of 'perceive' is stretched to cover the most rudimentary apprehensions of the world as well as the most advanced. The material things around us are not wholly inert and soulless. Significantly, it is when we are most alive and at our best that we know this for a fact. When we find ourselves surrounded by cold, dead, unsympathetic objects, are we not to that extent insane? °

So far from being far-fetched, this doctrine is implied in all our common-sense realism. We have a firm conviction that things really are what they seem to us to be, that their regional appearances in us belong to them and not merely to us, that the object owns its manifestations, and is not shut up in its central nothingness. To the innocent eye, the sky seems to be blue for itself, and indeed to rejoice in its blueness. This can only mean that the sky somehow comes here to take a look at itself through the eyes of all who behold it. Our rejoicing in its blueness is its own rejoicing. That is to say, projective activity is not the private property of him who projects: it belongs also to the object upon which the projection is directed. All things of which man has experience are in him resurrected from the dead, or given a new life.

Madame David-Neel, having as an experiment projected a fat and jolly monk, finds him becoming more and more of a person: it is nec-

+ See, e.g., Bradley, Appearance and Reality, pp. 163 ff., and Royce, The World and the Individual, i, p.49. Whitehead and Russell, Principia Mathematica, i. 14, do not allow that the word existence is applicable to the 'appearances' of an object to a subject, though these appearances have some kind of being. I do not disagree, inasmuch as existence involves inter-subjective intercourse, from which the appearances of one subject to another are abstractions. Even H. Wildon Carr's view (Theory of Monads, pp. 53-4) that what cannot be thought of as a subject of experience cannot be thought of as real, abstracts from that which is really real, namely the total community of mutual observers

* "We do not content ourselves with the life we have in ourselves and in our own being; we desire to live an imaginary life in the mind of others, and for this purpose we endeavour to shine We would willingly be cowards in order to acquire the reputation of being brave. A great proof of the nothingness of our being." Pascal, <u>Pensées</u>, 147.

Ø The things around us have constantly to be <u>worked over</u> -- gardens weeded, plants pruned, furniture polished and dusted, houses repaired and painted -- if they are to share our life: unless we care for them, they die. Thus D.H. Lawrence:
"Things made by iron and handled by steel are born dead, they are shrouds, they soak life out of us.
Till after a long time, when they are old

and have steeped in our life they begin to be soothed and soothing: then we throw them away." ('Things Made by Iron,' <u>Pansies</u>, p. 38)

× "When, therefore, we once recognize that relation to the conscious subject or self is essential to every object, we are forced, at the same time, to conceive it (the object).... as having a certain independent self-centred being in itself; for only so can it form an element in the life of intelligence." Edward Caird, <u>Hegel</u>, p. 194.

° Thoreau, at least, thought so when, recovering from a mood of this "slight insanity," he became "suddenly sensible of such sweet and beneficent society in Nature.... an infinite and unaccountable friendliness all at once." (<u>Walden</u>, 'Solitude') The poets testify that this beneficent society is not confined to what is called animate nature.

"We know that ghosts cannot speak until they have drunk blood; and the spirits which we evoke demand the blood of our hearts. We give it to them gladly; but if they then abide our question, something from us has entered into them." Wilamowitz-Moellendorff, quoted by A.D. Nock, <u>Conversion</u>, p. 270. essary to abolish him, and this does not prove easy. + It is impossible suddenly to cut off, as if by turning a tap, the subjectivity with which creator endows creature. Again, it is notorious how ghosts outlive their authors, dragging on a waning existence; I suggest that only when they cease to be anything at all for themselves do they cease to be anything at all for others, and so pass out of existence altogether. Consider primitive man, who endows trees, streams, rocks, mountains, and practically everything around him, with personality --- malevolent, beneficent, or neutral. He is by no means mistaken. To credit a stone with a view of the world is to bring that view into existence. The idol is not indifferent to its worshipper. On the contrary, it has just that influence over him which he believes it to exercise. What it is sincerely credited with, that it genuinely has. And what it genuinely has cannot be dissolved in a moment: there is a certain time-lag. In general, it may be said that the pathetic fallacy is only a fallacy for those who lack the vitality to make it anything else. A Wordsworth, on the other hand, is alive enough to bring all around him to life. Nor is this at all strange: life is bringing others to life. By itself and on its own, nothing lives, or even exists. Vitality is infectious or nothing, and its measure is the extent and power of its infection.

About any unfamiliar contrivance, our first question is: what is its purpose? --- man's purpose in it is taken to be the article's own purpose. Again, our language hits the mark. \times Indeed it is difficult to exaggerate the power of man to infect with his own characteristics the surrounding world. Not merely metaphorical are the mountains which faith moves, as the phenomena of telekinesis and the poltergeist amply show. The evidence for the latter is now overwhelming, and there is no excuse for continuing to ignore it. * However disturbing to orthodox science, the truth is that inanimate objects do sometimes fly through the air, and perform a variety of astonishing tricks, 'of their own accord' --- or rather (the evidence seems to suggest) at the instigation of some human agent.

Or (if this should appear too doubtful) consider the evidence of professional authors. Thackeray wrote: "I have been surprised at the observations made by some of my characters." • Dickens, describing his work to Forster, insisted: "I don't invent it -- really do not -- but <u>see</u> it and write it down." ° Miss Sayers records that the characters of her novels take on such life and independence that their creator becomes their interested observer, and sometimes their startled and disapproving critic. † Mr. Somerset Maugham testifies similarly. Ø The rule is that, while all the characters of fiction are offshoots of the author's vitality, they are convincing and 'round' only in so far as they gain a large measure of independence. The artist's aim, says Miss Sayers, is the complete independence of the thing he creates, "combined with its willing co-operation in his purpose".‡

The novelist is not a creature apart, living an utterly different life from ours. His or her capacity for creating quasi-independent characters is only our own, peculiarly applied and powerfully exercised. As the writer enters into and becomes each of his creatures in turn, so do we enter into and become one another. How often it is said that man is essentially a social being, that his humanity does not reside in himself as an individual, and how rarely are the full implications grasped. To be a social being is + With Mystics and Magicians in Tibet, p. 284. Such projections are not nearly so abnormal as we are apt to suppose: it is quite common for an imaginative child to create a companion for himself, a companion who may become very real indeed. The great thing with a ghost, writes an exceptionally critical medium, is to avoid taking it too seriously, and thereby giving it the energy it needs. Phoebe D. Payne and Laurence J. Bendit, <u>This World and That</u>.

"The nature of man as a spiritual being involves.... realizing himself in that which lies beyond him and seems to limit him." John Caird, <u>Introduction to the Philoso-</u> <u>phy of Religion</u>, p.123. This law is exemplified by stages, of which one of the earliest is animism.

× Archbishop Trench, whose book <u>The</u> <u>Study of Words</u> established him as a philologist, believed that language is often wiser "even than the wisest of those who speak it. Sometimes it locks up truths which were once well known, but have been forgotten. In other cases it holds the germs of truths which were never plainly discerned...."

* See, e.g., Sacheverell Sitwell's <u>Poltergeist</u>, for an account of many striking cases. The phenomena are often associated with a boy or girl (at about the age of puberty) who is not, however, consciously responsible for them.

- Roundabout Papers.
- ° Forster's Life of Dickens, ii, p. 58.
- † The Mind of the Maker, p. 50 ff.

Ø <u>Cakes and Ale</u>, Preface. Alexander (<u>Philosophical and Literary Pieces</u>, pp. 228 ff.) describes the artistic experience as discovery rather than invention; and he cites Michelangelo's "There is no thought which the sculptor expresses in marble that does not exist there already." Cf. Graham Wallas, <u>The Art of Thought</u>, IV.

‡Op. cit., p. 111. The problem (Miss Sayers goes on to say) is how to reconcile the character's free will with the author's overall intention. When writing her novels, George Sand abandoned herself to the characters, not knowing how they would conduct themselves, and how the novel would end. She says in a letter, "I can find nothing in myself. It is the other who sings as he likes, well or ill, and when I try to think about it, I am afraid and tell myself that I am nothing, nothing at all." The George Sand -- Gustave Flaubert Letters, trans. A. L. McKenzie, p.32; quoted by Rosamund E. M. Harding, Anatomy of Inspiration," p.15.

to transcend individual self-hood and to become many selves. "While we discuss together we become one another in turn. For, if I understand what you understand, I become your understanding, and in a certain unspeakable way am made into you". \times It is the nature of every man and woman I meet to see himself or herself through my eyes. Something of the person who consciously pleases or hurts me, who loves or hates me, is here in me being pleased or hurt, loved or hated. Sympathy is what empathy literally means. We need to inhabit each other if we are to be human. Society is a great novel, of which each of us is at once joint author, and one of the characters, and many of the characters. We are different in degree rather than in kind from the characters of what is called fiction, and from its authors.

We create each other, by mutual projection and reflection. For, as Traherne so admirably puts it, "We need spectators, and other diversities of friend and lovers, in whose souls we might likewise dwell, and with whose beauties we might be crowned and entertained. In all whom we can dwell exactly, and be present with them fully And as in many mirrors we are so many other selves, so are we spiritually multiplied when we meet ourselves more sweetly, and live again in other persons." °

5. PROJECTION AND REFLECTION (ii).

Everyday experience, summed up in all manner of proverbs and in the structure of language itself, illustrates perfectly the principle of projection and reflection. Love begets love: your own love is returned as another's. * It is not less yours because it comes to you from the other person, nor less his because he derives it from you. Enthusiasm is notoriously infectious. The prophet who inspires his disciples gets back what he gives. "Cast thy bread upon the waters: for thou shalt find it", not at once, but "after many days." • It is the same in our dealings with the universe itself: religion, says Martin Buber, does not ask whether the universe is our friend, so much as explore the results of taking up our stand in friendship towards it." ° Though the admonition "as ye would that men should do to you, do ye also to them likewise" † is unconditional, holding good projectively whatever may happen reflectively, still, in actual fact and sooner or later, the wished-for reflection does occur, and 'unrealistic idealism' is at last proved to be far more practical than the cautious and stinting 'realism' of common sense. By such projection and reflection we remake one another continually.

I take my hand to be the light which it reflects, just as the miner takes the coalface to be the light he sees it by, even though that light comes from himself --- from the lamp strapped to his head. "The youth, intoxicated with his admiration of a hero, fails to see, that it is only a projection of his own soul, which he admires." + But the youth is right: projection has become reflection, and as much a part of what the object really is as the light that streams from it. Shaw's Don Juan ϕ is unjust when he accuses Woman of allowing him to mistake his own visions, thoughts, and feelings for hers: Woman is what Man makes of her, and <u>vice versa</u>. When \times John Scotus Erigena, <u>De Divisione Naturas</u>, IV. 9.

If I want to see my friend (and to that extent to <u>be</u> my friend), I must look with him rather than at him, for it is in our common object that we share identity. "I can imagine", says W. E. Hocking, "no contact more real and thrilling than this; that we should meet and share identity, not through ineffable inner depths (alone), but here through the foregrounds of common experience, and that thou shouldst be -- not behind that mask -- but <u>here</u> pressing with all thy consciousness upon me, <u>containing</u> me, and these things of mine." <u>The Meaning of God in Human</u> <u>Experience</u>.

° <u>Centuries of Meditations</u>, II. 70. On women as unfitted to see themselves as women except through men's eyes, and <u>vice versa</u>, see Virginia Woolf, <u>A Room of</u> <u>One's Own</u>, V. The principle is of universal application: at no level is simple <u>self</u>awareness possible.

* "How many women's hearts are vanquished by the mere sanguine insistence of some man that they <u>must</u> love him! He will not consent to the hypothesis that they cannot. The desire for a certain kind of truth here brings about that special truth's existence.... <u>And where faith in a fact can help create the fact</u>, that would be an insane logic which should say that faith running ahead of scientific evidence is the 'lowest kind of immorality'..." William James, <u>The Will to Believe</u>, pp. 24, 25.

• <u>Ecc</u>. XI. 1.

° <u>I and Thou</u> (trans. Ronald Gregor Smith).

<u>†-Luke</u>, VI. 31.

"The beauty in her Lover's eyes was admiration of her own." Coventry Patmore, <u>The Angel in the</u> <u>House</u>, II. ii. 3.

+ Emerson, 'Literary Ethics'.

φ Man and Superman, III.

"....we receive but what we give, And in our life alone does Nature live: Ours is her wedding-garment, ours her shroud!

And would we aught behold, of higher worth,

Than that inanimate cold world allowed To the poor loveless ever-anxious crowd, Ah! from the soul itself must issue forth A light, a glory......" Coleridge, 'Dejection: an Ode'. we ask, "whatever can he see in her?" we know he sees himself, but that is not the end of the matter: what he sees was himself but is now herself --- a being who owes her attraction to her otherness. If for him any trace of the outward or projective movement were to remain, the inward or reflective movement would to that extent cease. For the condition of real projection-reflection is that the object shall own exactly what it seems to own. It is a truism that many a man has been saved from himself by a woman's belief, against all common-sense evidence, in his soundness --- a quality which, coming from her, becomes his retroactively *. What is not a truism is the law thus exemplified: our experience of others is at once their self-knowledge through us and our self-knowledge through them. Ø We all hold up mirrors to each other. I give unlimited hospitality to those who wish to know themselves by getting outside themselves; and my reward is ample, for their view back upon themselves is not other than my view of them. A man, as Shakespeare observed,

> "Cannot make boast to have that which he hath, Nor feels not what he owes, but by reflection; As when his virtues shining upon others Heat them, and they retort that heat again To the first giver." °

Common sense wants to know what becomes of effort and initiative. <u>Athanasius contra mundum</u> --- there is a <u>man's</u> attitude. But if we all meekly do what is expected of us, if we are all reduced to mirrors eyeing themselves in mirrors, have we not lost all human dignity, and come to the ridiculous condition of Christopher Sly, or the Emperor who let himself be talked out of wearing his clothes?

Of the two lessons I have to learn, I am always forgetting one or the other. The first is the lesson of how to become nothing, the lesson of the Tao -- "Be empty: that is all: the perfect man's use of his mind is like a mirror." \bullet --- the lesson of Keats' 'negative capability' and James' 'relaxation'. \bullet To be still, to polish one's mirror, to empty oneself and prepare the receptacle, is to invite a great access of power. And the second is the lesson of how to become something, --- by becoming something in others, re-creating them and so becoming part-author of reality. I am the world's receptacle, and it is mine. Others use me to make something of themselves, and I use them. By courtesy of the inhabitants of every region I am self-conscious, for their consciousness of me is my self-consciousness actual or potential. \dagger My continually changing self-estimate is a series of changes in them.

Suppose I am alone and without observers, on some uninhabited island. Am I not still self-conscious?

I am convinced that I have eyes and a head and a body, no matter whether the room is crowded or empty, whether I am Robinson Crusoe or a city-dweller. Now this conviction of mine does not make sense unless it is true for some observer, and it can only be true for one who is situated where I have (or am) a complete human body with head and eyes. He must be in a position to take on (so to say) this body of mine. Common sense tells me that on a desert island there is no such observer, but only inanimate objects. I reply that <u>to confer on myself a body is to</u> * Cf. William James, <u>Varieties of Religious</u> <u>Experience</u>, pp. 356, 357.

Ø Cf. Eckhart: "Creatures all come into my mind and are rational in me.... Beware, all of you, what ye do." <u>Works</u>, (trans. Evans), i. p 143.

° Troilus and Cressida, III. 3.

• ChuangTzu Book, VII.

θ <u>Talks to Teachers</u>, 'The Gospel of Relaxation'. See also Joanna Field, <u>Experiment in</u> <u>Leisure</u>, p. 132.

† I have read somewhere of a firm (the partners women, the place New York) whose business is to make candid criticisms of their clients' dress, manners, and deportment generally -- on the assumption that a man's friends are not outspoken enough, and his enemies are too outspoken, on the subject. Here is a striking instance of observers who serve as part of a man's self-consciousness. <u>confer on them a mind</u>. No mind there, no body here. My self-awareness infects my environment with an awareness that is in no way fictitious: the mind with which I surround myself is as real as mine, for it is mine. Bertrand Russell rightly points out that "We cannot find out what the world looks like from a place where there is nobody, because if we go to look there will be somebody there." × But the fact is that I do know what this part of the world called my body looks like over there. Somebody is there watching me. That somebody is myself, yet another than myself.

There is a weighty mass of evidence to show that the dying, and sensitives, and even normal healthy people, sometimes have the experience of leaving the body and observing it from outside. + This is not at all surprising, because it is only a vivid version of what we all do all the time without noticing the fact: self-consciousness involves the ability to get out of this body and into another. In Tibet this fact has for centuries been exploited: after long practice, the lama is able to identify himself wholly with a tree, or any other convenient object, and to see himself from the point of view of that object. •

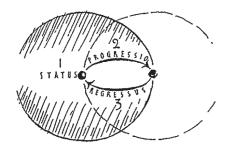
Our own doctrinal traditions embody the same principle on the grandest scale: the Holy Trinity involves a process of projection and reflection. God, says Eckhart, in becoming an object of consciousness to Himself, continually begets the Son, who is the Father objectified; the Spirit is the bond of love that unites Them. Thus the Trinity is the eternal process of the divine Self-awareness. In later terms, three stages may be distinguished: There is first the pure Idea, timeless, whole, and perfect but still abstract; next, the Idea projected into time, encountering resistance, becoming objective, definite, particular fact; finally, the Idea, disguised as the Other, returning to the Source, in Whom all estrangement is at last overcome. There are many alternatives of language -- for example, the status, progressio, regressus of the Neoplatonic triad; the being, knowledge of being, and love of both, of St. Augustine; ° the thesis (the Idea for itself), the antithesis (the Idea externalized), and the synthesis (Spirit in which externality is overcome), of Hegel * -- but the underlying doctrine is one and the same. And its stages are none other than the stages of this chapter --- (1) the centre with its contents, (2) the centre projecting those contents and disclaiming them, (3) the centre receiving back and claiming what it has projected. As St. Augustine and many of the Schoolmen taught, man, being created in the image of God, is himself the Trinity in miniature. † Each of us is in his measure an instrument and organ of the universal creative process. I would say that to exist at all as a concrete being is to take one's share, at some level, of the work of creating other concrete beings. We exist by making something of others, and the measure of what we are is the measure of what we find others to be. This, surely, is the fundamental meaning of the teaching: "Except a corn of wheat fall into the ground and die, it abideth alone: but if it die, it bringeth forth much fruit. He that loveth his life shall lose it; and he that hateth his life in this world shall keep it unto-life eternal." ϕ



× Outline of Philosophy, p. 164.

+ See, e.g., G. N. M. Tyrrell, <u>The Personality of Man</u>, pp. 160, 195 ff. Particularly interesting are his accounts of persons who, near the point of death, were able to observe with great clearness, and as if from above, their own prostrate bodies.

• David-Neel, <u>Op. cit</u>., p. 250.



° "And we have in ourselves", says St. Augustine, "an image of the Holy Trinity.... for we both have a being, know it, and love both our being and knowledge." <u>City of</u> <u>God</u>, XI. 26.

* "The first was the Idea in its simple universality for itself. ... The second was the Idea in its externality, so that the external phenomenon is brought back to the first, is known as the divine Idea -- the identity of human and divine. The third is this consciousness, God as <u>Spirit</u>, and this Spirit as existing in the <u>community</u>." Hegel, <u>Philosophie der Religion</u> (1832), ii. p. 261. The Eastern Church rejected the <u>Filioque</u> clause in the Nicene Creed. Actually, however, the West seems to mean that the procession of the Holy Spirit is <u>from</u> the Father <u>through</u> the Son. See Swete's <u>Holy</u> <u>Spirit in the Ancient Church</u>.

† Cf. William Law, <u>Christian Regeneration</u> (Hobhouse, pp. 11 ff).

In the soul, says Traherne, "the dimensions of innumerable worlds are shut up in a centre." (<u>Centuries of Meditations</u>, IV. 81.) But the only way to realise them is to project them upon other centres, and so lose them.

φ <u>John</u>, XII. 24, 25.

6. PROJECTION AND AESTHETICS --- EMPATHY.

In the principle of Einfühlung or empathy, × aesthetics furnishes a striking illustration of the projective-reflective activity. Why do I find certain objects -- shapes, actions, creatures -- fascinating or repellent, satisfying or disquieting, and in so many different ways? Why, for instance, should I thrill to the story of brave deeds? How do snow-capped peaks and cathedral spires gain their impressiveness for me? What is there about the roaring and scouring surf, the rousing, resistless locomotive, the gloriously mounting rocket, the scudding or gently floating cloud, the effortless soaring and swooping of birds, which stirs me, which answers to me, which for the moment makes life so much the more worth living? The answer (or a large part of it) is that I become all these things, and that I like the experience. I grow, and my satisfaction is satisfaction at this new role I am playing, at these new powers I am exercising. Nor is this growth always hidden from the outside observer. By his grimaces, by jerkings of hands and feet, the football enthusiast shows that he identifies himself with the player he is watching; and it is a commonplace that film-fans live another, if rudimentary, life in the film-star, as novel-readers do in hero or heroine. These are some of the more obvious manifestations of the law that we live (in so far as we are alive), not in ourselves, but in our objects. I know what it is to be brave in all heroes, fearful in all cowards, virtuous in all saints, villainous in all villains; I am graceful in the ash, glorious in the sun, delicate in the snow-crystal, strong in the pillar, sleek in the greyhound. The wealth of my attributes is unlimited, because I have all the world to draw upon. And it is only in these my objects that I can have such qualities, or any qualities at all. To have and to hold --that is the great impossibility. What I have, others hold.

But my present concern is less with the theory than with the firsthand experience that bears it out. I really do feel better for another's goodness --- goodness, like all other qualities, must be located <u>elsewhere</u> to be itself: if I imagine I am good I deceive myself, for the goodness I have I must disown. I have an inner assurance that the statue's beauty, so long as it is the statue's and not mine becomes mine. In the sunset cloud I know to perfection what it is to hover in the sky. I live as a bird and a star, a mountain and a tree, escaping from my littleness and overcoming all physical limitation. Abandoning myself to the object, I throw myself into its motions, I am swayed by its laws, I give myself up to its life, I surrender to its experience. In so far as I care to use it, this power of omnipresence is mine, and common sense shall not talk me out of it.

The empathetic experience is not necessarily pleasant. When the columns of a building are too slender or too squat, I feel vaguely uncomfortable: only when they are suitably proportioned do I have the satisfaction of putting forth the right amount of effort. And of course there are many things that I try to avoid going into (note the expression) --they are too painful. In any event, identification is never complete. There must remain the two poles of the process, and the feeling of transition between them. + My object is here-from-there and there-from-here: it is Page 60 × "I am here using as much of the doctrine of empathy as suits my purpose, and I do not pretend to do justice to one or to all of the several versions of that doctrine as put forward by T. Lipps, K. Gross, H. S. Langfeld, and others.

Is not the engineer trained to think and feel himself into the parts of the structures he designs, apportioning stresses so that there is no undue fatigue or strain? A bridge is a monster athletic display of molecules and groups of molecules, and if many are overworked and underworked the structure is a failure. A good designer has the technique of taking up the point of view of each member in turn, realizing in himself just what can be expected of it. Thus it is that I cross the river dry-shod by virtue of the nicely balanced co-operative effort of myriads of individuals, because the whole is indwelt by the designing engineer. If he did not become the bridge, there would be no bridge. In the same way, every work of man is man. Not only, says Lotze, do we enter into the flight of the bird, the fleetness of the gazelle, the graceful bending of the tree; "nay, even to the inanimate do we transfer these interpretative feelings, transforming through them the dead weights and supports of buildings into so many limbs of a living body whose inner tensions pass over into ourselves." Microcosmus, 1. pp. 565 ff.



The shape of this 17th century ewer is not merely satisfying: in it the beholder enjoys a feeling of self-satisfaction. In E. F. Carritt's words, "Aesthetic pleasure is an enjoyment of <u>our own</u> activity <u>in</u> an object." <u>The</u> <u>Theory of Beauty</u>, p. 273.



essential to keep up the circulation, to maintain the (now familiar) twoway process of building up and breaking down. Once this ceases, everything vanishes. If, in becoming my object there, I let go of this centre, or if, in returning here, I let go of the object's centre, nothing is left. Always it is the transposing-space, × the interval which procession demands, the gap or mutual range, which is the making of us.

As two-centred, I become the locus of two sets of attributes --- 'subjective' and 'objective'. The first is linked more particularly with this centre here (examples are interest, disappointment, disgust, love), and the second with that centre there (examples are beauty, redness, remoteness, bigness). Of the first set of attributes it may be said that, from being mine, they become my object's; of the second that, from being my object's they become mine. The circulation continues because the law of elsewhereness permits of no stagnation. Thus there can be no hard-andfast distinction between what belongs to one pole and what belongs to the other. Truly speaking, the beauty or ugliness, the qualities subjective and objective, the life and the experience, reside neither in my object nor in me, neither at this centre of mine nor at that centre which I make mine, but in the total traffic that passes between them.

All experience (I suggest) is like this, and reality is experience. ° To detach the objective pole, treating it as though it were self-supporting and self-existent, is the method of common sense and of science --- and a necessary and immensely productive method it is. The trouble is that it is also, and literally, fatal. You cannot bisect a blood-system without shedding the life-blood. To stop the circulation is to kill. The real, bipolar organism of subject and object as a pair of equals yet one, held apart and held together by their reciprocal 'metabolism', is slaughtered outright, and the scientific butcher contemplates a carcass. * Of course this is right and needful (without death there is no life) but there is no need for the butcher permanently to forget the living thing he has killed. The real, concrete world that shares our common life comes first in fact and in experience; the dead, less real, more abstract world of science comes second, and owes everything to the first. The scientist is a man before he is a scientist. It is only because the stars and mountains and clouds and stones and beasts which he studies share one life with him, are conjoined with him in an indivisible vital process, that he can become aware of them at all.

7. <u>THE MIRROR.</u>

For me to exist is to call others into existence --- a society of equals in and for whom I shall amount to something. I cannot help surrounding myself with comrades at every level of my being. But common sense objects that manifestly there are circumstances when I lack any such ring of companions, and that a certain minimum of organization is necessary before my observers can start to function.

Oddly enough, the reverse is true, and the perfect observer is the

+ E.D. Puffer, in <u>The Psychology of</u> Beauty (1905), analyzing 'aesthetic repose', distinguishes one group of elements in the background of consciousness from another in the foreground, with elements passing from one pole to the other. Their transition back and forth is the condition of self-consciousness, and the establishment of an unbroken circulation is the condition of aesthetic experience. In the perfect moment we see that our world is good, "that we grasp it, possess it, that it is akin to us, that it is identical with our deepest wills." The work of art "gives ourselves back to ourselves completed". See especially Ch. III.

× Rilke has the line: "Space spreads transposingly from us to things". <u>Later Poems</u> (trans. J. B. Leishman), p. 127.

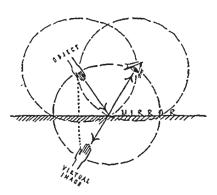
° According to Croce's Expressionism, meaning is conferred upon an object by a subject, who in this activity expresses and discovers himself. E.F. Carritt (in some respects a follower of Croce) similarly makes such expression the primary spiritual activity: for him the theory of empathy, in so far as it starts from a living person on one side and a dead world on the other, divides the indivisible, and can never reconstruct this primary spiritual activity. See Carritt's <u>The Theory of Beauty (1914)</u>, pp. 292 ff.

* James Ward says: "we can see how ... objects that, so to say, were common property, ceased to be regarded as property -- or relative to experiencing subjects -- at all, while the objects of immediate experience were regarded as the <u>peculium</u> of the individual and so as not objects at all: in other words, we can see how the psychology of dualism came to shut itself <u>in</u> and the physics of dualism to shut itself <u>out</u>, by sundering the one world of experience into two halves, an internal and an external, both abstractions and so both devoid of reality." <u>Realm of Ends</u>, p. 10. least organized, the most uniform and featureless. I mean the mirror. My looking-glass differs from my other observers not so much in kind as in the degree of its efficiency. Just as I inhabit, and to some extent become, my friend, when I judge the impression I am making on him, so do I become my mirror when I accept its version of me. Even common sense cannot deny that in important respects my mirror is for me a more reliable self-observation post than my friend is.

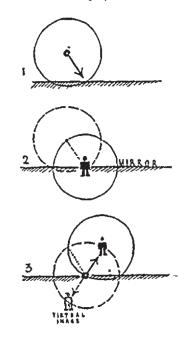
Common sense seems to find some confusion here. This man I see when I look in the mirror --- where is he? Is he not here, at the centre of my regions, and <u>not</u> over there in or behind the glass? All along it has been urged that I can only know what is here where I am. Now, apparently, the mirror, instead of endorsing the doctrine of regions, cancels it: for it puts my body back where it belongs, in its common-sense place at the very centre, from which it has been so carefully removed. +

Yes, but how does it do so? By doing what all my observers do, and projecting the contents of its centre on to my centre. Common sense is correct in pointing out that the man-in-the-mirror is really here and not over there, but fails to notice how he got here and who sent him. He is referred to this place by the second or regional me, who is centred in the mirror. Let me try to make the matter perfectly clear by distinguishing three stages. When (as I say) I see myself in the mirror, what I really do is (1) go out to become my mirror, (2) register what I am in that place, and (3) project it upon the original centre of my regions. Now this is nothing else than a specially lucid case of self-observation in general. In other instances the same three stages are found, but there is normally much in my observer with which I do not identify myself. Nor do I grasp all that I mean to him: I disown or neglect part of his estimate of me. My mirror, on the other hand, (in so far as it is a good one) devotes itself exclusively to reflecting me (or whatever lighted object it happens to be facing) without any complications and irrelevancies. My looking-glass is more accommodating than my friend, and imposes fewer conditions upon me when I set up my new observation-post in it. This is another way of saying that whereas I contribute only a part of my friend's nature, I am for the time-being the whole life and mind of my mirror. When I look in it I live in it, as it lives in me. ° The optical story of reflection is simply an abstraction from the concrete projective-reflective commerce of selves in their social relationships: the optical diagrams are ontological, exposing the skeletal framework of reality after the living flesh has been cut away. To be is to mirror.

(The sort of perfection owned by my mirror lies in its temporal limitation. Its grasp of time is nil or near to nil: neither memory nor anticipation complicate its present performance. × My human observer, on the other hand, perceives me as having a past and a future extending beyond this moment and place, while a supremely efficient observer would perceive me as having a past and future of unlimited duration, and a status extending far above and below the human. Thus there are two ideal limits, two kinds of perfection, in my observers --- the perfection of exclusiveness (which my mirror approaches), and the perfection of inclusiveness (which is traditionally attributed to God, or an all-knowing Mind); and though these two may be distinguished in theory they



+ Even more cogently, perhaps, common sense might take the case of the man who, by means of a system of mirrors, watches an operation performed upon the visual area of his own cortex. In such (not impossible) circumstances, the patient's brain coincides with the centre of his regions. And the explanation (as in the case of the man who sees his whole head or body in a mirror) is that he has added to that original centre a new centre in his mirror-observer, which contains and projects his brain.



° In other words, the law of elsewhereness is not violated, and a man's glass is not a means whereby he can achieve the impossible, and "be together with himself". Cf. C.S Lewis, <u>Perelandra</u>, pp. 156-7.

× In other words, the mirror, as such, belongs to the centre, to the level of the 'bare monad' of Leibniz, with its <u>mens momentanea seu carens recordatione</u>. See Ward, <u>Realm of Ends</u>, pp. 254, 255. are one in fact, as I shall argue in a later chapter. Midway lies my human observer, who sees enough of me in time and in space to blur the clear mirror-picture, and not enough of me to comprehend the total picture. Nevertheless that total picture includes and consists of all imperfect and partial estimates of me.)

What, then, is this remarkable thing I call a mirror? The perfect mirror (a true plane surface reflecting all the light that falls upon it) is the centre attained, the observer become nothing but accommodation. And just because it is this, it is also a complete system of regions, and the capacity of taking on the qualities and the life of all who are in them. I catch my mirror in the act of brushing its hair. Or, if I pick it up and take it to the window, there in my hand is a real cloud floating in a real blue sky, or the sun, or a constellation. This petty household article -- bought for a few pence and valued no more highly, put away perhaps in some drawer and forgotten -- is a head and a man and a star, and all things in earth and heaven. And I accept all its transformations as matters of fact, without mystery or significance! Here is an object which breaks all the rules of common sense without common sense ever noticing the fact. But for one who is concerned with the problem of knowledge (to say nothing of ontological problems) the mirror is at once the most baffling and the most illuminating, the most exceptional and the most typical, of all objects. As Professor C. D. Broad has suggested, × it should be the starting place for any adequate theory of perception, and not regarded as an awkward fact that has to be left to the end to be accounted for somehow. For what is happening everywhere else obscurely is happening here plainly --- the mirror is living, active, human, and sometimes suprahuman, because the centres ranged round it make it so. They breathe the breath of life into it. So it comes about that my mirror is a man here, and I am not. Unlike me, it is alive and human, though it is I who make it such. This is no metaphor, or a paradox for the sake of paradox, but one of those plain facts to which familiarity has blinded us.

It is the mystics, of all people, (those uncompromising empirical realists) who have appreciated the underlying principle. * Thus St. Paul (himself reflecting Plato) writes: "But we all, with unveiled face reflecting as a mirror the glory of the Lord, are transformed into the same image...." $^{\circ}$ In effect, we are God's regional observers, becoming Him in so far as we make way for Him by 'cleaning our mirrors', (in the phrase of Richard of St. Victor, and several others). He is in us as we are in our mirrors.

8. SOME LEVELS OF PROJECTION-REFLECTION.

Since the mirror is what it reflects, it rises and sinks in the scale of being along with its object. Its status is proportional to the distance of its object and the depth of the image, or in other words to the extent of its own projective activity. + And so with all the individuals comprising reality: their rank is that of their object, and this is proportional to the object's range. Standing at different levels, they (very naturally) enjoy different The mirror has, of course, another kind of limitation, in that the 'family of sense data' it offers is bereaved of certain members -- one cannot move round the thing one sees in a mirror.

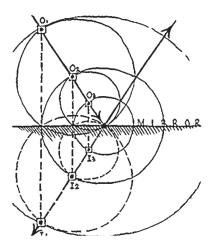
"For as a looking-glass is nothing in comparison of the world, yet containeth all the world in it, and seems a real fountain of those beams which flow from it, so the Soul is nothing in respect of God, yet all Eternity is contained in it, and it is the real fountain of that Love that proceedeth from it. They are the sunbeams which the glass returneth: yet they flow from the glass and from the Sun within it. The mirror is the well-spring of them, because they shine from the Sun within the mirror, which is as deep within the glass as it is high within the Heavens." Traherne, <u>Centuries of</u> <u>Meditations</u>, IV. 84.

Cf. the observation of John Smith, the Cambridge Platonist, that "God made the universe and all the creatures contained therein as so many glasses wherein he might reflect His own glory." See Inge, <u>Christian Mysticism</u>, p. 294.

× <u>Contemporary British Philosophy</u>, 1st Series (Ed. Muirhead), p. 92.

* St Teresa fancied, on one occasion, that she was a mirror without a frame, reflecting Christ. He told her that when a soul is in mortal sin the mirror is clouded and so cannot reflect Him, though in fact He is present. (Froude's Essay, 'St. Teresa')

° II <u>Cor</u>. III. 18. Cf. Plato, <u>Symposium</u>, 211, 212.



+ This statement is subject to certain qualifications, noted later.

views. The higher the viewpoint the wider -- the more projective -- the outlook. There are many grades of projection-reflection, and these, in general, amount to grades of being. Details belong later on: here I shall only mention the main stages, with some examples:--

(a) At the lowest stage, where there ceases to be any outlook or projection, existence ceases. A unit which altogether refuses to concern itself with its fellows annihilates itself. +

(b) Primitive inanimate units (e.g. electrons and protons) do not reproduce their kind -- at least not in the biological sense -- nevertheless I assume that they maintain one another by mutual projection and reflection. ° This level sees the active preservation of a <u>status quo</u>, which is, however, poor in attributes. The view is as lacking in quality as in scope.

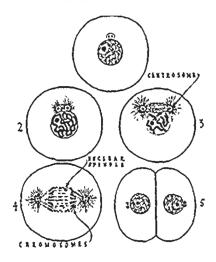
(c) Primitive living units reproduce their kind (as a rule at relatively short intervals) by simple division. This is a new order of projection-reflection superimposed upon (b).

(At this stage the process of projection-reflection becomes visible to a third party. If I may describe mitosis and cell-division in the language of this inquiry, what happens is that the cell, as represented in its organs the centrosomes, divides or stands away from itself, becoming a pair of rudimentary units each 'projecting and reflecting' the other. The nuclear spindle indicates the lines of this two-way activity, as if the familiar diagram were being drawn for our benefit. As the mutual range of the centrosomes increases, each attributes cell-hood to the other, in the shape of a full set of chromosomes, and presently there are two complete cells where one existed. Projective activity having subsided, both sets of chromosomes disappear: they lasted only so long as they were projected from an outside centre, and themselves projected in turn. Like everything else, they are in themselves nothing at all. In other words, the cell, obedient to the universal law, only becomes itself by occupying itself with another like itself. In the resting state, when projection-reflection falls off, the cell suffers a proportionate degeneration.

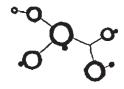
Among viruses, the method of reproduction is different, but the projective activity is still well-marked --- at least in some instances. Thus Barnard found that the virus associated with cattle-pneumonia consists normally of a sphere, on the surface of which small protuberances appear. These presently are extended -- or projected -- from the main body at the end of fine threads, where they grow to full size. Again, it seems, the interval that joins and yet divides, is of the greatest importance.)

(d) Multicellular individuals reproduce their kind in a slower and more complex fashion, and for the most part sexually. The offspring is a joint projection, and not the work of a single parent. And where it is reared by one or both of the parents, or by a larger group, the original projective activity is prolonged and reinforced, with notable results. Generally speaking, the higher the creature in the life-scale, the longer is this period of training, and the more elaborate the projective activity that goes to the making of an adult. But projection of some grade there must be. Death (that great demonstrator of the law of elsewhereness) is the inescapable fate of all that fail to shift center, and to unload all their + Stout is one of the psychologists who maintain that what is given in sense-experience is from the start referred to a source in or beyond the body, and this reference is projective. (<u>Manual of Psychology</u>, 2nd Ed., p. 371.) Lloyd Morgan_and some others hold the contrary view, that at the beginning of the individual's mental development there is no reference to something beyond. (<u>Emergent Evolution</u>, p. 101; but see also <u>Mind at the Crossways</u>, pp. 92, 93: Lloyd Morgan finds at levels below perception an external reference, to nowhere in particular.)

° Hoyle, Bondi, and Gold have, in the hypothesis of Continuous Creation, suggested that the background material of the universe replenishes itself, and that new matter in its most elementary state is always emerging.



Five stages in the division of a typical animal cell. (Adapted from Weismann 's <u>Evolution Theory</u>.)



A virus reproducing. (After Barnard.)

Many protozoa (single-celled animals) multiply at such a rate that, were it not for their wholesale destruction, the progeny of a single organism would in a few weeks exceed the bulk of the earth. Fish, on the average, produce hundreds of thousands of eggs a year, amphibia hundreds, reptiles tens or less, and mammals least of all. That is to say, quantity of projection gives place to quality. possessions upon another. * The only way to be something, and to go on being something, is to project others equal to the task --- that is, to reproduce one's kind. The life-cycle of birth, parenthood, and death, is no accidental peculiarity of living organisms, but a mode of the universal projective-reflective process, and a poignant indication of the inmost nature of reality.

(e) Still higher units -- those which are in some respects 'self-conscious' -- not only maintain and reproduce their own kind by projectivereflective activity, but also infect other neighboring units with their own qualities, and in general re-create their environment. Multiple projection turned upon a single object is particularly effective. Primitive man's way of projecting his own vitality into his surroundings is animism; civilized man's is science and technology. In both, man lays hold of what he is by discovering it in the external world --- the chief difference being that, in the first, he concentrates the life in the object, while in the second he concentrates it in himself the subject. Actually it does not belong at either pole, but in the two-way process that unites them.

(f) At this stage there is a great increase in mutually induced selfconsciousness. High-grade individuals become interested, not solely in themselves as they appear in and to the spectator, not solely in the spectator as he appears in and to themselves, but (over and above these) in the spectator as he is to himself. Mutual immanence is more and more a realized fact.

(g) The highest Individual, as completely self-conscious, is all-creative. + He projects all that is -- that is to say, Himself -- and takes all time to do so. "For all things exist only as seen by Thee, only as known by Thee...." says a contemporary poet. \times Even here (so many believe) the law of elsewhereness holds, and the bi-polar process finds its supreme instance in the Holy Trinity. So far from there being any suspension of the principle at the highest level, it is there that the principle originates and receives it final and perfect expression. Even God must find Himself in His Other, must die to live.

Note four points:-- (1) The more exalted the unit the more actively it projects, and the more exalted in scope and quality are its offshoots. (The law of equality draws attention to this fact.) (2) The tempo of projection -- or rather the rate at which new units are produced -- tends to fall off as we rise in the scale. (3) All grades of projection-reflection coexist and play their part in the hierarchy of projection and reflection. Common sense, for example, taking the projections of its own level as entirely valid, and denying the validity of those of other levels, is only being true to its function, and so to the totality which that function serves.

(One aspect of projection-reflection which is of great contemporary importance is known as chain reaction + --- a process which appears in such varied fields as nuclear fission, explosions, polymer reactions, epidemics, and rumour. The 'chain initiator' (which may be a bombarding neutron, a catalyst, a disease carrier or infected organism, a malicious person) induces in, or projects upon, two or more individuals a certain condition; each of these infected individuals, instead of merely reflecting the condition back upon the initiator, who may himself be immune, re-

* Cf. Plato, <u>Symposium</u>, 208. -The aim of indefinitely prolonging individual human life on earth (see, e.g., Metchnikov's <u>The</u> <u>Nature of Man</u> and <u>The Prolongation of</u> <u>Human Life</u>, and Shaw's <u>Back to Methuselah</u>) is, as Aldous Huxley sets out to show in <u>After Many a Summer</u> misdirected and ultimately self-defeating. To remove death would be, not to further life, but to destroy it, seeing that death is the condition of life, life's other aspect.

The normal result, when the individual is torn from the projective-reflective mesh, is degeneration. It is notorious how slovenly people (and particularly old people) are apt to become once they are solitary. In much the same way, when specialized cells are separated from the animal body and kept alive in the laboratory, they soon revert to a primitive amoeba-like form. On the other hand, tissue from one part of an embryo, if transplanted early enough upon another part, is likely to take on the characters of its new surroundings.

+ "God", says Browning, "is the perfect Poet." 'Paracelsus', II.

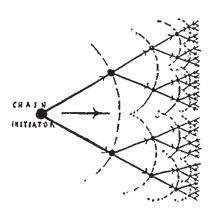
× T S. Eliot, <u>Murder in the Cathedral</u>. The mystic may approach this level, as when he says: It is no longer a world independent of knowledge. One never really has observed it as an external world at all. It has no independent Being. It is a world identical with the knower. It is a vision of his soul. Its life is his life. It is in so far as he creates it. Whatever he is as knower, that is his world." Royce, The World and the Individual, i. p. 160. In other words, when a man, transcending himself, realizes the total Self of all, then subjective idealism becomes true. Then, and only then, is the world his idea. It is also precisely the opposite: what is only his is nothing.

+ See the article 'Chains' by Alan Robertson in <u>Science News</u>, No. 3, (1947) in which the similarity of chain or branching reactions in physics, chemistry, and biology, is brought out. flects it on to others. In this way large numbers are very quickly affected, with explosive results. The principle is applied in the making of atomic bombs (where the neutrons shot out by a disintegrating U 235 nucleus break up other U 235 nuclei), in combustion engines, gas fires, and many types of chemical manufacture. Epidemics are perhaps the most familiar chain phenomena, but mass hysteria, panic, and the mutual and mounting fear and hate between nations, and between groups of nations, work according to the same principle. \times And so, fortunately, do benevolence, goodwill, and love. Each of us is a chain initiator of effects whose scope is incalculable, and whose consequences for good and evil would amaze us if they could be disentangled for our inspection.)

9. THE INEQUALITY OF SUBJECT AND OBJECT.

C. Projection and reflection are --- up to a point --- only common sense. But the law of equality is a very different matter. It is true, of course, that the savage reads himself into all around him. And it is precisely for that reason -- precisely because he puts into practice the doctrine of equality -- that he is a savage! Whereas the growth of the scientific attitude, of science itself, is putting into practice the doctrine of inequality. Slowly and painfully man comes to the conclusion that most of the objects around him are not at all like himself. * His neighbour sees things from another point of view, inevitably: how difficult to allow that he is <u>entitled</u> to it, even if the <u>fact</u> of its existence is firmly established. Another family or tribe or class has different customs: how hard not to find them shocking, or despicable, or just silly. Animals do not think man's thoughts, or live in his world, or act from his motives: how often the trained investigator (to say nothing of the pet-lover) projects his own humanity upon his subhuman material. Indeed we are far from eliminating anthropomorphism, and such blunders as the Clever-Hans error are always creeping in. ° The savage in us is very much alive. With a part of ourselves we know that nature is indifferent to us, and (in her larger aspects inanimate): yet we still curse the weather, put our faith in some talisman or other, and, especially in moments of great danger, personify all manner of dead objects. The fact is that man has only lately, and only in some parts of the world, begun to learn that his environment is not a reflection of himself. And there is no guarantee that he will not lose, in some tidal wave of superstition and barbarity, this hard-won knowledge.

P. All this is very true. Science purges its object first of mind, then of life, and finally of materiality itself. Science is the discovery of the infrahuman. It is the forgetting of man. It is the theory and practice of inequality. Religion, on the other hand, is the discovery of the suprahuman. + Again it is the forgetting of man, and the theory and practice of inequality --- but this time it is man that falls short of his object, instead of vice versa. In what does the progress of religious ideas chiefly consist, if not in the discerning of a Mind (or Spirit, or Personality, or a System of Values) whose quality is pitched higher and higher above the human norm? The evolution of the idea of God is a tale that begins with the all-too-human nature of Mumbo Jumbo, goes on by degrees to Page 66



× It would be an instructive and perhaps useful task to study the correlation of chain effects at different levels. Such questions would arise as: is there some 'vertical' process linking an epidemic of fear amongst nations with an 'epidemic' amongst U 235 nuclei leading to the explosion of atom bombs? Or rather, since it is fairly clear that there is such a process, the question is: are the linking events, at intermediate levels, similar chains? And is the mutual antagonism of individual men one of these necessary go-betweens? According to James IV. 1, at any rate, strife amongst men proceeds from strife amongst their bodily members.

* Nor is it enough that humanity, or our civilization, should make this discovery: each of us has to find it out for himself. The young child, endowing various dead objects with consciousness, recapitulates the racial history. Again, the distinction between animals and humans is for him very vague, just as it is for primitive peoples. To be descended from a kangaroo is a perfectly natural thing in the eyes of an Australian aboriginal. Many customs linger on to remind us of our ancient beliefs, as for example the Dutch ceremony of announcing a farmer's death to his cattle and bees.

° See, for a good account of such errors, David Katz, <u>Animals and Men</u>, pp. 1 ff.

+ "Early gods are like man and near him. But still, they were <u>as unlike and as remote</u> <u>as he could imagine them</u>. The differences between spirits and men, the gulf fixed between the natural and supernatural -gulf leaped in death -- the exaggerations and superlatives, these are as important parts of the conception as are the likenesses and simplicities of intercourse. When a man can <u>think</u> beyond the sun, and beyond the sky, ---- there God goes, and probably goes first." W. E. Hooking, <u>The Meaning of God in Human</u> <u>Experience</u>, p. 327. In St Augustine's words, "<u>Si comprehendis, non est Deus</u>." the jealous and wrathful and compassionate Jahveh, mightier than man but still very manlike, and ends with the Super-Essence of the Pseudo-Dionysius × and the ineffable and undifferentiated Godhead of Eckhart, which so transcends man that nothing positive can be said about It at all. Here projection ceases, and with it goes the last shred of parity between the human and the divine. "For my thoughts are not your thoughts, neither are my ways your ways, saith the Lord. - For as the heavens are higher than the earth, so are my ways higher than your ways, and my thoughts than your thoughts." ° To which the scientist might respond: as deep as the abyss below human thoughts and ways, are the thoughts and ways of the electron. And the philosopher might add: the higher, the heaven of the suprahuman the lower the abyss of the infrahuman. The discovery of what is so much greater than man, and the discovery of what is so much less, are really the two sides of one medal. The two man-transcending movements of religion and science are a symmetrical pair that cannot be parted. They are joined as the two ends of a spring are joined: the further they are pulled apart, the more forcibly do they draw together.

10. <u>THE EQUALITY OF SUBJECT AND OBJECT --- THE SUPRAHU-</u><u>MAN</u>.

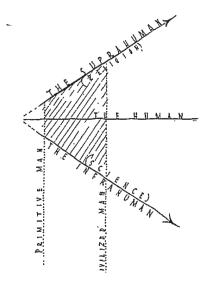
C. Then the so-called law of equality is finally disproved.

P. Not at all. Allow me to continue the story. Civilization is a set of variations on the theme that man is <u>not</u> the measure of all things. In so far as he fails to grasp the disparity between himself and the heights and depths of being, in so far as he comfortably assimilates reality to himself and is never amazed or terrified or appalled at its foreignness, in so far as he refuses to abase himself before the Inconceivable, surrendering all his petty pretensions, so far does he fall short of being a true man. Not once and for all, but continually he must know his place: he is a half-way house between the wholly unreal and the wholly real. When he forgets his human limitations he forgets himself, and is pitifully self-deceived. Nothing that I have to say in this book must be allowed to obscure these facts. It is dangerous, as well as ridiculous, ever to forget them.

But there is something queer and self-contradictory, all the same, about the statements I have just made. The gap widens between man's idea of man and his idea of God on the one hand, and between his idea of man and his idea of matter on the other. Yet man is aware of this double gap. How is this possible unless he spans the gap? "Now mine eye seeth thee", says Job to his Maker, "wherefore I abhor myself..." + But if man, comparing himself thus unfavourably with God, is not merely emitting meaningless noises, then he knows God at least well enough to make the comparison; and to know God is to reflect His nature, to contain something of Him, to have Godlike capacity. In fact, only God is capable of knowing Himself, and in so far as I know Him I am an agent of His own self-knowledge. × "The human mind has an adequate knowledge of the eternal and infinite essence of God", says Spinoza. *

× See, for instance, <u>The Divine Names</u>, XIII, where the Godhead is described as beyond goodness, beyond perfection, even beyond being.

° Is. LV. 8-9.



Kierkegaard, and his contemporary disciples, are certainly right to proclaim the "yawning abyss of quality" that divides man from the divine. Even the extreme and hopelessly one-sided Barthian theology (which does not leave to man even the power of response to the mercy of God, let alone any real moral or spiritual competence) insists on an essential truth -- the transcendence of God, and the danger that besets the doctrine of immanence. It is when the complete otherness of God is stressed to the exclusion of all else, that the consequences are harmful, both for religion and for thought. On this see Aldous Huxley, Ends and Means, p. 240.

+ <u>Job</u> XLII. 5-6.

× "The mental intellectual love towards God is the very love of God with which God loves himself..... that is, mental intellectual love towards God is part of the infinite love with which God loves himself." Spinoza, <u>Ethics</u>, V. 36.

* <u>Op. cit</u>., II. 47.

If this is so, the mind is no longer human, but raised to the status of its object. Man as mere man cannot know what transcends man. But he has such knowledge, and thus is more than man. It is essential that I never forget my human limitations, but the more vehemently I insist on them the more I deny them, since I must have increasingly in mind that against which I weigh myself and find myself wanting. On the other hand, the more vehemently I insist on my transcendence of the merely human condition the more I assert that condition: the norm must be there to be transcended, and continually to transcend it is continually to emphasize it. $^{\circ}$

C. This is all very fine in theory, but what are the crude facts? Man is a mammal that has taken to strutting on its hind legs. Lately sprung from ape-like stock, he remains in mind and in body a beast. In important respects he is the inferior of his animal ancestors. <u>Simia guam similis, turpissima bestia, nobis</u>! --- such was the opinion of Ennius, one of the first of the Roman poets, and subsequent history only confirms it. This promoted ape has, it is true, made his presence felt all over the earth, but it is often a baneful presence. Moreover the earth is one of the smaller planets of a very ordinary star, which is itself one of thousands of millions of stars belonging to our local galaxy, which again is one of millions. • That such an animal (so recently, so tentatively, so rarely, rational) lost to the point of annihilation in such a universe, should claim, not only to know, but also in some sense to be identical with, the Reality behind the whole --- this is quite ridiculous. Indeed it is madness.

P. Yet man goes on hearing the claim made century after century in every part of the world, scarcely ever noticing that it is the boldest, most revolutionary -- yes, the most absurd -- of pretensions. It <u>is</u> a kind of madness, and he who thinks it sane and sober just has not taken in the idea. To know it, a man must be beside himself --- and at his best and completest.

C. I prefer not to be out of my mind. And, after all, is not religious tradition on the side of common sense here --- the side of sanity and reasonable humility? Warnings against spiritual pride are always becoming necessary. Θ

P. The doctrine that man is capable of attaining the level of what is highest and best and most real in the universe is the common core of all the great religions. We are "partakers of the divine nature" + and "are made after the similitude of God". × "Brahman is Atman" * --- the highest cosmic reality is the inmost soul of man. "The man who knows the actions of Heaven and knows the actions of men, that man is perfect. To know the actions of Heaven is to be Heaven and alive.....Identify yourself completely with infinity-eternity." † East and West are here at one. "The identity between the subject and the object was realized in India before Plato was born..... This identity of subject and object is not a vague hypothesis, but the necessary implication of all relevant thinking, feeling and willing..... Religious mysticism and deep piety witness to the truth of the great saying 'That art thou,' 'Tat tvam asi!'" ø Men of different times and races and traditions testify, with remarkable consistency, to the truth of the bold words of St Bernard of Clairvaux: ° On the parallel movement of Hebrew and Greek thought from an anthropomorphic deity to a God too exalted to be comprehended or even approached by man, see Edward Caird's <u>Evolution of Theology in the Greek</u> <u>Philosophers</u>, ii, pp. 178 ff.

• As Gerald Heard has reminded us (<u>Code</u> <u>of Christ</u>, p. 124), human control over the world has, in effect, diminished with the progress of science. Our knowledge of nature vastly outstrips our control of it: the savage has considerable power over his tiny world, while we have none over our world of stars and nebulae.

 Θ "For I say ... to every man that is among you, not to think of himself more highly than he ought to think; but to think soberly." <u>Rom.</u>, XII. 3.

- + II <u>Pet</u>., I. 4.
- × James, III. 9.
- * Taittiriya Upanishad, I. 5.

† <u>ChuangTzu Book</u>, VI, VII.

ø S. Radhakrishnan, <u>The Philosophy of the</u> <u>Upanisads</u>, pp. 45, 46. There is, he says, a point of rapture where the human spirit "forgets itself....and. passes wholly into God..... To experience this state is to be deified." * Even Islam, which began by insisting one-sidedly upon the transcendent otherness of God, soon produced Sufism, with its compensating insistence upon the divine immanence. $^{\circ}$

We are like what we like, And "What we are, that only we can see".• We can take for our object anything from the highest to the lowest, and so rise and fall ourselves in the scale of being. (The rule, I shall try to show, is that symmetry is preserved, and our ascent above man is matched by our descent below him. The ascent is emphasized in religion and the descent in science, but both religion and science involve simultaneous ascent and descent. While it is impossible to exaggerate the greatness and the littleness of man, it is fatally easy to disconnect them, and to emphasize one to the neglect of the other.)

11. THE EQUALITY OF SUBJECT AND OBJECT - THE INFRAHUMAN.

The scientist is the equal of the things he studies. For instance, knowledge of the atomic nature is only to be had at the level of the atom, just as knowledge of the divine nature is only to be had at the level of the divine.

To common sense these statements are absurd. But consider, for a moment, what is known to the physicist as the principle of indeterminacy. + One of his most difficult problems is how to explore his material without seriously disturbing it. He gets his evidence about the atom's structure when the atom is either emitting or absorbing energy, and so ceasing to be what it was; the disintegrating atom has something to tell him, but the resting atom keeps its secrets. Similarly, the cytologist must isolate, kill, and stain the cell in order to study its chromosomes. Again, many animal functions and structures can only be investigated by maiming or killing the organism. Even in our human society the principle holds good, and the social survey itself affects the material surveyed. A number of eminent scientists have drawn attention to these facts. Thus Niels Bohr links the indeterminacy principle in physics with what Joseph Needham calls the 'thanatological principle' in biology. × The latter is the view (which Needham challenges) that "Of living substance we literally know nothing. We study the behaviour only of the living organism. Whenever we study organic substance, it is necessarily dead inert material that we investigate." ° Now this is as much as to say that the scientist is far too big, too clumsy, altogether too human for his job. He ought to be a Proteus, infinitely mutable and infinitely elastic, capable of insinuating himself into the living tissue, into the giant protein molecule, into the electron rings of the atom, without causing the slightest disturbance. An efficient detective does not obtrude himself; he merges into his surroundings; above all he does not interfere with the evidence. In so far as the scientist falls short of this model, he investigates the products of his own ineptitude rather than the material itself.

Yet it is plain that the scientist does have genuine and very detailed

* <u>De Diligendo Deo</u>, X.

° The contrast between Allah (the oriental despot on a magnified scale) of the Koran (see, e.g., LVII) and the Allah of the Sufi mystic Jalaluddin Rumi, is complete: certainly it far exceeds the contrast between Mohammedanism as a whole and Christianity as a whole. Jalaluddin's words -- "The Beloved is all in all; the lover merely veils Him"-- might be those of Mechthild of Magdeburg and many another Christian mystic.

• Emerson, 'Nature' (1836).

+ See, e.g., Eddington, <u>The Nature of the</u> <u>Physical World</u>, pp. 220 ff. He pictures a scientist trying to discover the position of an electron. The electron has to send out light to the eye of the scientist before it can be seen, but this disturbs the electron to an uncertain degree. "There is a fundamental inconsistency in conceiving the microscopic structure of the physical world to be under continuous survey because the surveillance would itself wreck the whole machine." Eddington adds that such facts call for a new epistemology. It is part of my endeavour to suggest the lines of such an epistemology.

× See Joseph Needham's contribution to <u>The Philosophy of A N. Whitehead</u> (Ed. Schilpp), p. 248, and <u>Order and Life</u>, I.

° J. Johnstone, <u>The Mechanism of Life</u>. (Quoted by Needam, <u>Order and Life</u>, p. 29.) knowledge of the infrahuman world. Indeed it may plausibly be argued that he is more at home, more knowledgeable, more surely in control, at the lower levels than at the human level. * Hosts of artificial molecules and even artificial atoms, and the entire structure of modern physics and chemistry and biochemistry, bear witness. What, in view of the immense difficulties involved, could be a more impressive achievement?

There can only be one explanation. It is this: the scientist is just such a Proteus as I have described. ° He really is a detective who knows how to camouflage himself, and to let the evidence alone. Automatically he is the equal of what he observes. He is all things to all things. In the atom (as I shall argue in more detail in the next chapter) he is the electron noting the proton, and vice versa. In the living tissue he takes a cell's view of a cell. Always he puts himself in the place, not of the object he is observing, but of one of its companions and equals. And all this, of course, without for a moment ceasing to be the fully human scientist. Physics, says Eddington, "does in practice give a preference to the view of the microbe over that of the man". + And (as I believe) rightly and inevitably so. According to Bertrand Russell, physics is mathematical and abstract because we know so little about the world. × I would prefer to say that it is like that because atoms and electrons and protons know so little about the world, and as physicists we are in the same position, at the same level, sharing the same nature and the same ignorance.

It is the prerogative of man consciously to function at every level of reality --- he would not be human if he were only human. In other words, man is a travelling observer, capable of revising the interval between himself and his object. Consider the scientist's position. He is where his object arrives at the status which he accords it. And his object is where he, the scientist, arrives at the same status. The regional ordering of things is such that only a cell can note a cell, and only a molecule can note a molecule. Atoms are cases of extreme myopia. It is because they take such a poor view of themselves -- of reality as revealed in one another -- that they are atoms. The only reason I am a man is that I appreciate manhood in others, and when I cease to do this I cease to be human. If one of the cells in my brain registered some human acquaintance of mine, that cell would immediately become human itself: in fact it would become the man I am. To be sure, this happens all the while --- my atoms and molecules and cells are for ever becoming me the man, and I am for ever becoming them. And there is nothing occult about this perpetual metamorphosis: all I have to do is re-estimate my surroundings. As I make less of my object, so am I made less of, till, at the point where I give it credit for nothing whatever, I myself am a cipher. These are the conditions of my knowing, and until I realize them my knowledge is defective. +

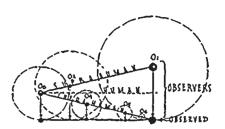
That the subject descends with his object is a principle admitted on all sides --- by implication. It is possible (indeed it is common) to know too much about a thing, to bring brains to a place where brains do not belong. "Theirs not to reason why...." To take too much into account is to rise above the level in question, and so to fail to function there. Thus a really fair, broad-minded, impartial politician is hardly likely to succeed in that capacity. A barrister who gives the other side its due is a Hundreds of different radioactive isotopes are now available from the atomic pile, and the use of some of them as tracers is enabling biologists to explore with unprecedented thoroughness the normal functioning of living creatures, without disturbing it. Red blood corpuscles, for instance, are labelled by means of tracers, and their history as they circulate through the body is readily followed.

* Actually, as I shall show in Chapter XII, the very low and the very high members of the hierarchy are indissolubly bound up together. And this essential ambiguity is seen even in mathematics, which is the language of the widest and most general aspects of the universe no less than of the most restricted and minute: it is at once infrahuman and suprahuman.

° "In so far as we think as strictly human beings, we fail to understand what is below us no less than what is above." Aldous Huxley, <u>After Many a Summer</u>, p. 157.

+ 'The Domain of Physical Science', in <u>Sci</u> ence, <u>Religion</u>, and <u>Reality</u>; see pp. 195 ff.

× Outline of Philosophy, p.163.



Leibniz held that we may discover something of the nature of inferior monads by introspection; because the lower is contained in the higher, all infrahuman conditions fall within the scope of human experience. As for the suprahuman, Leibniz believed in the existence of a hierarchy of intelligences between man and God, into which men are possibly transformed after death. See Erdmann, <u>History of Philosophy</u> (1892), ii. pp. 181 ff.

+ As H. Wildon Carr pointed out, "the object is only truly known when the conditions of knowing enter into and become an intimate part of the concept of the object known... There are not, pure objects on the one hand and indifferent subjects on the other." <u>Contemporary British Philosophy</u>. 1st Series (Ed. Muirhead), p.111. See also p. 143 for Viscount Haldane on the same theme. bad barrister, however good a man. \times A mother who loves all babies whatever equally, is hardly reckoned a good mother. A physicist who takes into consideration the fact that some of his electrons form a human brain, has ceased to be a physicist: he has strayed from his proper level. Electrons and man are incompatible. Thus a kind of stupidity is needed, a stubborn refusal to see the other side of the question, an ability to ignore (if not deny) the existence of other levels of reality, a willing acceptance of limitation. And the reason is that to do justice to narrow things (which undoubtedly exist and are of the greatest theoretical and practical importance) it is necessary to become narrow-minded. James Hinton finely says that the evil we find in the world is the "projection of our own deadness". * In the same way, everything infrahuman that we discover in the universe is a projection of our own infrahumanity. A whole man can never be a scientist.

To enter the realm of the infrahuman, the scientist must be conformed to it. He must adopt a new system of reference, a new scale of magnitude, a new standpoint --- the standpoint of his new colleagues. The situation is admirably described by Malebranche \bullet : -- A mite (that is to say, any creature which I can only just see with the naked eye) is my <u>minimum visible</u>, accordingly it can have for me no limbs. But when I look at the mite through a microscope I find that it has limbs just as I have them, and that in this the mite's world, and from this the mite's standpoint which I now share, its limbs are no smaller than mine. The mite's foot is of the same order of magnitude as the man's. Such, in outline, is Malebranche's way of showing that magnitude is not a property intrinsic to real existences.

Everything happens as if the microscopist became a mite. For instance, describing his experience at the mite's level, he reports that the mite walks <u>quickly</u> the <u>long</u> distance from A to B. Now this reckoning of speed and distance belongs to the mite's world in which the microscopist is temporarily living a mite's life, and it is vastly different from human reckoning. Nevertheless his ability to make a verbal judgement about the mite's speed of travel is a human ability. Thus we see the microscopist functioning at two levels, holding them together by means of a 'vertical' process. And this is typical of man's exploration of other levels: the human level continues to function as the base of all his excursions.

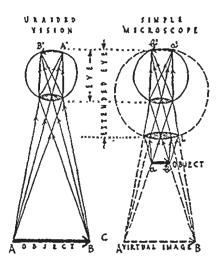
Common sense raises the objection that (if the doctrine of regions holds good) the microscope, to introduce the observer into the miniature world of the mite, should enable him to <u>approach</u> the object. Instead, it does the opposite thing, and removes the eye, by a distance of several inches, from the region where the mite is a mite.

The objection is easily countered. I can put myself in the place where the mite is a mite (that is, a fraction of an inch from its centre) but I cannot with my unaided vision take in properly what is there: what I see is fogged and lacks detail. Accordingly -- in order to bring out clearly what is in this region -- I use a microscope. "Microscopes", as Berkeley says, "make the sight more penetrating, and represent objects as they would appear to the eye, in case it were naturally endowed with a most exquisite sharpness ..." \otimes And this they do by temporarily becoming parts or \times Dr. Johnson (it will be recalled) had an argument with Boswell on this topic.

"No account", says Bishop Whichcote, "can be given of <u>Wickedness</u>, in a way of Reason; for Reason is against it." (<u>Aphorisms</u>, 140.) At the other extreme the mystic finds it impossible to give an account of his vision. In short, to know a level, visit it.

* <u>Man and his Dwelling-place</u>. Cf. Emerson: "The reason why the world lacks unity, and lies broken and in heaps, is, because man is disunited with himself." 'Nature' (1836).

• <u>Recherche de la Vérité</u>, I. 6. Berkeley uses a similar argument (including the illustration of the mite) in the first dialogue of <u>Hylas and Philonous</u>. See also H. Wildon Carr, <u>A Theory of Monads</u>, pp. 46, 47.



The image b'-a' formed in the eye by the small object a-b corresponds to the image that would be formed by the object A-B, several times the size of a-b, placed at the ordinary limit (C) of direct vision. In other words, for the man who extends his eye by the lens (L), the infrahuman world of a-b opens out so that it is just as roomy as the human world of A-B. As H. Wildon Carr says, "the norm of magnitude in all perspectives is constant." A Theory of Monads, p. 50. See also his Changing Backgrounds in Religion and Ethics, p. 117, where be points out that, in our journeys from one system of reference to another, the system we are in is always chez nous.

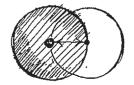
 \otimes <u>Op. cit</u>., 1st Dialogue.

organs of the man that uses them. The microscope, when in use, is as truly me as my eye and my brain are me. I have grown an extended eyeball, with extra lenses. I have evolved for the occasion an eye capable of taking in what is here, only a fraction of an inch from the centre of the mite's regions.

In other words, the microscope enlarges me, extends me to the spot where the mite is only a mite. But surely (says common sense) instead of extending or growing, I should shrink to match my object. Instead of being a Lilliputian in Lilliput, it seems I am Gulliver.

Again, there is no serious difficulty. For neither of the participants (the mite and its observer) does the microscope exist as such, or its human user exist as such. There are only, on the one side, an infrahuman observer registering a mite, and, on the other, a creature which (if it can return the observer's gaze) also registers a mite --- namely, what we would call its own reflection in the lens of the instrument. That is to say, in the somewhat unlikely event of the mite becoming interested in its observer, it would make him out to be another like itself.

To common sense such arguments carry no conviction. Let me then cite a concrete case, where there can be no doubt whatever that the microscopist is scaled down to the measure of his object, and furnished with the appropriate organs. The technique of cell dissection has reached an astonishing degree of precision. Thus M. de Fonbrune, of the Pasteur Institute of Garches, near Paris, using microscopic scalpels and a variety of instruments, is able to cut the nucleus out of one cell and plant it in another. This feat is made possible by his ingenious pneumatic micromanipulator, which is a system of gears for reducing man-size movements to cell-size movements. What is this device but a ladder down which the scientist climbs to the level of his object? M. de Fonbrune's real 'hand', as he operates upon the cell, is not the macroscopic hand that moves the 'joy-stick' of the micro-manipulator in the human realm, but the microscopic hand which is busy in the cellular realm. For him, the cells' world is <u>chez nous</u>



12. CONCLUSION.

By way of recapitulation and conclusion, the following stages or moments may be distinguished. They need not appear historically in the order I give.

(1) The Primitive Outlook: the object as man's equal.

Subject and object, by means of projection and reflection, build one another to like status. Thus primitive man is surrounded by objects that are infected with his own qualities of life and mind. Virtually he lives among equals. Science and religion are as yet undifferentiated.

(2a) Transcendental Religion: the object as man's superior.

Advance in religious belief is man's realization, by means of projec-

tion and reflection, of what is superior to himself. "Man may behold it afar off. Behold, God is great, and we know him not." + An essentially human tribal deity, capable of jealousy, rage, hate, and frustration, becomes, by slow degrees, the "Super-Essential Essence, a Mind beyond the reach of mind and a Word beyond utterance, eluding Discourse, Intuition, Name, and every kind of being." \times

(2b) Science: the object as man's inferior.

Religion and science become differentiated. Advance in science is the progressive withdrawal from the world of the human characteristics that had been projected upon it. The world is degraded: thus the stars are no longer alive, much less are they intelligent. Colour, sound and scent, and in the end materiality itself, are denied to nature. It is difficult to say what, if anything, remains.

(3a) <u>Philosophy: the object as man's inferior and superior, yet his</u> equal.

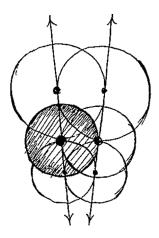
Religion and science, originally one, are fated to work further and further apart. The task of philosophy is not to deny or to close the gap, but to demonstrate why it is necessary, and then to bridge it. This task philosophy should perform by showing that science and religion are opposite (yet symmetrical and complementary) aspects of a single expansion, and that to both must be brought the principle of the equality of subject and object. Thus philosophy may show how the foregoing stages are valid but partial views of the complete picture --- the picture of polymorphic man, who is at home on all levels of being.

(3b) <u>Transcendental-immanental Religion: the object as man him-</u><u>self, yet wholly other</u>.

The entire universe is the projection of the Self which is identical with the self of man. In the last resort, then, man's object is none other than his own reflection as in a mirror. ° But the condition of there being any reflection at all is that he shall take it as given, external to himself, objective fact.

A merely intellectual grasp of these truths is not enough. The theory must be worked over and lived to become real. The linked ascent and descent must really be performed. In its completer phase, religion includes and integrates the foregoing stages. The divine and the human are "moments or members of an organic whole, in which both exist, at once in their distinction and their unity, "• and in this whole must be included the infrahuman. The practical realization of these three in one is the full religious life. + Job XXXVI, 25-6.

× Pseudo-Dionysius, <u>The Divine Names</u>, I. 1.



° Cf. the four stages in the evolution of the child's consciousness, as distinguished by Piaget (<u>The Child's Conception of the</u> <u>World</u>): 1. <u>Absolute Realism</u> -- the instruments of thought are not distinguished from the_object; 2. <u>Immediate Realism</u> -- though distinguished, they remain in the object; 3. <u>Mediate Realism</u> -- they are in the body and the surrounding air; 4. <u>Subjectivism</u> -- they are in oneself. I suggest there <u>should</u> be a 5th stage -- they are socialized.

•John Caird, <u>Philosophy of Religion</u>, p. 229.

Appendix to Chapter III

THE SELF AS NOTHING IN ITSELF

Common sense has many doubts about the foregoing discussion but underlying them all is the doubt as to whether I am, in myself, nothing at all. \dagger It seems impossible to believe that nothing wholly original, nothing exclusively mine, nothing active and independent of others' action, attaches to me here. What of my feelings, purposes, desires, emotions, psychical activities of all kinds, habits, and character generally? What (to use Alexander's terms) of the mental acts I enjoy, as distinct from the objects I contemplate? ϕ These acts are not nothing. Where, then, do they belong (common sense wants to know) if not in me, the subject?

In reply, let me put another question:-- what is left after taking away (a) all that a man is in and to others, and (b) all that they are in and to him? I say, nothing whatever. No man can call his soul his own. His purposes are his objects in life --- they are at least as much objective as subjective. His love and hate and desire attach to something --- to the vaguest of objects, possibly, but still to something external. "Every thing or quality felt," says William James, "is felt in outer space The very first sensation which an infant gets is for him the outer universe." + It is true he comes to distinguish degrees of externality or remoteness, and some objects approach the centre while others recede from it; but nothing arrives there, and ceases to be regional. Dr J.B. Watson is quite justified in saying that the 'centrally aroused' image or feeling is a myth: there are always an incoming and an outgoing train of events, connecting the centre with an object which is regional or nothing. And Bertrand Russell has good reason for proposing that knowledge should be taken as something which we see others displaying, rather than as something we observe in ourselves: it is a mode of reacting, rather than a state of mind. × In other terms, knowledge is one way of regarding the process whereby my object comes into its own here in me, and I come into my own there in it. And, after all, it is not as if there were some objects which roused or demanded subjective activities (so called) and others which failed to do so. Every object comes fully clothed with emotional significance, ° active to some end, alive with a variety of meanings; otherwise, it is no object. In fact (as Josiah Royce taught) the object is the whole system of such meanings and purposes accruing in all its observers. Reality is experience, in which it is impossible to divorce feeling from the thing felt, or thinking from the thing thought, or purpose from the thing purposed. *

Of course there is a sense in which a man has all that common sense claims for him, and a great deal more into the bargain. Θ But not a particle of this immense property is himself alone, or even <u>his</u> self: its nature is to elude his grasp. It is what he is for others (or for himself as he lives in others), and what others are for him (or for themselves as they live in him). It can never be what he is for himself in himself. And of course (as

† There are many reasons for believing that our modern concern for the separate, inviolable ego is abnormal -- at least in its degree. Some primitive languages have no word for 'I'; and early Semites said 'Here killing' for "I kill". When a Maori says "I have done it", he may mean "My tribe has done it". See <u>Society and Nature</u>, by Hans Kelsen, p. 11.

 ϕ Note that Logical Positivists do not make this distinction. 'We do not accept the realist analysis of our sensations in terms of subject, act, and object. For neither the existence of the substance which is supposed to perform the so-called act of sensing nor the existence of the act itself, as an entity distinct from the sense-contents on which it is supposed to be directed, is in the least capable of being verified.' It is meaningless to speak of "a substantival ego and its mysterious acts". A. J. Ayer, Language, Truth and Logic, p. 122.

+ <u>Textbook of Psychology</u>, pp. 15, 16. I think it is true to say of the young child, as of 'pre-psychological' primitive man, that not he, but what he sees, is fearful, cheerful, hopeful, and so on. Similarly when we dream, we do not take any credit for our imagery. Accordingly 'I dreamt' in German is <u>es träumte mir</u> --- 'it dreamt itself to me'.

× <u>Outline of Philosophy</u>, pp. 20 ff. Cf. Ar-Istotle's view (<u>De Anima</u>, III. 4. 429) that the intellect apart from its object is a mere potentiality without actual existence.

° Whitehead (<u>Adventures of Ideas</u>, XIV.7) draws attention to the prevalent vice of abstracting sensa from their enormous emotional significance.

* Cf. Bradley, <u>Appearance and Reality</u>, p. 146.

Θ To the objection -- how can we love one who is nothing-in-himself? -- the Brihadaranyaka Upanishad (II. 4) gives the answer: it is the universal, the Brahman, in him that makes him dear. In any case, our love is love of him-in-us, not of him-inhimself. Meinong and others have noted) many different attitudes and activities may go with one and the same object (I may imagine it or perceive it, affirm it or deny it, love it or hate it) +; and these activities may be variously grouped and classified, and perhaps all subsumed under the one activity of attention. But the point I am urging is that such activities are, strictly speaking, neither me nor mine. Instead, they are modes of my objects' residence in me. What distinguishes perceiving from imagining can be reduced, McDougall suggests, to a difference between objects in the two cases. \times And Bosanquet points out that in solving a problem I do not do anything: various thoughts occur to me --- thoughts which I can neither summon nor ban. They come to me, or they fail to come. The solution presents itself: I do not think it. "For it is God which worketh in you both to will and to do of his good pleasure", says St. Paul. ° Thought is not the subject's control of mental process, but the object's; and the more adequate my thinking the more I feel compelled by the object. * That is to say, the necessity in thought springs from the real world as it reveals itself in the thinker. "Everyone assumes that we have direct introspective acquaintance with our thinking activity as such, with our consciousness, as something inward and contrasted with the outer objects which it knows"; but this (William James goes on to say) is far from certain. † An act of will is always characterized by its object, • and so is every other kind of mental act. Conversely, an object is always characterized by the mental acts which are inseparable from its manifestation to a subject.

I cannot believe that the way in which objects occur to me here (or occur in me) is peculiar or accidental. On the contrary, I take them to be their normal selves. In other words, I accept as a true sample this slice of reality which I call my experience, and, with Whitehead, "reject the distinction between nature as it really is and experiences of it which are purely psychological." + What must be avoided is an intolerable bifurcation of existence into a more or less unknowable reality and an alltoo-knowable appearance ϕ , and an equally intolerable bifurcation of appearance into data (or sensa, or what is immediately known in sensation) and psychical activities which handle them. No doubt it is useful, and indeed necessary, to make such abstractions from concrete experience as our interests demand, and no doubt these abstractions (whether they are pre-Herbartian faculties, or consciousness, or McDougall's dispositions, or the mental acts or 'relations of mind to object' of realist philosophers) have a sort of validity. But it is essential again and again to come back to the fact that the real and concrete object has and is all the activity it evokes, all the disguises it adopts, all the being-in-others which it acquires. Allow a single manifestation of the object to be irrelevant or false, allow a single perspective of it to be fundamentally distorted, subjective and not objective, a mere appearance; and all is lost. For (as science amply demonstrates) every perspective view of the object must then follow the same path, moving across to the subject pole and leaving, in the end, an object pole that is bare of all qualities whatsoever. And in any case the theoretical value of the faculties, or dispositions, or mental acts, and so on, is rather limited: the trouble is not that they are difficult to discern, but that they are fatally easy. Their numbers multiply embarrassingly. Thus there is nothing to prevent, and everything to en+ Meinong (following Twardowski) distinguished in the mind (1) acts, (2) contents,
(3) objects, and followed up this analysis with great subtlety. See J. N. Findlay, <u>Meinong's Theory of Objects</u>.

× <u>Psychology</u>, p. 80. Cf. C. H. Richardson, <u>Spiritual Pluralism</u>, p. 137, on the reducibility of various types of subjective activity to attention, and of their differences to differences in the objects attended to.

° <u>Phil</u>. II. 13. Cf. I <u>Cor</u>. XII. 6.

* Bosanquet's views on this topic are well summarized in Hoernle's <u>Idealism</u>, p. 170.

† Textbook of Psychology, p. 467.

• See Windelband, <u>An Introduction to</u> <u>Philosophy</u>, p. 70. Cf. H. H. Price, <u>Percep-</u> <u>tion</u>, p. 5:

"Are there several sorts of acquaintance, e. g. sensing, self-consciousness, and contemplation of mental images? I cannot see that there are. The difference seems to be wholly on the side of the data."

+ The Principle of Relativity, pp. 61, 62.

φ It is Kant we have to thank for this fatal division. There is no need, however, to deny his teaching of the creative, formgiving powers of the mind --- so long as it is clear that they characterize the objects as they come to themselves in us, and not ourselves apart from that process. As Hegel insisted, reason is objective in things, not subjective in us; embodied in the phenomena of experience, not imposed by the experiencing mind upon some raw material, or thing-in-itself. The unfolding of objects and their laws in me is more like the growth of my body than the work of my hands. As for the a priori truths of logic and mathematics, I am prepared to accept the view of the Logical Positivists that such truths are not really <u>a priori</u>, but are analytic or tautologous: in so far as they are known to be true apart from empirical experience, they lack factual content. See A. J. Ayer, Language, Truth and Logic, pp. 86-87.

courage, the invention of a special disposition or act, not only for each of the innumerable varieties of 'the mind's relation to its objects', but also for each of the innumerable varieties of objects. +

Realist philosophers sometimes speak of my 'self-feeling' in regard to my object. Perception (it is said) is bi-polar: at one pole is my attitude of attention, merged with my self-feeling, while at the other is the object, and perception is the holding together of these two in the unity of a process. Sometimes the subject pole (as when I am watching a thrilling game) is very little in evidence, but always there is something here -- for example, a purpose, sensations arising from forehead and eyes and so on -- which stand in contrast to the content of the object pole. In short, the self or subject is always something, and never a blank sheet or mere receptacle. *

With much of this I agree, and I have already insisted upon the bipolar character of all experience. One centre is always in the object there, while the other is in the subject here. But I also insist that the subject pole is always vacant. × For when it ceases to be vacant (and this is happening all the time) I have already shifted to the other pole, making that my centre, and a vacancy in its turn. For instance, when I recognize the puckering of my forehead and the craning of my neck as such and as mine (instead of as some puzzling character of my object) I place myself over there where my forehead can be viewed and my neck exists as a neck. Subject pole and object pole change places in such a way that the former is always without content. In brief, every man, every experiencing subject, is a Tantalus, whose claim to an object is sufficient to remove it from his grasp.

But however fugitive, the object of my experience is valid: my awareness of it belongs to its essence. Philosophers have criticized Locke, Berkeley, and Hume for using the word <u>idea</u> ambiguously, to mean (a) the mind's experience, and (b) that to which the experience refers. This double use of the one word is said to be question-begging: the idealist (taking advantage of the inadequacy of language) treats 'the sensation of blue exists' as if it meant the same as 'blue exists'. Really there should be two words for blue --- one for the experience, and another for the object of that experience. My own view is that (once more) our language is in the right, and that blueness which exists apart from the experience of blue is as chimerical as the smile which exists apart from the smiling Cheshire cat. If blueness is at all different from the experience of blueness, then it differs only in being an abstraction from that experience. Certainly it is nothing over and above what its observers make it out to be.

All experience qualifies the object of experience; none qualifies the subject. ϕ That is to say, the whole content of experience is projected into the subject's regions, none of it remaining at the centre. It should be noted, however, that the object may be referable, in respect of one quality, to one region; and referable, in respect of another quality, to another region. ° Thus I do not place the sun where I place the sun's haziness, nor the sun's haziness where I place the painful glare of the sun. Nevertheless the sun is for me a single object, all of which is regional, projected. What remains unprojected does not exist.

+ Thus (incredible as it may seem) Mc-Dougall, not content with his long list of human instincts, postulates one disposition by virtue of which I think of a horse, another by which I think of a mammal, another by which I think of a vertebrate, and so on <u>ad infinitum</u>. <u>Psychology</u>, pp. 80ff; <u>An Introduction to Social Psychology</u>, III.

* See, for example, R. W. Sellars, <u>The</u> <u>Essentials of Philosophy</u>, for a very clear statement of this kind of perception-theory, which has a good deal in common with the Phenomenology of Husserl.

× If modern philosophy has a foundation stone, it is Descartes' <u>Cogito ergo sum</u> --- which ought to have been <u>Cogito ergo</u> non <u>sum</u>! Man is a thinking reed, Pascal tells us; and that (I add) is because, reedlike, he is hollow at the core. His language drops many broad hints: when he thinks, he is occupied with something, he reflects; letting himself go, he entertains the object. In his human capacity he is capacity for the human. He is <u>capable</u> of many things, because, literally and in fact, he finds <u>room</u> for them.

Bertrand Russell writes: We think of an idea as essentially something in somebody's mind, and thus when we are told that a tree consists entirely of ideas, it is natural to suppose that, if so, the tree must be entirely in minds. But the notion of being 'in' the mind is ambiguous. We speak of bearing a person in mind, not meaning that the person is in our minds, but that a thought of him is in our minds. And so when Berkeley says that the tree must be in our minds if we can know it, all that he really has a right to say is that a thought of the tree must be in our minds. The Problems of Philosophy, pp. 62, 63. See also G. E. Moore, Philosophical Studies, and C. D. Broad, The Mind and Its Place in Nature. My comment on Russell's argument is that, when we say we have a person in mind, we mean what we say. Where else should he be?

 ϕ Dr Joad (<u>Decadence</u>, pp. 108, 118 ff.) makes the "dropping of the object" an essential part of his definition of decadence; a pervasive characteristic of our time is the fallacy that experience has value independently of its object.

° Cf. Bergson, <u>Matter and Memory</u>, p. 59; cf. H. H. Price, <u>Perception</u>, p. 38: "<u>Ev-</u> <u>ery</u> Totum Datum can be divided into a somatic and an environmental part, and in every Totum Datum there is concomitant variation of these two."

"The Ego that pretends to be anything either before or beyond its concrete psychical filling is a gross fiction and mere monster, and for no purpose admissible." Bradley, <u>Appearance and Reality</u>, p. 89. As the subject of experience, I am reduced to nothing. After all, this is only common sense. How can the subject be the object of experience, and still remain the subject? And how can what is incapable of being experienced be anything at all?

Nor has this doctrine of the nothingness of the subject (apart from its object) an importance which is merely theoretical. For thousands of years Indian religious philosophy has taught that the higher knowledge, freedom (Moksha), and deliverance from the cycle of rebirth, involve distinguishing the real Self, or Atman, from all its contents or states; the ego has to be emptied of everything before its true nature, and its identity with Brahman, can be realized. + (Or, as I would say, in order to become the receptacle of all things, I must make way for them.) Here at the centre, fulness of being and emptiness of being come to identity. Hence the Buddhist doctrine of no-soul. It belongs, says Mrs Rhys Davids, "to the essence of Buddhist thought to emphasize the fact that in mental states we have phenomena, and not anything behind phenomena, such as soul or ego, or substance." × The Buddha himself is reported to have said of the world: "It is empty of a self, or of anything of the nature of a self. And what is it that is thus empty? The five seats of the five senses, and the mind, and the feeling that is related to mind: --- all these are void of a self or of anything that is self-like." $^{\circ}$ And, lest this teaching should be dismissed as nothing but oriental nihilism, let me add that our own religious tradition has its own version of it. From the Gospels ("I do nothing of myself") •, through Eckhart (We must eternally sink "from nothingness to nothingness") ‡, and St John of the Cross ("That thou mayest possess all things, seek to possess nothing") *, down to our own times, it has been taught that only when we have surrendered all that is ours, renounced all our claims and pretensions, and arrived at utter emptiness, are we capable of living full and regenerate lives. Salvation comes only to those who, abandoning themselves, put into practice the theory I am defending here. For it is precisely because a man is in himself nothing that he can become everything in others. Having nothing, he has nothing to limit him. And common sense, in its perennial attempt to save from destruction some miserable chattel for man, only breaks the conditions of that universal policy of assurance, whereby unlimited wealth is his who loses all.

On the other hand, Lotze (<u>Microcosmus</u>, E. T., ii. p. 680) asserts that we can experience the self "previous to and out of every such relation (to the not-self)" There is an "inner core, which cannot be resolved into thoughts" and "we always misunderstand it when we seek to construe it." I would say: it is either experienced and objective, or not experienced.

+ See Max Müller, <u>Indian Philosophy</u>, pp. 215, 363. On the true subject which can never become an object, see S. Radhakrishnan, <u>The Philosophy of the</u> <u>Upanisads</u>, pp. 28 ff; on the necessity for ceasing to identify the empirical self with the real self, see his book <u>The World's</u> <u>Unborn Soul</u>, pp. 24 ff. Cf. Jung's statement that, somehow or other, we have to discover "the important truth that the ego is not the centre of psychic life; that it revolves around the self, the centre." <u>The Integration of the</u> <u>Personality</u>, p. 38.

× <u>Buddhism</u>, p. 51.

* Subida del Monte Carmelo, I, 13.

Of a certain stage in the religious life, William James well says: "Passivity, not activity; relaxation, not intentness, should be now the rule. Give up the feeling of responsibility, let go your hold, resign the care of your destiny to higher powers, be genuinely indifferent as to what becomes of it all, and you will find not only that you gain a perfect inward relief, but often also, in addition, the particular goods you sincerely thought you were renouncing. This is the salvation through self-despair, the dying to be truly born, of Lutheran theology, the passage into nothing of which Jacob Behmen writes." The Varieties of Religious Experience, p. 110.

^o Mrs Rhys Davids, <u>Op</u>. <u>cit</u>., p. 52.
<u>John</u>, VIII. 28. Cf. XV. 5; also I <u>Cor</u>., IV.

^{4,} and II <u>Cor</u>., VI. 10.

[‡] Evans, i. p. 248.

PART II

The human soul has an innate disposition to divest itself of its human nature in order to clothe itself in the nature of the angels and to become an angel in reality for a single instant of time --- a moment which comes and goes as swiftly as the flicker of an eyelid. Thereupon the Soul resumes its human nature, after having received, in the world of angels, a message which it has to carry to its own human kind.

Ibn Khaldūn, Muqaddamāt (quoted in Somervell's Abridgement of Toynbee's A Study of

History, p. 218).

The sun sets and has his perfect polarity in the life circuit established between him and all living individuals. Break that circuit, and the sun breaks. Without man, beasts, butterflies, trees, toads, the sun would gutter out like a spent lamp. It is the life-emission from individuals which feeds his burning and establishes his sun-heart in its powerful equilibrium..... Every existence is relative to other existences. Not only does the life of man depend on man, beast, and herb, but on the sun and moon, and the stars.

D. H. Lawrence, Fantasia of the Unconscious, XV.

'Realize yourself' does not mean merely 'Be a whole', but 'Be an infinite whole'...... The mind is <u>not</u> finite, just because it knows it <u>is</u> finite. 'The knowledge of the limit suppresses the limit.' It is a flagrant self-contradiction that the finite should know its own finitude...... If I am to realize myself, it must be as infinite.

F. H. Bradley, Ethical Studies, pp. 74 ff.

Man, that complex multiplicity Of air and water, plant and animal, Hard diamond, infinite sun.

Edith Sitwell, Street Songs, 'Tears'.

One must know oneself.... Now the order of thought is to begin with self, and with its Author and its end. Now, of what does the world think? Never of this, but of dancing, playing the lute, singing, making verses, running at the ring, etc., fighting, making oneself king, without thinking what it is to be a king and what to be a man.

Pascal, Pensées, 66, 146.

Man is capable of existing on several different planes, from the animal to the angelic, and precisely in this lies his danger; i.e., of falling to the very lowest.... Neither animals nor angels can change their appointed rank and place. But man may sink to the animal or soar to the angel.... The majority of men choose to remain in the two lower stages mentioned above, and the stationary are always hostile to the travellers or pilgrims, whom they far outnumber.

Al Ghazzali, The Alchemy of Happiness, IV.

The purpose, then, of Hierarchy is the assimilation and union, as far as attainable, with God.

'Dionysius the Areopagite, The Heavenly Hierarchy (Parker), p. 14.

If we could even effect in one per cent of our readers a change-over from the conception of Space to the conception of Heaven, we should have made a beginning.

C. S. Lewis, Out of the Silent Planet, p. 174.

(The words are spoken by one of the characters in this novel.)

CHAPTER IV

THE CLOSE VIEW

If all the creatures with blood in their veins, because of the vital energies of the Five Forces in them, forthwith start preying on each other, then in the individual mans body in which the Five Organs lie so tranquilly, there must be a preying of one on the other.

Wang Ch'ung, Nun Heng, III. 5.

That the head might not roll on the ground with its heights and hollows of all sorts, and have no means to surmount the one or to climb out of the other, they gave it the body as a vehicle for ease of travel..... Clinging and supporting itself with these limbs, it is able to make its way through every region.

Plato, Timaeus, 44, 45.

I am fearfully and wonderfully made.

<u>Ps</u>. CXXXIX. 14.

And Jesus asked him, saying, What is thy name? And he said, Legion.

Luke, VIII. 30.

And when all is done, what is this all for, but for a mere bag of blood and corruption?

Marcus Aurelius, Meditations, VIII. 35.

My limbs and members when rightly prized, are comparable to the fine gold, but that they exceed it. The topaz of Ethiopia and the gold of Ophir are not to be compared to them. What diamonds are equal to my eyes; what labyrinths to my ears; what gates of ivory, or ruby leaves to the double portal of my lips and teeth?

Traherne, Centuries of Meditations, I. 66.

And of those many opinions which men raise Of Nails and Hairs, dost thou know which to praise? What hope have we to know ourselves, when we Know not the least things, which for our use be?

Donne, 'The Second Anniversary'.

There is but one Temple in the Universe, and that is the Body of Man..... We touch Heaven when we lay our hand on a human body.

Novalis (quoted by Carlyle in 'The Hero as Divinity').

And, verily, much even that is <u>one's own</u> is hard to bear! And many inward things in man are like to the oyster -- loathsome and slippery and difficult to catch -- so that a noble shell with noble gems must plead therefor. But even this art must be learned --- to <u>have</u> a shell and a lovely semblance and a cunning blindness!

Nietzsche, Thus Spake Zarathustra, 'Of the Spirit of Gravity'.

Every individual person is a compound creature, being made up of an infinite number of distinct centres of sensation and will, each of which is personal, and has a soul and individual existence, a reproductive system, intelligence, and memory of its own, with probably its hopes, and fears, its times of scarcity and repletion, and a strong conviction that it is itself the centre of the universe.

Samuel Butler, Life and Habit, pp. 104, 105.

1. THE UNKNOWN BODY

What am I? In Part I the answer was: I am the view outwards from a centre, and I am the view inwards to a centre. Here in Part II, the second half of this answer will be developed. What I am is what my observer makes of me, and that depends upon his range. The time has come to study his findings rather more carefully, and if possible to map out the regions of my space according to what he experiences in them.

Starting where common sense starts, my observer reports that I am a man. What does this mean? Two things may be seen in a man --- that

Chapter 4: The Close View

which distinguishes him from other men, and that which makes him like them. Nearly everybody nearly all the time (and this includes myself) sees the unique in me and ignores the general. Not the essence, but only the accident, matters; with the result that I am reduced to the ghost of myself, hovering in a shadow world of disembodied peculiarities. Compared with what is ordinary in me, the extraordinary is nothing; yet this nothing, this miserable fragment of a man, is treated as if it were the whole. We are not simple enough to observe the simple. We must take the advice of Jalaluddin Rumi -- "sell your cleverness and buy bewilderment" -- if we are to note anything but trivialities. +

To see myself and others abstractly, as little more than a set of labels, is of course a practical necessity. But occasionally I feel a deeper necessity (which, in the long run, is just as practical) --- a necessity to ignore the accidents and realize the essentials of my nature. I am a man, never mind what kind of a man. To be this flesh and blood (and neither machinery, nor a gas, nor a flame, nor a pterodactyl), to have these four limbs (instead of a thousand, or none, or caterpillar-tracks), to be furnished with this head, these eyes, these ears (which might have been so many dials and pointers, or inflorescence, or foliage, or a constellation) --- this is not nothing; nor is it something I know good reasons for. The body is exceedingly curious. "A man strikes the lyre, and says, 'Life is real, life is earnest, and then goes into a room and stuffs alien substances into a hole in his head." × The joke is that I carry on as if I had initialled the blue-prints for the original model, as if I had been in the know from the start, and therefore need not bother to look at the completed work. Men are certified insane for less. How rarely do I un-know what I am, so as really to notice it. Now and again my "wonder-hiding Garments" slip off, and I glimpse myself. It is a memorable experience. Ninety-nine times out of a hundred it is perfectly safe to look at this thing called man. But as you go on looking at it, there is always what Chesterton called the "frightful danger of seeing it for the first time". °

2. THE UNKNOWN INTERIOR.

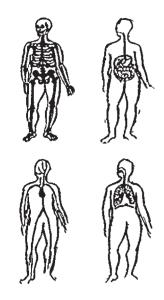
My common sense reminds me that, however conscious I were to become of my human body as a whole, my appreciation would still be superficial. Science literally goes into things, in the belief that what is important about them is found inside. Anatomy and physiology can throw light on what I am, by taking me to pieces and showing how the pieces behave.

What, then, are the main parts of my body? As a rough-and-ready first stage, convenient divisions are the skeletal system, the muscular system, the respiratory system, the circulatory system, the alimentary system, the excretory system, the reproductive system, and the nervous system. Thus a complete man may be pictured as a sort of congruent society of specialist men, of whom one breathes, while another walks, and a third digests, and so on. Each of the systems may, in turn, be regarded as an assemblage of organs. And an organ is further divisible into vari+ The main difficulty is that human bodies are so plentiful, with the result that "the Miraculous, by simple repetition, ceases to be Miraculous". But, as Carlyle goes on to say, "Am I to view the Stupendous with stupid indifference, because I have seen it twice, or two-hundred, or two-million times?" (Sartor Resartus, III. 8.)

"What a chimera then is man! What a novelty! What a monster, what a chaos, what a contradiction, what a prodigy!" Pascal, <u>Pensées</u>, 434.

× <u>The Napoleon of Notting Hill</u>, III. 3. See also the poem of Rupert Brooke's 'Thoughts on the Shape of the Human Body' (<u>Complete Poems</u>, London 1935, p. 51); and Mr John Brophy's <u>Body and</u> <u>Soul</u>. "Viewed from the outside", says Mr Brophy, "the body may be conceived of as a bag of skin plumply distended by its filling and maintained in a fantastic shape by the rigid understructure of the bones and the adhesion of muscles which oppose or divert the pull of gravity and prevent the contents from seeping dropsically to the legs."

° <u>Op. cit.</u>, I. 2. The fact is that we see the human body in a very primitive fashion, - somewhat as an animal sees things, perhaps. The critical, analytical attitude which we adopt towards man's works is not yet extended towards himself. On this see Gerald Heard, <u>Narcissus: An Anatomy</u> of Clothes, p.126.



ous types of tissue.

Now an odd fact about this bodily hierarchy of mine is that I do not believe in it. Of course I know about my organs, even in some detail. I am sometimes concerned about the way they are functioning, and I take more than a casual interest in an operation performed on me to put them right. All the same, I find it impossible to think of myself as so many miles of blood-vessels and yards of intestines, as so many pounds of liver and brain and kidneys, as so many pints of blood and half-digested food. I find it difficult to visualize even the bones in this hand. When do I recollect the faeces I carry even in the most refined company? How often do I give a thought to the skeleton by means of which I perform each movement, or to the ceaseless motion of the live thing housed in my chest --- not the generalized heart of the textbook but the particular one lying there just beneath my hand, not the skeleton of science but the very bones of me which someone may dig up in a hundred or a thousand years' time? + Can I say that my waistcoat's contents are one half as real to me as my waistcoat is, or as the escapement of the watch in its pocket?

This is not ordinary lack of imagination, but something deep-seated. How is it that I feel responsible for my evil thoughts, but disclaim all responsibility for physical disease? Samuel Butler × and (among contemporaries) C. G. Jung ° have drawn attention to this remarkable inconsistency. "What the body as a whole does, I do", says W. E. Hocking, and adds in a footnote that the qualification 'as a whole' is necessary in order to exclude what my organs do. * It is as hard as it is necessary to admit that I am the monstrous menagerie I find in myself, and to take responsibility for all its works. The truth is that to be anything but homogeneous from head to toe and from front to back, like a lead soldier, is neither flattering nor quite nice; and so I hide from myself, no less than from my fellow men, those fabulous and incredible worlds that lie just beneath my waistcoat --- worlds whose configuration is more remote and unreal than the scenery of the moon or the deepest ocean bed. If suppression is not at work here, why should an operation on a human be any more shocking than an operation on a steam-engine, when witnessed for the first time? Men are careful to live at that distance apart which makes men of them. The rest is hushed up in a vast game of make-believe --the game (and we are all masters at it) of pretending to be only human, the skin game, the game of human taxidermy. How useful it would be to drop the pretence. "Happy he who can" -- I quote Carlyle again • -- "look through the Clothes of a Man.... and discern, it may be, in this or the other Dread Potentate, a more or less incompetent digestive-apparatus." Happy, perhaps, but how rare! Not even the scientist, off-duty, takes his science seriously. Ø Its practical value is what counts.

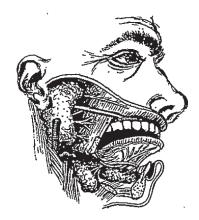
But the key to the chamber of horrors has been found. Already major operations are carried out with local anaesthetics, and a surgeon can remove his own appendix. + The time may come when attendance in the operating theatre will be part of an elementary education, when men will know their intestines as now they know their faces, when painters will reveal beauty that is more than skin-deep, and even bottled viscera will become ornamental. † Sir Thomas Browne speaks of "all those rare discoveries and curious pieces I find in the Fabrick of Man." (<u>Religio Medici</u>, I. 36.) Certainly his awareness was more than professional --- "We carry with us the wonders we seek without us: there is all Africa and her prodigies in us; we are that bold and adventurous piece of Nature, which he that studies wisely learns in a compendium what others labour at in a divided piece and endless volume." (<u>Op.</u> <u>cit.</u>, I. 15.)

+ John Cowper Powys found a "curious comfort" in becoming conscious of his skeleton, "moved about by an invisible spirit", rather as the Stoics found moral strength in the notion of the body as a corpse carried about by a soul. <u>Philosophy</u> <u>of Solitude</u>, pp. 199 ff.

 \times <u>Erewhon</u>, XI.

° Psychology and Religion, p.12.

* The Self: Its Body and Freedom, p. 48.



A commonplace anatomical diagram (of the salivary glands): the grotesqueness is enhanced by the juxtaposition of the human and the infrahuman.

• Sartor Resartus, I. 10.

ø John Macmurray rightly says "that in spite of our boasting, we do not really believe in science except in so far as it ministers to our unscientific wants. That is usually called cupboard love." <u>Freedom in</u> <u>the Modern World</u>, pp. 40, 41.

+ See Dr. L. J. Witts' Essay, 'The Banishment of Pain', in <u>Reshaping Man's Heritage</u>, pp. 68, 69.

† Of course my unawareness of my organs is only to be expected: I do not enjoy an oesophagus but my dinner, not a cortex but a percept, not lungs but fresh air, not the glands of Bowman but the smell of mimosa. For me here, all this bodily apparatus really is mythical, an impossibility. I am disembodied <u>qua</u> myself, embodied <u>qua</u> others. Perhaps awareness of form will bring with it awareness of function. At present my body's abilities pass unnoticed. I am content to put my dinner in my mouth and forget it, to levitate matter in perfect ignorance of how it is done, and generally to operate as if in a trance earth's most complex machine, without taking the slightest interest in any part except a small area of the casing. More than this --- I actually <u>expect</u> this piece of matter to stay the same temperature winter and summer, to interpret and to execute with the utmost finesse my vaguest wishes as to how it shall move, to retain the same structure and chemical composition whatever I pour into it, to do its own repairs and make its own readjustments however I use and misuse it, to stay one shape and not turn into something quite different no matter how its environment alters: all this, and much more than this, I expect of my body, and I keep my surprise for those moments when my body falls a little short of my expectations. The wonder is that it ever begins to function at all.

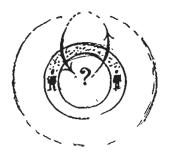
This unconsciousness of mine is no accident, no arbitrary trick of the mind. There is a reason for it. Never did envelope so belie its contents. The world within me is more savage and primitive than the world of mesozoic monsters, and I feel that something has been achieved since then. In self-defence, in defence of my humanity, I am obliged to deny all of me that is more than skin-deep. And so, as merely human, I am a hollow thing, a thin shell, a station through which incoming and outgoing traffic passes to foreign regions. If, however, such a model of myself seems bloodless, unreal, ostrich-like, and I desire solidity, then I must confess my infrahumanity. This is to exchange the horizontal for the vertical view, \times in which I am what I appear to be in every region. As an intellectual exercise this is not difficult, perhaps. Realization is another matter.

But the truth is that my unawareness, so far from being misguided and unrealistic, is in its own way an eloquent witness to the regional organization of things. For it is a fact that, as man, I am without bodily contents. When I function at the human level, my organs are abolished, made nothing, absorbed into the central void. As previous chapters have made clear, if I am to experience another man, this man must go: the accommodation to be cleared cannot be less extensive than the visitor who comes to occupy it. He is human in me, and I am human in him: whatever else we may be is irrelevant. In other words, whole men and parts of men are incompatible. Levels will not mix. I am less than a man, but only for an observer who also is less than a man, or for myself when I identify myself with such an observer.

3. ORDER OF IMPORTANCE IN THE BODY.

Let me acknowledge the organs my observer finds in me. Now the question arises: what is the order of their importance? For my cobbler, I am a pair of feet, for my hatter a head, for my grocer an alimentary canal, for my barber a head of hair. Opinions are divided. What is mine? Can I settle the question by direct inspection? How few of us note that "all this mass of flesh which we behold, came in at our mouths; this frame we look upon, hath been upon our trenchers; in brief, we have devour'd our selves." (<u>Religio Medici</u>, I. 37.) And how few, with Walter de la Mare, find it "As odd as can be,

That whatever Miss T eats, Turns into Miss T."



× Sex furnishes an excellent illustration of what I mean by verticality. To begin with, sex is human and visual: the partners preserve their common humanity by keeping distance. The next stage is sub-visual, 'animal', a question no longer of complete humans, but of organs; for the range has lessened. Then sex becomes cellular, a question no longer of male and female humans or organs, but of male and female cells. Then genes take up the tale..... Similarly, higher levels than the merely human may be consciously included. It is Beatrice -- human love idealized -- who conducts Dante up through the many-regioned heavens, to the Empyrean itself.

Cf. A. E's poem about "The burning-glass of womanhood. Only so far; here must I stay: Nearer I miss the light, the fire; I must endure the torturing ray, And with all beauty, all desire." <u>Collected Poems</u>, p. 96.



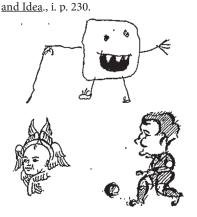
Drawing by a boy (nine years old) of a man with toothache --- an example of what is sometimes called 'haptic' overemphasis of the affected part. See Victor Löwenfeld, <u>The Nature of Creative Activ-</u> <u>ity</u>, and Herbert Read, <u>Education through</u> <u>Art</u>, pp. 89, 132 ff.

I close my eyes, and try to 'feel' inside my right hand, then in my left, then in my head and my feet; and so on. * In so far as I succeed, no organ seems to have distinct priority over the rest: I do not feel markedly more at home in one than in another. Nevertheless in concrete experience (of which the visual and auditory components are of such paramount importance) there can be no doubt as to the existence of a bodily hierarchy. Thus I am convinced that my head is more truly me than my arm is, that my brain is less remote than my liver, that my face is a more privileged part of me than the sole of my foot. Ø The order of importance is head, trunk, limbs. If the artist cannot paint a full-length portrait, he paints the bust; if this is too much, the head alone. For Plato the head is divine, and the breast is within hearing of reason's discourse, while in the belly a wild beast is tethered. + It is significant that the caricaturist's exaggerated human heads do not look grotesque, and that even the bodiless winged heads of Raphael's cherubim and seraphim seem natural enough. × Again, young children often draw men as bodiless heads, with legs growing out of their chins. Socially, I am a face. The rest is not much more than support and backing. That is why facial mutilation can be so horrible, compared with the mutilation or the loss of a limb.

What solid justification is there for these intuitions or prejudices? First, there is the obvious fact that I am most vulnerable in those parts which are reckoned most truly myself. I am more likely to survive the loss of a limb than to survive a serious abdominal injury, and more likely to survive the latter than a serious head injury. Again, a disease of the brain is likely to change my behaviour-pattern more drastically than a disease of the lungs. More important is the evidence provided by the nervous system's integration of the body. My fore-brain is the principal telephone exchange, where all unusual and major connections are made; my hind-brain and spinal cord are subsidiary exchanges, dealing with routine work before it goes on to the higher level. What remains of my nervous system is chiefly concerned with mere transmission. As for the rest of the body, it is sometimes considered (though rather arbitrarily) to exist solely for the purpose of maintaining and transporting the nervous system. $^{\circ}$

At any rate it is certain that the observer can find in my body a hierarchy of the sort that Plato described. And I, on the other side of the fence, can supply an inverted kind of confirmation. My observer's criterion of importance is visibility; mine is invisibility. I hardly see my head at all; I see my trunk imperfectly; I see my limbs, and particularly my hands and feet, very well. With my observer it is the other way round: he concentrates upon my head, while the remainder is vignetted. In other words, the more exalted the member of the bodily hierarchy the more it approaches the centre of my regions --- the place I call <u>here</u>. I see my hand so clearly because it is so much less central than my head is: it lies out there. † Looking out from the centre I can never see all of 'myself' and what I can see (though it reveals the status of what I cannot see) is always, for me, the less important half of 'what I am'.

* An exercise practised by certain Indian yogis and Tibetan lamas, is to transfer 'consciousness' from one part of the body to another. The student becomes, for instance, his hand, feeling himself to have the shape of a hand, while the rest of the body is a distant moving object. See, e.g., Alexandra David-Neel, With Mystics and <u>Magicians in Tibet</u>, p. 252. Ø Cf. Schopenhauer, <u>The World as Will</u>



+ Timaeus, 44, 45, 69, 70. Cf. Pseudo-Dionysius, <u>The Divine Names</u>, IX. 5; Frazer, <u>The Golden Bough</u>, Abridged Edn, p. 230. × The highest ranks of angels (cherubim and seraphim), being the nearest to God and the farthest from man, were commonly represented as heads only; archangels are of lower rank, and accordingly were sometimes represented as busts only --the lower part of the body, from the waist down, was either absent or concealed behind a cloud.

Galen regarded the liver and veins as the seat of our vegetative life; heart, lungs, and arteries as the seat of our animal life; brain and nervous system as the seat of our intellectual life. See Benjamin Farrington, <u>Greek Science</u>, II. p. 159.

° "I am a brain, Watson. The rest of me is mere appendix", says Sherlock Holmes. Cf. Bergson, <u>Creative Evolution</u>, pp. 129, 265. And Chuang Chou ----

"(Consider the body and its parts,) its nine apertures and six internal organs, all in their places. Which of them shall we like best? Or are we to be pleased with them all alike? (As a matter of fact) each has its personal function, and thus all are in the position of servants: is that not so? As servants they have not the power to control each other: is that not so? Then can they take turn and turn about in being master and servant? (As a matter of fact) they have a true ruler in his place (viz. the 'I'); and whether they try or not to find out his reality does not add to or subtract from the truth about him." Chuang Tzu Book, IL

† I refer here, of course, to what may be called the 'normal visual centre'; I can and do make the 'remoter' parts of my body, and the whole of it, central.

4. THE COMMUNITY OF ORGANS.

I am an indivisible living whole, of which no part can claim separate existence. At the same time I am a collection of living wholes, each of which lives for itself and cares nothing for me. Which of these two incompatible descriptions of me is valid?

They are both valid. Everything depends upon the level at which observation is occurring. Sometimes the onlooker will describe me as 'all eyes', or 'a mouth to feed', or a new 'face'. Anyone putting himself in the right place can check the truth of these observations, and can note (for instance) that the face has no body. And I, from my side, can confirm my observer's story: often I narrow down to a single organ, such as an aching tooth or a cold hand. † In short, not only is it evident, both to me and to my observer, that my members live separate lives of their own: but it is equally evident that I am always descending to live their infrahuman life. And the life I live in them is none other than their own life --- no copy, but the real thing.

Seldom do I stop to think of the many lives on which my human unity is precariously poised. Yet the biological evidence is clear. The heart or liver or reproductive organs of an animal can live on apart from the rest of the organism, for weeks and months, when a suitable environment is provided. + A well-formed chicken's leg has actually been grown in the laboratory from a shapeless fragment of the embryo. × There is no reason, in fact, why I should not be granted a piecemeal immortality in some laboratory devoted to the maintenance of organs that have fallen out with one another.

That divided life would be nothing like the life of the whole which I now enjoy. Yet even now each part has something like a will of its own, and it would be possible to write an autobiography in terms of the struggle between one set of organs and another set. Perfect subordination to the interest of the whole (assuming that there is such an ascertainable interest) is a remote ideal, not a fact. I come under the influence of this member, then of that. The master is run by his servants, and my body is largely out of control. * I do not refer only to my involuntary muscles: my voluntary muscles are not yet educated and disciplined as they might be. When I am ill the insubordination of my members becomes even more dangerous. Valéry writes: "je suis né plusieurs, et je suis mort un seul. L'enfant qui vient est une foule innombrable que la vie réduit assez tôt à un seul individu." ° That is the unattainable goal, for the level of the many cannot be abolished. The most integrated personality is still a plurality: indeed, his name never ceases to be Legion. The best that can be hoped for is that the vertical processes, linking the level of the many with the level of the one, shall proceed smoothly, and with a minimum of wasteful strife: the strife, for example, that St Augustine describes as the "unclean motion of the generative parts" contrary to the will of the whole man. "The motion will be sometimes importunate against the will,



Drawing of a man, by a child of five whose development has been retarded. The body's parts are imperfectly co-ordinated.

† In hospital, I am apt to become, for the staff, "the liver in bed 9", or "the heart in bed 5". The ancient Egyptians personified the head, the belly, and the tongue. Paracelsus, and others of his time, believed that the body contains a host of archaei or subsidiary daemons, who control its functioning. But instances of this kind are innumerable.

+ See e.g., Alexis Carrel's <u>Man, the</u> <u>Unknown</u>. In 1912 Dr Carrel, at the Rockefeller Institute for Medical Research in New York, cut out a small part of the heart of a chicken embryo, and placed it in embryonic chicken juice. By means of careful feeding, cleansing and pruning, the fragment has been kept alive for more than 35 years.

× C. H. Waddington, <u>How Animals De-</u> velop, p. 81.

Basilides the Gnostic taught that, appended to the rational soul in us, are the spirits of the wolf, monkey, lion, goat, etc., which give rise to the various passions and affections. Clement's comment on this theory is that "it represents man as a species of Trojan horse, enclosing a host of different spirits in one body". John Kaye, <u>Clement of Alexandria</u>, VI.

* As F. Matthias Alexander insists in <u>Man's</u> <u>Supreme Inheritance</u>, and other wellknown books.

° The words are put into the mouth of Socrates, in the dialogue, <u>Eupalinos</u>.

Georg Groddeck (<u>The World of Man</u>, pp. 75, 84, 225) calls organs and cells "It-forms", and attributes to each "its T' consciousness": not theory, so much as clinical experience, forces him to this conclusion. At death, the separate organs assert themselves and seek their own pleasure: witness the emptying of the bowels at the moment of death, and the ejaculation of the hanged man. and sometimes immovable when it is desired, and being fervent in the mind, yet will be frozen in the body." + Indeed, the manifold lives that are lived in us are so evident that they are everywhere recognized, and by peoples of the most diverse cultures. The Yoruba-speaking tribesman on the West Coast of Africa, who believes that a man has three inmates -- one in the head, one in the stomach, and one in the great toe -- is only expressing in his own way the truth that St Augustine and Alexis Carrel express in theirs. ×

Bodily unity there is, but it is easily overestimated. An ant has been seen to fight with its own severed limbs; so has a wasp. * The arms of a sea-squirt, after an apparently harmonious life together form two groups each of which walks away from the other, so that the central disc, containing the common mouth, anus, and stomach, is divided down the middle. Even at the human level, when the endocrine controls are upset, tissues grow out of all proportion --- the body is given over to anarchy. Again, a lesion of the cortex may be accompanied by motions of the hand which the patient ascribes to the hand's own will.

The more primitive the animal the less unified it tends to be. A lack of integration that is normal at a low evolutionary level is pathological at the human. Also at the human level the subject himself comes to hold views about his unity which are an important aspect of that unity: he says he is one, and not many. But that is not what he always says. A common insane delusion (it is not only a delusion) is that portions of the body have become hostile or alien --- and the insane is only the normal exaggerated. Then there are the dismemberment cults of Osiris and Orpheus (echoed by the contemporary interest in trunk murders) and the numerous myths and children's stories that describe the assembly of man, either at conception or a birth, out of separate parts. Empedocles, for instance, taught that the body's members arose separately; later on they met one another, and, if they fitted, combined permanently. "On it (the earth) many heads sprang up without necks, and arms wandered bare and bereft of shoulders. Eyes strayed up and down in want of foreheads..... Solitary limbs wandered seeking for union." °

The truth is that I am at once a concourse of miraculously efficient living specialists, a cageful of animals, and a chorus of Furies. Well might Marcus Aurelius ask himself: "Whose soul do I now properly possess? a child's? or a youth's? or some wild beast's soul?" • The nineteenth century hid the beast away; but the new barbarism, the new psychology, and the new theology (which are all three really revivals) in their several ways make concealment difficult for the twentieth. A very small thing unmans me. My humanity is delicately balanced, and easily destroyed. It is not the established, certain thing it seemed to be, but is poised upon violent infrahuman strivings which cannot be guaranteed always to keep one another in check. In principle Plato was right --- there is a beast in my belly; † and St Paul spoke only too truly of "the law of sin which is in my members". \otimes Self-deception in this matter is increasingly difficult and increasingly foolish. And the first step towards mastery is frankly to admit the facts --- as George Fox \oplus did when be discovered in the human heart "the nature of dogs, swine, vipers, etc.", and Boehme did when he discerned there the lion, the wolf, the dog, the fox, and the serpent. +

+ <u>City of God</u>, XIV. 16. Similarly Plato (<u>Timaeus</u>, 91.) has a curious description of the penis and the womb as unruly living creatures.

× A. B. Ellis, <u>The Yoruba-speaking Peoples</u>, 1894.

* Wasmann, <u>Instinct und Intelligénz</u> p. 93. (Quoted by L. T. Hobhouse, <u>Mind in Evolution</u>, p. 416.) Insane patients sometimes regard parts of their bodies as hostile or alien, and the left hand may fight with the right.

"I am inclined to think" (says Socrates in Plato's <u>Phaedo</u>) "that these muscles and bones of mine would have gone off long ago to Megara or Boeotia --- by the dog they would, if they had been moved only by their own idea of what is best, and if I had not chosen the better and nobler part..." (98 C.)



A devil, from a painted glass window in the Bodleian Library.

^o Burnet, <u>Early Greek Philosophy</u>. p. 214.
 Joanna Field, in her stimulating <u>Experiment in Leisure</u> (p. 164), discusses this topic. See also Silberer's <u>Problems of Mysticism and its Symbolism</u>.
 P.D. Ouspensky, in <u>Tertium Organum</u> and other works, takes the view that the organs and limbs 'think' separately, especially during sleep.

Graham Wallas, <u>The Art of Thought</u>, p. 37, regards the organism as a combination of co-operating elements, each of which retains a good deal of initiative.

• Meditations, V. 11.

† On Plato's doctrine of the body's members as requiring the discipline of the soul, see <u>Phaedo</u>, 94.

⊗ <u>Rom</u>., VII. 23; c.f. <u>Rom</u>., VI. 13, VII. 5, <u>Col</u>., III. 5, <u>Jas</u>, IV. 1

+ <u>Three Principles</u>, XVI. 31 ff. Cf. the Islamic tradition that in the heart (<u>qalb</u>) hosts of good and evil beings fight for mastery. Here, says Rumi, "the pricks of angelic inspiration and satanic temptation come from thousands". (R. A. Nicholson, Rumi, <u>Poet and Mystic</u>, p. 96.)

 $[\]oplus$ <u>Journal</u>.

Shelley's Furies say to Prometheus:

"Thou think'st we will live through thee, one by one, Like animal life, and though we can obscure not The soul which burns within, that we will dwell Beside it, like a vain loud multitude Vexing the self-content of wisest men...?"

To which Prometheus replies, "Why, ye are thus now". But few of us can go on to say with him that we rule "The torturing and conflicting throngs within." *

(In case the foregoing should seem too vague and generalized, let me cite one or two additional examples. In functional anaesthesia the affected limb -- while generally avoiding injury by 'automatic' movements -- may be pricked or burned without the patient feeling anything, and he is quite unable to move it voluntarily. In some of the cases where the limb moved spontaneously, McDougall found gestures that seemed to show intention on the part of a detached fragment of the personality. \times It appears that sometimes, and in some degree, schizophrenia involves a parcelling out of the body's space, rather than of its time, between the contending selves. Then there are the many cases in which the patient has partial control of a limb, and there seems to be a struggle between the will of the whole and the will of the part: this is only the normal tendency aggravated. The most familiar example is the nervous tic, in which the member visibly sins against the whole. More rarely, the patient's arm and hand having become quite insensitive, are yet capable of writing down intelligible answers to questions whispered in his ear, while the patient is engaged in conversation with a third person, and unaware of the questions that his hand is answering. Alternatively, the hand, given pricks which the patient can neither see nor feel, will nevertheless correctly record their number. + Again, there are the reported instances of persons who, nearing the point of death, seem to experience a disintegration of the personality into components associated with the body's organs. "I realized" (says one who had such an experience) "that the B-consciousness belonging to the body was beginning to show signs of being composite, that is built up of 'consciousness' from the head, the heart and the viscera. These components became more individual and the B-consciousness began to disintegrate....") °

5. <u>CELLS</u>.

All the same, as common sense is quick to point out, there is no such exact correspondence between my passions and my organs as a primitive psychology tried to make out. If a member can be said to exercise a will of its own, that will is no more autonomous and self-contained than the member's 'body'. No piece of tissue, no organ or group of organs, ranks as an individual in the sense that I the man rank as an individual. Amongst them there are few distinct boundaries, and only a very small degree of independence so long as the body is in health.

All this is changed at the next stage. My cells are distinct, selfcontained animals. I am a society of some fifteen billions of them. † * <u>Prometheus Unbound</u>, I. We cannot dispense with the concept of these "conflicting throngs" --- all we can do is to rename them. See, for instance, Mrs Melanie Klein's <u>Contributions to</u> <u>Psychoanalysis 1921-1945</u>, on the weaned infant's incorporation of the "bad breast"; and, in general, the autonomous life in the unconscious of various "good" and "bad" objects and part-objects --- outrageously severe "internal monsters" dominating the young child.

× <u>The Energies of Men</u>, p. 266. Sheldon has distinguished 3 human types --- <u>viscero-</u> <u>tonics</u> (comfort-loving people whose life is centred on the digestive tract), <u>somato-</u> <u>centrics</u> (power-lovers, centred on the muscular-skeletal system), and <u>cerebro-</u> <u>tonics</u> (thinkers, centred on the nervous system). But, in each of us, all three 'systems' are active and striving, as it were, for mastery. According to which of the three is generally dominant, we are 'endomorphic', 'mesomorphic', or 'ectomorphic'.

+ See McDougall, Psychology, p. 194. I am not suggesting, of course, that the secondary personality inhabits only the arm and hand: evidently it has the use of much else, and is (so to say) in the position of the lodger who has one part of the house to himself, shares a second part with the family, and is excluded from a third. The many tales, ancient and modern, of disembodied hearts, hands, and other organs, as possessed of intelligence (one of these tales has been made into a film called "The Beast with Five Fingers"), though recognizing an important general truth, are entirely fantastic in detail. In so far as organs have 'intelligence' of their own, it is of a very low order.

° The case was cited by Sir Auckland Geddes in an address to the Royal Medical Society, Feb. 26, 1927.

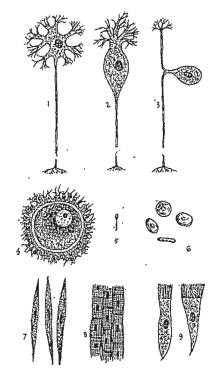
C. S. Lewis, <u>The Pilgrim's Regress</u>, p. 188, draws a grisly picture of' the lecherous as fountains of vermin, or bodies disintegrating into plural reptilian life. His description recalls vividly the puppet whose limbs alarmingly detach themselves one by one and dance away, to the horror and delight of the audience.

† That is, 15,000,000,000,000, and not U.S. billions. Authorities differ widely about the number; I have followed Sherrington ---<u>Man on His Nature</u>, p. 86.

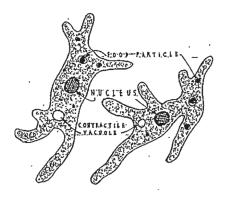
About fifty different kinds can be distinguished, each with its special function or way of life. For example, there are the thread-like nerve cells whose length may be measured in feet: their task has already been sufficiently described. There are two sorts of muscle cells whose function is to move various portions of my body: this they do by contracting their length and increasing their girth. There are numerous varieties of cells whose task is that of a chemist --- to make and to pour into my blood such substances as the needs of the moment demand, or to extract surplus and harmful substances. There are the cells that line my wind-pipe and with their lashes drive out intruding particles. There are the red corpuscles --- disc-shaped oxygen ships of the blood-stream. There are the white corpuscles which devour invading germs. And so on.

The appearance of my cells is as variable as their function. Often it is fantastic, for animal specialization has in this community gone to extreme lengths. Some cells are as transparent as glass, others quite opaque; some have turned their substance into bone or the enamel of a tooth, others are practically fluid. But whatever its size and shape and performance, the living cell is always a separate creature, 'breathing' and feeding and eliminating its waste for itself, born separately and dying separately, living its life in a cell-membrane, which prevents its substance (the cytoplasm) from mingling with that of other cells. Admittedly its food and oxygen are delivered to its doorstep via the blood-stream (which is also the cell's sewer) thereby enabling it to settle down to a sedentary life: but, after all, much the same could be said of the average civilized man. Not unlike the members of higher societies, my cell-members have grown up together in such a way that each has come to depend on the rest for many things, and for the most part is content (except in disease) to assert its individuality only in so far as this fits in with the general convenience. The measure of freedom still left to the cell depends upon its function. The sperm cell, swimming by vigorous lashings of its 'tail', is as free as a fish in a river; and one kind of white corpuscle looks like, and moves around like, any amoeba in stagnant water --- its scavenging activities take it all over the body. As everyone knows, cancer cells, which are undisciplined offspring of healthy cells, multiply regardless of the general welfare (their abundant vitality is my disease); but even the ordinary, well-behaved cell is still a potential free lance. + The peculiar environment of my body ensures that the cell's individuality shall be subordinated for the present. When, however, like the living specimen in the laboratory or the fertilized germ cell in the womb, it is released from restricting circumstances, the cell multiplies at such a rate that (if it could be maintained) the cell's progeny would presently outgrow the solar system. Alternatively a cell of mine can (as in blood-transfusion) shift its allegiance from this cell-community to another. In short, it is as if mutual convenience, rather than any absolute necessity, holds these fifteen billion animals together, so making myself the man possible. If they agree, I live; if they differ violently, I get ill; if they fall out altogether, I die, and (outside laboratories and my children) they die with me.

I have been writing of my cells as <u>they</u>: with equal truth I could have written <u>we</u>. For I am these 15,000,000,000 animals. So far as common sense is concerned, and in the eyes of the law, and for all practi-



Some types of human cell: 1,2,3, neurones or nerve cells; 4,5, unfertilized ovum and sperm (to the same scale); 6, red corpuscles; 7, 8, muscle cells; 9, ciliated epithelium cells.



Amoeba in movement: two phases. The animal creeps about by throwing out irregular projections of its body.

+ As Roux has shown, the struggle for food between the various tissues is intense, and Loeb applied the doctrine of natural selection to cell layers. When I fast, my cells practise cannibalism on a vast scale. Kenneth Walker writes: "Life for an enfeebled cell is as ruthless as it is for an aged animal in the jungle. The wandering cells of the body approach and attack it, instinctively knowing that it cannot defend itself. Finally it is engulfed, thus providing sustenance for its fellows." <u>The Diagnosis</u> of Man, p.30. cal purposes, what this collection of primitive animals does I do, and what I do they do. Here am I writing about cells, as I say. But what this means in fact is that, by virtue of an unspeakably vast and complicated communal effort, my cells are writing about themselves. There are turmoil and stress and lightning adjustments, there are signalling and pulling and I know not what other labours --- all so beautifully timed and co-ordinated that the result is simplicity itself. - More wonderful still, these animals are here recording, in this paragraph, some of the activities which go to the making of this record. However sketchy the record, it is an impressive achievement. I, the man, am an organization which billions of animals have formed to further certain common ends and to achieve self-knowledge.

At the same time I am their ruler. I am the prince of a country thousands of times more populous than the entire human community on earth, but I am so busy seeing to foreign affairs that I don't care whether I have a thousand or a million or a billion subjects, or what they look like, or what trades they are engaged in, or whether they live for a day or a year, or as long as I do. By chance I happen to have heard of their existence, and so I grant them a total of perhaps a few hours' consideration in the course of my lifetime, but under slightly different circumstances I would have lived all my days in utter ignorance of them. Even now, aware as I am of the hordes I rule, the subject is only of passing interest: rarely does the more than Arabian-Nights quality of the situation occur to me. Yet it is they who do everything for me --- I cannot move my little finger or twitch an eyelid unless they contrive it. They feed and transport me, repair and cleanse me, and all that the world gives me credit for is their doing. Is it not then very curious that I, who in the conduct of the State's foreign policy am fairly observant and inquiring, should so ignore the citizens at home who make both my foreign policy and myself possible?

But my cells are far nearer to me than this picture suggests. There is no prince alongside of, or over and above, his subjects. It is the State itself that walks and talks, that runs and sits down to rest, that goes to bed and gets up in the morning, that is now writing this book about itself. A city-on-legs, a top-heavy community of living creatures rushing about the face of the earth in search of some diversion, and for ever overlooking itself!

6. MAN INTO CELL: CELL INTO MAN.

I watch my hand's swift and subtle motions as I write this sentence, and I say to myself that I am moving my hand. But I have no idea what this statement really means. Myriads of animals are performing all manner of evolutions, but I do not feel like a ring-master. If it is at my bidding that they act, I am unconscious of giving them orders; still less do I know how my orders are passed on and put into effect. Perhaps the day is not distant when it will be possible to project on to a screen a man-size picture of a cell while it is still in my hand, so that I can study the way its "We breathe that they may breathe, not that we may do so; we only care about oxygen in so far as the infinitely small beings which course up and down in our veins care about it...... Our will is the <u>fiat</u> of their collective wisdom..... it is they who make us do whatever we do --- it is they who should be rewarded if we have done well..." So writes Samuel Butler (<u>Life and</u> <u>Habit</u>, pp. 107, 112). He paints here only one side of the picture, of course, but it is a side that is nearly always ignored.

"Ruder heads stand amazed at those prodigious pieces of Nature, Whales, Elephants, Dromedaries and Camels.... but in these narrow Engines (of the body) there is more curious Mathematics; and the civility of these little Citizens more neatly sets forth the Wisdom of their Maker." Browne, Religio Medici, I. 15. Here the wisdom of the body transcends the body; Nietzsche, on the other hand, makes it immanent. "There is more intelligence in your body than in the highest wisdom." (Thus Spake Zarathustra, 'Of the Despisers of the Body'.) "The body", he says in the same chapter, "is... a war and a peace, a flock and a shepherd."

behaviour flows from my intention to move my hand this way and that. But such an experience could only serve to bring home to me the mystery of how I actually 'get at' (and, indeed, become) the cell. And there is the same puzzle in reverse. All my sense experience is, as Chapter II made clear, cellular before it is human. How does the cell's experience of its narrow environment become the man's experience of his much wider environment? How do my cells 'get' at me? How do they become me?

I live vertically, and think horizontally. And so (in so far as they live and think at all) do my subordinates of every grade. If one of them were gifted with a high order of intelligence, and could contemplate his fellows intent on leading their own lives without any regard for the general good, he would surely wonder how the general good is nevertheless served. He might go on to speculate about an intelligence that ordered nature, saving cells in spite of themselves. It would be an act of the boldest faith for my supernaturally intelligent cell to go on from such reflections to realize the invisible human me, so that he could say of himself and his companions: 'We are not alone in the world; there is a Cell who is somehow the beginning and the end of all this feverish activity. And this Cell isn't out there in some remote heaven of his own, but here in us, pervading our lives. We are this Cell, and he is us. When we all do our little tasks we do his big task. Our little bodies are his big body; our little lives his big life --- a life whose quality, though it all derives from us, is immensely superior in every way. It is true that no cell by travelling the world can find anything but other cells and their products, and that no cell can ever hope to perceive the great Cell. The Laplace-cell who says that he has searched the whole bodily heaven with his telescope and found nothing but cells and more cells, is looking in the wrong direction. For the great Cell is here, and he has no being that is not in us. In fact it is not I who speak these words, but he who speaks them through me. And the mystery of mysteries is that he controls us and yet depends on us, that he is us and yet is not us, that he is immanent in us and yet immeasurably transcends us.'

What would for such an inquiring cell be a theological question is for me a psycho-physical one. And though science has many detailed suggestions to make, they throw little light on the crucial problem, which is none other than the problem of my regional metamorphoses. My observer, seeking to explain my functioning, is driven to search for causes at other levels: he approaches and recedes, travelling radially through my regions. In effect, he observes the man becoming cells and the cells becoming man. When he sees events at the one level issue in events at the other level, he is registering (and participating in) my breaking down to multiplicity and my building up again to unity. His radial movements are not a whim: he cannot help moving so if he is to follow what is going on. Instead of resting content with the human or cellular horizontal patterns (which are only cross-sections of the vertical process) my observer himself becomes a part of that which unites them --- to understand the process he is obliged to take part in it. And he records that (in the terms of Chapter I) while the spell which I, at the centre, cast over one region, is quite different from the spell which I cast over the next region, the two are entirely interdependent and the traffic between them is unceasing.

Samuel Butler (Life and Habit, p.72) imagines himself as a blood corpuscle. "On the other hand," he goes on, "if I were the being of whom such an introspective blood corpuscle was a component item, I should conceive he served me better by attending to my blood and to making himself a successful corpuscle, than by speculating about my nature." What Butler did not realize was that, since we are our blood corpuscles and they are us, our consciousness of them is their self-consciousness. When we stoop to consider our cells, we stoop to their level; when they rise to consider us, they rise to our level. Man into cells, cells into man --- this vertical metamorphosis, so far from being unusual, is of the very essence of life's procedure.

"Who can say where individuality begins and ends, whether the living being is one or many, whether it is the cells which associate themselves into the organism or the organism which dissociates itself into the cells?" Bergson, <u>Creative Evolution</u>, p. x. The answer, I suggest, is that the one exists by becoming many, and the many by becoming one. The geography of one region is what it is because it is continuous with the geography of superior and inferior regions. To say that I am a man, or that I am cells, is inaccurate. I am cells-becoming-man, and manbecoming-cells.

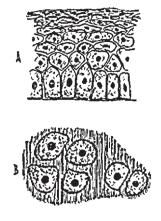
To state the facts is not to explain them. In the end they must be humbly accepted for what they are, with their irreducible givenness. And any account of them which seems to explain them away, or to reduce the wonder of them, is worse than useless. Who is it that says 'I'? Fifteen billion idiots are no cleverer than one, yet this walking asylum of brainless and blind deaf-mutes is also an intelligence whose field of thought is the universe. And what is even more important than this paradox is the fact that the subject of it is capable, in his more lucid moments, of realizing the paradox.

7. THE CELL-MESH.

Common sense points out that the arrangement of the cells in the body upsets the schema of regions. According to the schema, each cell should be in the place where its neighbours are cells, preserving just enough elbow-room to remain for them no more and no less than cellular. Instead, vast numbers of cells are in contact, forming a solid mass. This can only mean that they are nothing to one another.

In order to answer this objection, let me suppose for a moment that I am given the task of designing a large animal body, using for material many small animal bodies. The parts must keep their distance, yet somehow the whole must be held together. The only way to combine the necessary compactness of structure with the necessary intervals between the parts is to set the parts in a matrix, which will do for them what fenders do for ships --- keep them just far enough apart. And when I turn from my theory to the facts, that is precisely the arrangement that I find. The nucleus, which is by far the most important structure in the cell, is surrounded by more or less transparent cytoplasm: thus the pattern of the cells of my body ensures that their nuclei are well insulated from one another, and that the regional proprieties are observed.

It remains true, of course, that the cytoplasm is an integral and necessary part of the cell, as well as a fender or distance-piece. But this is not unlike the means whereby, at other levels, the necessary mutual distance is maintained. What do men do when they recognize and greet one another but shake hands? They are in contact, yet each remains in the other's man-region. How does a boxer hold off an opponent who is apt to clinch, but by pushing him to arm's length and keeping him there? Again there is both distance and contact. How do children keep their respective places while dancing in a ring but by holding hands? So also do the cells of my body hold each other apart and hold each other together. And in this way they form a kind of grid or mesh, a projective-reflective network, in which each unit is where the neighbouring units reach the status of a cell.



A (stratified epithelium cells) is an example of cells in contact: note, however, that the nuclei are well apart. B (hyaline cartilage cells) is an example of cells separated by an external matrix.

Again in the mitotic division of cells (described in the previous chapter) an important function of the cytoplasm is to provide room in which regional activities can occur, and so to enable the cell (as represented by the centrosomes) to stand away from itself. We shall find a similar 'mesh' at all hierarchical levels. For example, stars are in one sense co-extensive with their gravitational fields, and so interpenetrate; while in the ordinary sense they hold themselves extremely aloof from one another. The preservation of mutual status always involves these two seemingly incompatible requirements --- of distance and the abolition of distance. *

What, then, happens at the boundaries of the cell-mesh? The outermost members of the society are asymmetrical, and are the basis of what may be called the open or unsaturated cell-region. When my approaching observer gets to this region, he attaches himself to the community of cells, at a spot where it is free to receive casual visitors. He is temporarily affiliated to the society, by occupying a vacant position. And the condition of his honorary membership is that, whatever his original status, he shall here rank as a cell.

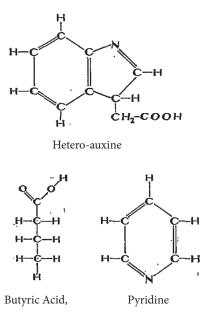
8. THE EMPTY BODY

The observer sees me as a collection of cells, then as one cell. He draws nearer, till the object altogether fills his field of vision. The once-infinitesimal speck has swollen into a world, into a huge labyrinth whose contents are streaming like the traffic of a capital city seen from the air, while incessant demolition and rebuilding are in progress. °

He notes that the cell, in its turn, has 'organs' --- members within members. Much depends upon which part is selected for closer inspection. Suppose the observer chooses the nucleus of a cell that is about to divide. It resolves itself into a number of threadlike chromosomes, which are again differentiated into the factors or genes which are the vehicles of heredity. He has now arrived in the borderland between the 'living' and the 'dead', where some units grow and reproduce themselves, while others of comparable size do not. Here is the realm of giant protein molecules, which X-ray analysis shows to be elaborately patterned and of great variety: in several instances their structure and shape are directly related to the body's macroscopic functions.

Each giant molecule proves to be a great society of atoms -- chiefly hydrogen, carbon, nitrogen, and oxygen -- each of which is, in turn, a society of 'ultimate particles'. These particles do not, however, fill out the atom in any ordinary sense; indeed it may be said that the atom consists almost entirely of empty space. At the centre of the void there lies a compact collection of particles -- some carrying a positive electrical charge, and (except in the case of hydrogen) others carrying no charge -- while ranged around this nucleus, at varying and relatively astronomical distances, is a whirling cloud of anything from one to ninety or more negatively charged particles, pursuing circular and elliptical paths. The whole bears some resemblance to a solar system, inasmuch as the orbital bodies are of small mass compared with the central body, and spin about their own axes; moreover the centripetal electric force which prevents them from flying off at a tangent resembles the gravitational force which * Similar in principle are (1) the arrangement of the molecules (or atoms or ions) in a growing crystal --- the interior lattice of 'observation posts' is filled, but at the surface are vacancies in the process of being occupied; and (2) the magnet, which may be looked on as an assembly of tiny magnets whose N and S poles neutralize one another except at the two ends of the bar, where new-comers are made welcome: it is no mere coincidence that the magnet's lines of force resemble the regional system of this book's 'travelling observer'.

°For a fascinating description of chemical processes in the cell, the general reader is referred to Sir Charles Sherrington, <u>Man</u> <u>on His Nature</u>, pp. 78 ff.



Examples of molecular structure, to illustrate some of the forms it may take. (Actually hundreds of thousands of different carbon compounds are known, each with its own arrangement of atoms.) The observer is here moving in regions where direct vision must give way to more round-about methods. The electron microscope, though theoretically able to show the larger atoms, cannot as yet probe so far; but, by means of X-rays, what are virtually photographs of a molecule's structure can now be taken. And these photographs show that the chemist's diagrams (of which I give three examples) are fairly true to the facts. Indeed the chemist is a molecular architect, familiar with those rules of planning which enable him to build innumerable structures unknown to nature.

holds the planets in their orbits, in that both obey the inverse-square law.

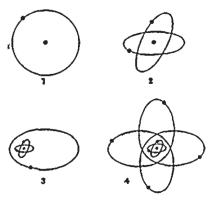
According to the physicist I am atoms, and atoms are volumes of space inhabited so sparsely as to be almost deserted. It has often been said that if an atom were magnified till it stood as high as the Empire State Building (or two-and-a-half times as high as the dome of St Peter's, Rome; or something of the kind) then its orbital electrons, and the nucleus itself, would appear no bigger than peas; and, again, that if all the subatomic particles in my body could be gathered together in a compact lump, the lump would be too small to see with the naked eye. These comparisons -- mixing levels as they do -- must not be taken too seriously, but they serve to bring home the fact that modern physics, as it approaches the centre of my regions, altogether dissolves my 'solidity'. There is plenty of behaviour, of a peculiarly frantic kind, but the one who behaves becomes more and more inscrutable as he dwindles, till he is in danger of vanishing entirely. This familiar body turns out to be something like a sky sprinkled thinly with innumerable stars, so that to a sufficiently shrunken man of science I resemble a problem in astronomy rather than in physiology or anatomy. For him I have far more in common with the Milky Way than with common sense's description of me as a compact mass of flesh and bone. Everything I call solid and substantial -- my head, my whole organism, my family, my country, the great globe itself -- for the physicist as for Prospero; melts into the thinnest of thin air, if not into the baseless fabric of a vision. And the final curiosity (one is tempted to add) is that the thin air should yet prove capable of contemplating its thinness, and of composing this paragraph about itself.

9. INSIDE THE ATOM

At the start of this chapter my common sense prompted me to appeal to science, rather than to philosophy, to tell me what I am. Now the scientist gets his data by going into things, in the belief that what is significant about them is not superficial. When he inquires into my nature, his method is to find out what parts I have and how they go; and this he can do only by drawing nearer and nearer to me.

With what result, we have seen. It transpires that first I am a man, then something like a zoo, then something like a galaxy, and in the end something which may excusably be taken for nothing whatever. Moreover, if the law of equality holds good, my scientist-observer suffers a parallel transformation. This is certainly much more, and much less, than my common sense had bargained for.

But the law of equality, common sense retorts, does not hold good. The regional schema may work fairly well at and around the human level, and perhaps possess some measure of philosophical validity, but it is useless for science; and (common sense goes on) the further the schema is pushed into the realm of the very large and the very small, the less it applies. For example, the assertion that only ultimate physical particles are capable of appreciating me as ultimate physical particles



Atoms of (1) hydrogen, (2) helium, (3) lithium, and (4) carbon, according to the classical Bohr model. In fact, however, classical mechanics, with its definite trajectories, ceases to apply here: the path of the electron is subject to the principle of indeterminacy, and becomes in effect a diffuse pattern.



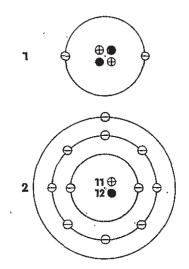
The electron cloud pattern of the hydrogen atom (in what is known as its 3s state) as envisaged in accordance with the principles of wave-mechanics.

is either monstrously flattering to them, or monstrously impertinent to physicists.

In fact, however, the boot is on the other foot. For it is precisely in the human region that the validity of the schema is far from obvious (witness my failure to realize that I keep my head over there, and not here), and it is precisely in the regions of the very small (and of the very large, as I shall show) that the schema becomes altogether overt and unavoidable. Here it is overlooked only by reason of its excessive obviousness. For the micro-scientist has for long been working, in his own way, to the pattern of concentric regions inhabited by mutual observers, over whom the laws of equality and elsewhereness hold sway.

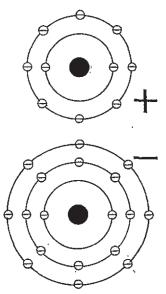
I come to actual examples. But first I must provide, in the smallest possible compass, a rough sketch of the structure of some typical of atoms. The simplest example is the hydrogen atom, which has for nucleus a solitary proton (or relatively massive particle carrying a positive electric charge) balanced by a solitary orbital electron (or much less massive particle carrying a negative charge) revolving about it many millions of times a second. Next in order of complexity is the atom of helium, which has two orbital electrons matched by two nuclear protons. The helium nucleus contains, in addition, two neutrons ° (uncharged particles whose mass is similar to that of the protons); but it is not these, but rather the protons or units of positive electric charge, which determine most of the atom's properties, and its place in the periodic table of elements. The same general pattern is followed in all the heavier atoms: under what are called normal conditions, the number of peripheral electrons -- which may be as many as 92 -- is the same as the number of central protons, and the latter are, as a rule, linked with a somewhat larger number of neutrons. Not surprisingly, when the number of electrons passes a certain limit some are crowded out, and the heavier nuclei are as a consequence surrounded by several electron shells. The sodium atom, for instance, has three such shells, containing respectively two electrons, eight electrons, and one electron --- making a total of eleven negative units, which are balanced by eleven positive units in the nucleus. Not every shell has the same capacity: thus the maximum number the innermost shell will hold is two, the next eight, the third eighteen, and so on. Nevertheless the outside shell never holds more than eight --- the remaining ones are added only when the next shell has begun to form. And how the atom behaves is very much a question of how many electrons this outer ring contains. When it is filled to capacity (having eight electrons, or two in the case of helium) the atom is chemically inert, or satisfied. On the other hand, those atoms which have only one outer electron, or are one short of a complete shell of eight, are unusually active. Thus the sodium atom acts as if it wanted to get rid of its single outer electron, while the chlorine atom acts as if it were hungry for an extra electron to add to its seven. Accordingly, when these two atoms come together under the right conditions, they fulfil each other's needs, joining forces as a molecule of sodium chloride or common salt.

So much for the general distribution of the particles comprising the atom in its ordinary state. Actually, one kind of atom is capable of numerous states. For example it may, when it is in a star, or even on earth,



(1) Helium. (2) Sodium. These diagrams are, of course, merely schematic, and do not attempt to show the electrons' orbits, or the actual disposition of the particles in detail.

° Under certain conditions a neutron emits an electron and becomes a proton. Accordingly some physicists, including Eddington, have looked upon the neutron as a compound of an electron and a proton (held together by what is called co-spin), and not as an ultimate particle. In this case, the atom is reducible to an equal number of protons and electrons, some of the latter being nuclear and the rest orbital.



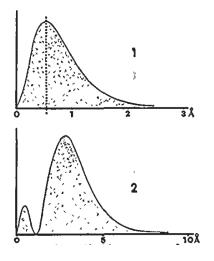
A molecule of sodium chloride. The solitary electron of the sodium atom fills the vacant place in the outer shell of the chlorine atom, where it becomes linked with an electron partner of opposite spin. The sodium atom remains attached to the chlorine atom because it is now (being an electron short) positively charged, while the sodium atom (being an electron to the good) is negatively charged: carrying unlike charges, they attract each other. be stripped of some or all of its circulating electrons. Nor is there just one orbit in which an electron may move: when the atom absorbs a quantum of radiation, an electron shifts to a wider orbit, and when the quantum is emitted the electron slips back again. But the number of possible orbits is strictly limited. Everything happens as if there were grooves in the space around the nucleus, and electrons could only circulate in them: the ridges between the grooves are a kind of no-electron's-land.

Actually, however, this description, though useful as a preliminary, will not do. At this point it is necessary to mention an awkward but most significant fact --- the physicist can never specify in full the behaviour of the electron. His difficulty is that any experiment whereby an electron is detected disturbs it to an indeterminate degree. (In principle, it is possible to describe an experiment which would enable us to measure the electron's position, or its momentum, or its kinetic energy, or its angular momentum; but it is impossible to describe one which would enable us to provide all this information about the electron as it is at a given moment. To determine one measurement is to leave the others vague. For instance, when we try to measure the electron's energy at a certain instant of time, we find that in measuring the energy we lose account of the time, and in measuring the time we lose account of the energy.) One result is that it is no longer meaningful to speak of "the exact position and momentum of an electron at a given moment": the measurement that cannot, even in principle, be measured, is a monster best forgotten. ° What we can meaningfully discuss, and set out to determine, is the probability of finding the electron at the given time and place, or the probability of its having a given momentum at the given place. Consequently, if we wish to picture the electron at all, we must see it as merging in its orbit, and the orbit as spread out or diffuse. The distinct orbit of the classical theory remains, it is true, but only as marking the place where the probability of finding the electron is greatest. We may think of the nucleus as surrounded by cloud-layers of various densities, or by a system of waves somewhat like those on the surface of a pond when a stone is thrown into the water, so long as we regard them as 'waves of probability' rather than physical waves. And the nucleus must be similarly treated: it is infected with the same uncertainty. The physicist cannot pin down the proton or the neutron. All he can do is to find out the chances of its being present, at the stipulated moment, in this place rather than in that.

10. THE ATOM AND THE REGIONAL SCHEMA: THE HYDROGEN ATOM

Now let me point out some of the ways in which this very odd story of atomic structure agrees with the scarcely less odd regional story of the earlier chapters of this book. I propose to take the physicist's account of what is going on in me at atomic and subatomic levels, and to translate it as far as possible into unspecialized language, so that it may be compared with what is going on in me at other levels. Otherwise, it is as if my approaching observer must lose his memory, if not his wits, as he enters each new region, and become quite incoherent when he tries to

° To a large degree the modern physicist has given up the idea of a purely objective physical world, independent of himself its investigator; and he is coming to see his function as the getting and co-ordinating of certain types of experience, with a view to the prediction of similar further experience. An essentially inscrutable Nature, which is the hidden cause but never the object of experience, is well on the way to becoming a myth and a cipher. Accordingly, while for the older physics the principle of indeterminacy would have implied faulty methods of observation, and would have told us nothing about Nature, for the new physics this principle has the same sort of validity as 'a law of nature'. For observations of what is here, not natural objects over there, are the subjectmatter of physics; and physical laws are handy descriptions of these observations. Any unavoidable limitations to which the observer is subject must find expression in the 'laws of nature' he formulates: 'nature' here includes his nature. It is not what the object is that matters, but how it strikes us; though no doubt how it strikes us is largely dependent upon where it strikes us from.



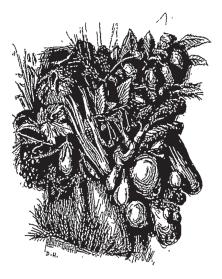
Electron distribution curves for (1) the normal state of the hydrogen atom, and (2) one of its higher energy states -- not to the same scale. The curve shows the relative probability of finding the electron at different distances from the nucleus; thus in (1) the electron spends more of its time at a distance of 0.5292 Å than at any other distance. Note that in its higher energy state, the electron does not altogether forsake its original orbit, but spends most of its time further afield.

give some account of his journey as a whole.

Suppose that he has come very close to me --- so close, in fact, that I am for him no more than a single proton, or hydrogen nucleus. What, if the regional schema holds good here, may be expected? What, on general principles, is the situation likely to be? (1) The observer is in the region where all I amount to is a proton: that is to say, he is in a place which is normally inhabited, if it is inhabited at all, by an electron. And it would not be surprising if he were to do there what he did in my human region --- move round me in order to view me from every angle. (2) If what he makes of me is to remain more or less constant, he must in his motions about me keep to a more or less constant distance; and this is a matter in which I am very much concerned, seeing that the permanence of my characteristics is inseparable from regularity in the habits of my observers. (3) But within certain limits, of course, my condition varies. If I increase in importance, it is appropriate that my observer should at once retire to a more respectful distance; or, if I diminish, that he should become more familiar, more closely acquainted with me, less distant. (4) These re-estimations of me are likely to occur with dramatic suddenness: the increment or the loss occurs all at once, by lump-sum instead of on the instalment plan ° (5) But in fact it is meaningless to speak of my variations, and of my observer's reckoning of them, as things apart: I change for him or not at all. What each of us is, he is in the other. Yet each must project upon the other's centre the content of his own, so that there is constant circulation between us. We are linked in a projective-reflective couple, or bipolar system; we are complementary yet opposite, like the positive and negative poles of an electric cell. (6) Though we are of equal status, we are not necessarily equal. There is no reason, for instance, why the mass my observer attributes to me should not be very different from that which I attribute to him, so long as they are of the same general order. (7) While we should expect to find certain fundamental conditions of observation at all levels alike, we should be prepared for very wide differences. In particular, it would be odd if my observer, having made himself small and nimble enough to enter the world of ultimate particles, retained all his macroscopic faculties unimpaired, and succeeded in specifying accurately (for example) my position and my velocity. A good deal of ignorance would come naturally to him, would fit his station. But the paradox is that this ignorance, or rather uncertainty, is the right kind of knowledge, the proper degree of certainty, for this lowly level: there is no question here of some accidental impediment which more expert observers, similarly placed, could surmount. It is possible, of course, to avoid all vagueness, but only by retreating to a higher level where protons do not belong. In short, the vagueness in my observer is mine: that is how I seem to him, and that is how I am....

It is unnecessary to keep up the pretence any longer. This sevenfold description of the proton's hypothetical observer is nothing else than an unconventional description of its orbital electron --- the electron which (1) rotates about the proton, (2) and maintains a more or less constant range, (3) and retires to a wider orbit when energy is absorbed, (4) and recognizes nothing less than a whole quantum of energy \times , (5) and carries an equal but opposite electrical charge to that on the proton, (6) and

° To take a macroscopic instance, suppose I am shown a problem picture and am told that it contains a head. I examine it closely, and find only a jumble of unrelated units. Then I hold it at a distance, and in a flash the larger pattern emerges. There are no mediating views, no accumulation of small adjustments resulting in the major change. The reaction is of the all-or-nothing type, like seeing a joke. The following illustration will serve as an example.



Part of the painting <u>Summer</u> (1563) by Giuseppe Arcimboldo, in the Picture Gallery, Vienna. Arcimboldo specialized in fantasies of this kind.

× According to the quantum theory, the atom refuses to absorb or to emit anything less than the standard minimum quantity of energy known as a quantum: consequently there are, between the various energy states of the hydrogen atom, no mediating positions. The number of electron distribution curves is severely limited. has only a fraction of its mass, (7) and along with the proton is subject to the principle of uncertainty. Indeed I am unlikely to find any other observer half so well qualified to register what I am at very close range. Just as there is a place, about a yard from here, where I am taken to be a man, so there is a much nearer place -- a chemical region or atmosphere ° -- where I am taken by molecules to be a molecule, and so there is a third place -- less than a hundred-millionth of an inch away -- where I am taken by an electron to be no more than a proton. † My electronobserver bears witness to this last estimate by patrolling my proton region, as a night-watchman bears witness to the presence of the strongroom by his periodical circumambulations. The electron does more than entertain a theory about me: it puts the theory into energetic practice. The whole manner of its existence is a striking demonstration of my regional effects, of what I do out there at the periphery, from here at the centre. Only an electron, or something of the kind, is capable of making the discovery that I am a proton, for a more observant and better equipped observer would find more in me. To put me into the category of infinitesimal particles is to take an extremely poor view of me. Here is an important discovery which only the purblind can make: only an infinitesimal particle can achieve the proper degree of narrow-mindedness and obscurity.

What, then, of the proton itself, at still closer range, at the very centre? What is it intrinsically? Such a question, for modern physics, is pointless. A particle is known by what comes out of it, by its regional effects \times and concerning what it is in itself science has nothing to say. In effect, there is nothing at the centre. Science is essentially a regional enterprise* and it is here, at the lowest physical levels, that our common-sense notions of simple location are finally exposed as untenable, and the regional schema, with its principle of elsewhereness, takes their place. +

But I have another source of information --- inside information. If I am this nucleus, this proton, which my observer so industriously patrols, then I am in a position to say what it is like to be an ultimate particle, here at the centre. And I find that the physicist's assumption is altogether justified: there is nothing here at all. That is to say, there is nothing wholly intrinsic, nothing that is located only here. Nor is this conclusion merely the result of a careful analysis of experience. It is forced on me. Every night I have to rediscover the darkness, the nothingness that lies at my core. I suggest that the man who, having said his prayers, gets into bed and sinks into a dreamless sleep, has in a few strides -- taking several rungs at a time -- descended the whole length of Jacob's ladder. At this lowest level there is no outlook at all, and we are altogether emptyheaded. Sir William Bragg's celebrated picture of an atom as a man's head enveloped in a swarm of mosquitoes, was rather less fanciful than he imagined: the thing I have under my hat is just as truly a proton as a cell, and just as truly a cell as a human head; and in all instances it is, intrinsically and in simple location, nothing whatever.

^o The term is Sir Charles Sherrington's -- "A chemical atmosphere, so to say, surrounds a particle, different for different chemical kinds of particles." <u>Man on His</u> <u>Nature</u>, pp. 101-2.

† In answer to the question why a proton differs from an electron, Eddington suggested that they are actually of similar structure, but related as it were righthandedly and left-handedly. <u>The Philosophy of Physical Science</u>, pp. 123-4.

× Here the physicist agrees with Plato: "I suggest that anything has real being, that is so constituted as to possess any sort of power either to affect anything else or to be affected, in however small a degree, by the most insignificant agent, though it be only once. I am proposing as a mark to distinguish real things, that they are nothing but power." <u>Sophist</u>, 247.

* To use an apt simile of Bertrand Russell's, the scientist is like a customs officer whose knowledge of his country's industries is confined to what passes its borders. A particle "ceases altogether to have the properties of a 'thing' as conceived by common sense; it is merely a region from which energy may radiate The main point for the philosopher in the modern theory is the disappearance of matter as a 'thing'. It has been replaced by emanations from a locality." "As to what there is where the radiations come from, we cannot tell, and it is scientifically unnecessary to speculate." An Outline of Philosophy, p. 112.

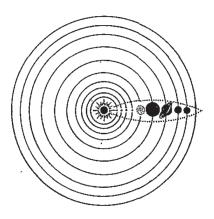
+ "How can this collection of ordinary atoms be a thinking machine?" Eddington inquires. "But what knowledge have we of the nature of atoms which renders it at all incongruous that they should constitute a thinking object? Science has nothing to say as to the intrinsic nature of the atom. The physical atom is, like everything else in physics, a schedule of pointer readings. The schedule is, we agree, attached to some unknown background. Why not then attach it to something of spiritual nature of which a prominent characteristic is thought? It seems rather silly to prefer to attach it to something of a socalled 'concrete' nature inconsistent with thought, and then to wonder where the thought comes from." (The Nature of the Physical World, p. 259.) Or, as I would say, to disclaim inside knowledge of ultimate particles is, in effect, to reduce all things except myself to them.

11. <u>THE ATOM AND THE REGIONAL SCHEMA: MORE COMPLEX</u> <u>ATOMS</u>

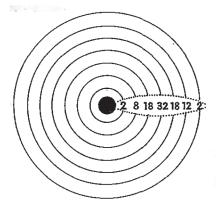
I have already pointed out that the electron's way of announcing an increment of energy is to pass to a more distant orbit, where (so to say) a wider prospect is to be had. In general it may be said that as my observers increase their range, so they make more of me --- in the long run. But in the short run they may also make less of me. Retreating radically through my regions, the observer tends to experience increasing content up to a certain maximum; and thereafter the content falls off, and perhaps vanishes altogether, before the next region is attained, and content of a new order emerges to wax and wane in its turn. In other words, there is found, between any two adjacent regions, a borderland where the scene becomes impoverished and obscure, but it is a case of reculer pour mieux sauter of a minor, set-back before a major advance. Thus my receding observer sees my head grow a trunk, and my trunk limbs; then the whole dwindles till I am a dwarf, a homunculus, an undifferentiated speck; while he for his part undergoes similar metamorphoses. Thus also the planets, which are (in a manner yet to be shown) solar observers, suggest by their increasing mass an increasing estimate of the sun; and then, beyond Jupiter, suggest by their diminished mass a diminished estimate.

Now this tendency -- I call it the law of the spindle -- is exemplified in the arrangement of the electrons belonging to my more complex atoms. The first or inmost shell contains at the most two electrons, the second at the most 8, the third 18, the fourth 32, the fifth 18 again, the sixth 12, and the seventh and last only two. And this 'spindle-shaped' disposition of electrons is generally reflected in the individual atom. The shells of the iron atom, for instance, hold 2, 8, 14, and 2 respectively; and the shells of the mercury atom, 2, 8, 18, 32, 18, 2. (Nevertheless there is a sense in which this falling off does not mean that earlier gains are lost. To find the cell, get inside the man-region; to find the atom, get inside the molecule-region; to find the light atom, get inside the shell of the heavy atom. For it may be said that the man is cells and molecules and atoms, and the higher or more complex atom is also the lower and less complex --- that argon, for instance, with 2, 8, 8, electrons, is neon with 2, 8, and helium with only 2.) $^{\circ}$

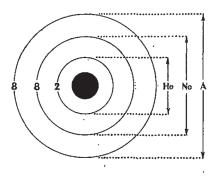
Nor is the nucleus itself, relatively compact though its members are, exempt from the law of the spindle. It too may be regarded as a system of shells, the innermost consisting of two protons and two neutrons --- that is, a helium nucleus. Here, indeed, is a second and still more restricted subatomic region with its own rules and regulations. The forces that bind particle to particle are, at this close range, not subject to the inversesquare law that governs the motions of the orbital electron: quite different in kind, these 'exchange forces' far exceed the electric forces which hold the electron to its path. On the other hand, they fall off far more quickly. Thus, at very close quarters, the exchange forces binding the nuclear protons outweigh the electric forces which tend to drive them apart. But as the size of the nucleus increases, and with it the average distance between its particles, so do the repulsive and long-range elec-



The solar system: the sizes of the planets, but not their relative distances, are drawn roughly to scale.



The uranium atom: a schematic indication of the contents of its seven shells.

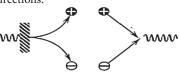


° Perhaps I should add here that, as we come to the larger and more complex atoms, so the inner electron cloud is drawn more firmly towards the nucleus, and shrinks accordingly. And this is just what, on our theory, we should expect: for it is a rule of perspective that space should close up in the trail of the retreating observer, and should open out in the region he is approaching. Once more it seems as if, when we want to see epistemological principles clearly exemplified and bodied forth, we cannot do better than consult the physicist. tric forces gain on the attractive and short-range exchange forces; and so does the nucleus as a whole become less and less stable. Once more, there are limits set to growth of a particular kind, at a particular level.

Some idea of the nature of these mysterious exchange forces may be had by supposing that the proton and its associated neutron continually change identity, or that they bandy, like tennis players, a unit of positive electricity. Again, it would seem that the law of elsewhereness, and the procedure of projection-reflection, which operate by stealth at higher levels, are here openly dominant. ° Indeed it might be said that the entire economy of the atom, and the world of ultimate particles in general, is made up of pairs, whose members are in some respects opposite and in others the same. Thus, besides the orbital-nuclear pair (electron and proton, of equal but opposite charge) and the nuclear-nuclear pair (proton and neutron busy exchanging identity), there is an orbital-orbital pair --- electrons are grouped in pairs of opposite spin. × But perhaps the most striking of all these pairs is the positive and negative electron: these particles, twins of equal mass and equal but opposite charge, are simultaneously born when a gamma ray is stopped, and simultaneously annihilated when they collide, leaving a gamma ray as residue. According to the famous theory of Dirac, these positive electrons or positrons are to be thought of as holes in space, left by certain ordinary or negative electrons, rather than as something self-existent. In general, then, it is as if physics abhorred the solitary particle, the somewhat that casts no shadow, that can show no opposite number, no sparring partner, no regional observer of like status. And small wonder, if the unobserved and unobservant physical body, unsociable, self-contained, and nowhere else but where it centrally lies, is a baseless myth and an absurdity. +

But does it follow from all this (my common sense persists) that the scientist, in order to have dealings with one particle (or set of particles) must scale himself down to another? And how on earth is such a reduction possible? The answer is brief and simple. Firstly the scientist already is -- on his own showing -- electrons, protons, and so on; secondly, electrons and protons and so on are -- it is his own working assumption -- regional effects and not central substances: there is no reason to assume anything at the core. Nobody could be better fitted to explore subatomic levels. † In fact, we have only to listen to him. "I am going to bombard nitrogen nuclei", we can imagine Rutherford saying; and presently a stream of alpha particles -- helium nuclei -- hurls itself at them. "Let us bombard uranium", says Otto Hahn, and neutrons advance to the attack. This is not, I think, loose speaking, but on the contrary one more instance of the rigour concealed in our common idiom. Many profound discoveries await the man who will only listen to what he says.

When Professor Gamow's Mr Tompkins explores the atom, he becomes an electron; * and how else, indeed, could he insinuate himself into this little world? If the atomic or nuclear physicist (note the title) is not normally so self-aware or so frank, that is only because he has made himself so very much at home in atomic circles, and learned to speak their language so fluently -- the language of mathematics, and in particular of quantum mechanics -- that his condition and whereabouts pass almost unnoticed: he is too well domiciled to perceive his domicile. But ° In 1934, Yukawa suggested that the cement which binds proton and neutron is a negatively charged particle shared between them. The meson, as this go-between particle is called, has the same charge as the electron, but many times its mass. Two years later, a 'heavy electron' of this sort was detected by observers of cosmic rays. × Pauli's principle says that not more than two electrons in an atom may simultaneously possess the same type of motion, in which case their spin is in opposite directions.



The birth of matter from energy is the birth of twins of (as it were) opposite sex: a gamma ray becomes a positive and a negative electron. Their death is the reversal of their birth.

+ It has often been pointed out that if two electrons A and B were to vanish simultaneously from one locality, and reappear simultaneously in another, it would be impossible to determine whether it was A or B which had become A1; and indeed there would be no sense in saying that either one of the first pair was identifiable with either one of the second. We know of nothing 'at the core' to serve as a distinguishing mark. † A physicist writes: "Our conceptions of the world are determined by the position man occupies in the universe, and our imagination must fail when we try to leave this position. Man's picture of the physical world and his views on causality would be entirely different if he were much larger or much smaller than he is." (K. Mendelssohn, What is Atomic Energy? p. 75.) But how could we possibly know this to be true unless our picture of the world, and our views on causality, were not sometimes quite unlike man's? Or if we were not sometimes forgetful of our place and stature?

* G. Gamow, Mr Tompkins Explores the Atom --- a well-known picturesque introduction to the subject. But such works are often, from the philosophical viewpoint, most revealing. For technical jargon, though indispensable in its place, is apt to draw a convenient veil across the basic assumptions of any study. I suggest (1) that no scientist can avoid using language which attributes life and mind to particles; (2) that we have no reason to suppose this a mere accident, and that a wholly 'nonanimistic' science is possible; (3) that the linguistic conditions of science should be taken as seriously as its other conditions, and not divorced from the 'natural world' science studies. I think that if we are more honest about science as it really is, we are likely to come round to the point of view which I advocate here.

in fact his calculations -- extraordinary alike for their precision in respect of the crowd's behaviour, and for their imprecision in respect of the individual's -- are unnecessarily mysterious (if not incredible and incomprehensible) when they are interpreted as essentially man-made, or foreign in origin to the levels to which they refer, or somehow thrust upon them from above. No; there is present in the universe, besides electrons and protons having certain mass and charge and velocity, <u>awareness</u> of electrons and protons having certain mass and charge and velocity; and I can see no justification for divorcing the facts from the awareness, by relegating it to a region where, by definition, electrons and protons are altogether out of place. Where common sense counts two, I count one; and the onus is on common sense to show the need for duplication.

The electron, then, does not blindly run. But to say that the physics which lends it eyes belongs exclusively to the electron's level would evidently be absurd. For physics itself, like its subject matter, declines simple location. It belongs there, at the base of the hierarchy, from here, from the everyday levels of common sense and everyday affairs. Instruments like the cyclotron and the Van de Graaff generator, and the mathematical procedure that goes with them, are the Jacob's ladder by which the physicist goes down to the basement floor of the universe, and all its rungs are necessary. In fact, the further we venture up or down from the human plane, the more we are likely to find that no plane is anything by itself or apart from the vertical supports of the whole structure. * To arrive at the nucleus, the physicist, must advance radially through all its regions, conforming to the rules of each in turn; but it is the tale of his journey as <u>a whole</u> which counts, which determines the outcome of his adventure. If I may change the figure once more, the arrowhead is no good without the shaft, though the shaft must itself fall short of the bull's-eye.

12. THE HORIZONTAL AND THE VERTICAL

In this chapter I have distinguished some of the main features which my observer finds in his descent from the level of man. Unavoidably, I have described them as if they were independent, real by themselves, selfsupporting. But it is necessary that I remind myself again and again that the autonomy of the separate layer is a fiction, and that the horizontal datum is only one cross-section of that ascending and descending process which unites all such cross-sections, maintaining them and making them what they are. ° Taken by themselves, the units of any one level are dead scraps of flesh, torn from the many-levelled living whole. A portrait of myself which does not take account of this totality is no portrait at all, but the diagram of an autopsy. The tree of knowledge -- of knowledge about my nature -- springs from the seed of nothingness at the centre, and thrusts its branches into the furthermost regions; but branches, trunk, and seed are one. The innumerable observers who compose it are yet one observer. Moreover there is a sense in which this ubiquitous observer is not, ultimately, other than what he observes.

But here I must be more specific. Inevitably, science is departmen-

* When we say that a thing changes, we imply that we travel through all its regions from here to the centre, noting in each region concomitant changes; otherwise, if the change observable here is not supported by linked changes observable in nearer regions, then it is a mere appearance --for example, what we call an atmospheric effect. In this and a score of other ways we <u>mean</u> the vertical or hierarchical system without realizing it.

° There is all the difference between our being used by this two-way process, and our intelligent participation. Thus the Tao expert of the 3rd century B.C. --- "Every single thing both becomes and debecomes, both processes being to and fro in the unity of mutual interpenetration. Only the man of all-embracing intelligence knows this unity of mutual interpenetration. Because he has this intelligence, he cannot be made use of but takes up his abode in its common functioning." <u>Chuang Tzu Book</u>, II. tal, but process is interdepartmental. Science is horizontally divided, but process is vertical. \times It follows that, in this inquiry into my nature, I must cut through the strata of the sciences, and seek the outlines of a science which shall unite them. To attempt less is to be unrealistic. For the actual flow of nature does not oblige us by confining itself to the channels laid down in our curricula --- it is a perennial spring gushing freely from the deepest to the highest level, and falling back as freely. Of course it would be foolish to object to the horizontal procedure of the special sciences -- only so can the data be collected for the Science of the vertical -- provided we recognize that the grain of nature runs the other way. It is not enough to make a cross-section here and a cross-section there; nor is it enough to make an unlimited number of them, setting them side by side so that their similarities and differences may stand out clearly. The vertical continuity and flow must be captured.

It is such a hierarchical science that I must seek if I would know what I really am. For my nature is not to be discovered in one of my regions and at a particular range --- there is no unique viewpoint revealing the genuine me, while the rest reveal too much or too little. ° Nor is it to be discovered in all my regions and at all ranges: a gallery of pictures, even a gallery of countless masterpieces, would not do me justice. Rather it is to be found in the motion picture of which they are the stills. An infinite host of infinitely observant observers, stationed throughout every region and sub-region of me, would hardly do. If the inquirer desires to know what it takes to be a man, he must ascend and descend like the angels of Jacob's ladder, so that he may follow -- or rather share -- the two-directional flux which is man's real life.

All this is vague. I conclude this chapter, therefore, with a section illustrating the kind of hierarchical approach I have in mind.

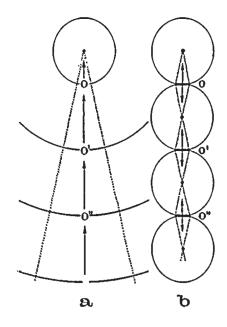
13. <u>VERTICAL AND HORIZONTAL MODES OF DEVELOPMENT</u>

I develop in two ways --- (a) the vertical, when my observer recedes, and (b), the horizontal, when he keeps to the same distance, but devotes part of his attention to a second object, thus linking me to it. The characteristic pattern of (a) is a widening system of concentric circles; of (b), a lengthening system of contiguous circles. Now each of my hierarchical levels has its own manner of development, in which (a) and (b) are variously proportioned; and the aim of hierarchical science should be, not merely to discover in detail the procedure, in terms of (a) and (b), at each level, but also to clarify the vertical connections. Here I can only suggest, tentatively, a programme.

(i) Atoms

Atomic physics provides, as I have shown, a notable example of the vertical mode of development. Here, if we think of the atom building up from lighter to heavier kinds, we find that new particles join forces with the atom, both at the centre and peripherally, in such a way that the original concentric system is expanded and not duplicated. At the same × A topical instance is the vertical process whereby my human activity in the production of this sentence issues in my subatomic activity amongst the particles of this hand, in such a way that these words are written. "Our experience of the physical actions of our bodies following the determinations of will," says Whitehead, suggests "the modification of molecules in the body as the result of the total pattern. It seems possible that there may be physical laws expressing the modification of the ultimate basic organisms when they form part of higher organisms.... We should expect transmission. In this way the modification of total pattern would transmit itself by means of a series of modifications of a descending series of parts, so that finally the modification of the cell changes its aspect in the molecule, --- or in some subtler entity." Science and the Modern World, p. 186

° "Biological regularities", writes Dr Joseph Needham, "may remain for ever irrefragable", but "they will, considered alone, remain for ever meaningless. Meaning can only be introduced into our knowledge of the world by the simultaneous investigation of all the levels of complexity and organization. Only in this way can we hope to understand how one is connected with the others. Only by understanding how one is connected with the others can we hope to see the meaningful integration of the evolving world in which organization has been achieving its ever new triumphs." The Philosophy of Alfred North Whitehead (Ed. Schilpp), p. 269.



time, subordinated to this vertical procedure, is the horizontal procedure whereby each electron shell is built up before the next is begun. Thus the retiring observer who looked only inwards towards the centre would miss an important part of the facts.

(ii) From Atoms to Molecules

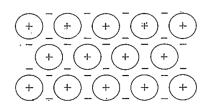
<u>The van der Waals' force</u>. Atoms are associated in a variety of ways, forming systems with two or more centres. For instance, the particles of liquids and solids are, as a rule, held together by a relatively feeble physical attraction known as the van der Waals' force. This force arises from the electrical attraction which the nucleus of one atom has for the electron shells of the next atom --- an attraction which is not quite nullified by the repulsive forces acting between the atoms' respective nuclei, and between their respective electron systems. There is some deformation of the atom's shape here, but its chemical properties remain the same. In terms of the regional schema, the observer of one nucleus grants it a rudimentary kind of extension by paying some attention to adjacent nuclei.

<u>Metallic bonds</u>. A lump of metal consists of a lattice of atoms whose outer electrons, instead of being firmly held, are free to drift throughout the mass. Attracted by all the nuclei they come across, they owe a kind of plural allegiance; and it is as a corps of travelling observers that they hold their nuclei very tightly together.

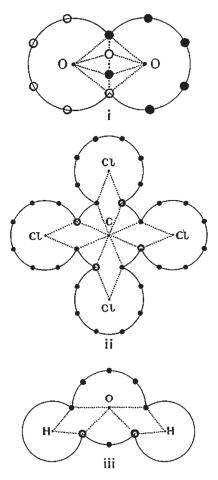
<u>Electro-valent bonds</u>. In this case, the peripheral electron (or electrons) of an atom whose outside shell has just begun to form, forsakes it for a second atom which needs this electron to complete its own outside shell. The result is that the denuded atom, which is now a positive ion, is attracted to the augmented atom, which is a negative ion. Though the atoms do not mingle, there is true molecular union, and the resulting particle has chemical properties which are different from those of either of its constituent atoms. Growth of this kind occurs when the electron-observer of one system turns his attention to another, yet without altogether ignoring the first.

<u>Co-valent bonds</u>. In many ways the most effective procedure of all is for the electron-observer (instead of drifting from one nucleus-object to another and another, or shifting to just one other) to recognize simultaneously a pair of nuclei, and as it were to look, Janus-like, both ahead and behind. After this manner co-valent bonds are established, whereby atoms so pool electrons that their outer shells are completed to the number of eight, or two in the case of hydrogen. The result of this truly cooperative enterprise is again molecular union, but of a peculiarly close and fertile kind; yielding innumerable substances, each with unique chemical properties. Molecules formed in this way, and particularly those containing carbon atoms, are capable of extension till they reach very great size and complexity; and it is to these giant molecules that the cell owes most of the characteristics associated with life.

<u>Mixed links</u>. Here, then, are four ways in which electrons are able, by extending their membership from one concentric system to another, to bring about the more or less intimate union of atoms; and two of these



Metallic Bonds



<u>Co-valent Bonds</u>. Schematic diagrams of molecules of (i) oxygen, (ii) carbon tetrachloride, (iii) water. I have added the dotted lines to suggest the 'double allegiance' of the shared electrons.

ways give rise to molecules which belong to a new hierarchical order. But it should be noted that these four links are not mutually exclusive: van der Waals' forces may be associated with either co-valent or electrovalent bonds, and co-valent and electro-valent bonds may be combined.

(iii) The Cell

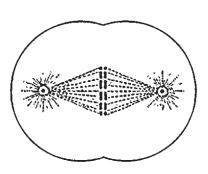
The life-history of the typical animal cell illustrates beautifully both the horizontal and the vertical modes of development. When a pair of gametes or sex-cells unite to form the fertilized egg-cell of a new organism, their nuclei merge: two independent systems become a single concentric system. And as the cell grows, this concentric pattern is preserved --- up to a certain limit of size. Thereafter, another mode of growth -- the horizontal -- supervenes. The cell becomes two-centred, and its nuclear material finds itself at the common boundary of two systems, both of which it must recognize. But this ambiguous situation does not last long: it is as if the two-faced regional observer, placed midway between the two centres, is obliged to project his content upon both, with the result that each acquires a nucleus of its own, and becomes independent of the other. The cell has grown, not, like an atom or a molecule, by annexing another, but by halving itself --- and doubling itself. (And certain crude anticipations of this method are already to be found amongst the cell's particles, some of which add to themselves molecules till they reach a certain critical size, when they divide.)

(iv) The Metazoon

The two modes of growth which I call horizontal and vertical, correspond approximately to what are often known at biological levels as aggregation and individuation. The first denotes the multiplication of units of the same order, the second their coming together as one system whose members have surrendered much of their self-sufficiency. Thus the animal body is composed of many layers of cells, each of which, alike in its structure and functioning, refers beyond itself to the greater whole which it serves. It is as if all acknowledge a common centre; yet that centre is to be found in every cell, each of which may be looked upon as the one whom all the rest serve, as well as the specialized servant of all. The animal, then, grows by 'vertical' individuation following upon 'horizontal' aggregation; but once more the limit is soon reached, and the only way to pass it is by the 'horizontal' method of reproducing one's own kind --- by the production and recognition of new centres, instead of by the accumulation of more material around this centre. The observer now has one eye on me, and the other on my child.

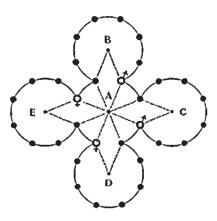
(v) Society

Much of the foregoing is still more elaborately exemplified in human society, which is sometimes looked upon as an aggregate of separate self-centred beings, living together for mutual convenience, and at other times as a living and organic whole of which all are members. * Obviously in the growth of society the two modes of development -the horizontal mode whereby observing unit is added, in linear fashion, to observing unit, and the vertical mode whereby each unit observes in its form and behaviour the requirements of the whole -- obviously,



A stage in the mitotic division of an animal cell (schematic). The chromosomes comprising the equatorial plate are visibly linked on either side, by means of the nuclear spindle, to the centrosphere.

* Certain broad social laws regulate all hierarchical levels, while their detailed application varies from level to level. Problems of social relationships, which are over-complex and obscure at middle levels, are simplified and clarified at very high and very low levels. Wherefore it was fitting that the 'social psychology' of the Trinity should precede and prepare for that of man. Again, Olaf Stapledon, in his Death into Life, very properly goes to the opposite pole of the hierarchy -- to electrons -- for help in his imaginative description of the after-life. He assimilates the indistinct electron in the atom to the spirit dissolved in a corporate being, and the free electron to the same spirit regaining independence. The atom-binding electron is assimilated to the spirit that helps to unite two corporate beings, by its membership of them both.



<u>Plural membership</u>. The two sons of family A are married to daughters of families B and C respectively; the two daughters are similarly married into families D and E. Thus the family circle A is made up to eight, each of which belongs, whether by marriage or origin, to one other family. And thus the five families are united by marriage. And it is no mere coincidence (and no fake either) that the diagram would do equally well for a molecule of carbon tetrachloride! I say, these two are inextricably bound up together: they alternate, and they are two ways of taking the one set of facts. Each member of an organization -- the family circle, club, church, etc. -- formed for a certain purpose, belongs also to other organizations: he is not content to look only one way, to belong to only one circle, and to observe only one set of rules. And it is this plurality of membership, this recognition by observers of many centres within society, that knits it together into true whole --- this, and conscious loyalty to the whole itself. Once more, the vertical mode depends upon the horizontal, and there is no ascent to the new level without much preparation at the old. $^{\circ}$

(vi) Conclusion

Everything happens, it seems, as if my receding observer (if he is really intent on seeing the whole picture and how it is built up) must, as he comes to each new region, pause to look over his shoulder. From time to time he needs to recognize, and to attribute what he experiences to, a <u>plurality</u> of centres. For I cannot develop from one stage to the next while preserving intact my concentric pattern, or by the vertical method alone. In other words, at no level can I take my equals and use them as my step-ladder to a higher level; unless I am prepared to be so used by them. Before they form part of my concentric schema, I have to recognize them as centres altogether independent of me, separate and inviolable: we are no more capable of merging than are a row of beads on a thread. Aggregation must precede individuation, horizontal growth prepare the way for the vertical, two-directional observation alternate with one-directional. Indeed it may be said that genuine hierarchical growth is the result of concern for others at this level, rather than of anxiety to gain the next for oneself.

° It may be noted here that, as a rule, though the lower in the hierarchy is the basis of the higher, it is completed only in the higher. Thus the inner electron shells are not in all cases filled to capacity until the outer ones are partly filled; again, the transuranic elements (plutonium and the rest) had to wait for man. Thus the molecule rises to great complexity and variety only under the guidance of the cell, and later of man. Thus in many ways the cell which is a member of an animal's body is capable of performances impossible for the solitary cell. Thus man-in-society is commonly, qua individual organism, better adapted and more successful biologically, than he could ever be on his own.

CHAPTER V

THE CLOSE VIEW, CONTINUED.

Suppose a man had moulded all sorts of figures out of gold, and were unceasingly to remould each into all the rest: then, if you should point to one of them and ask what it was, much the safest answer in respect of truth would be to say gold', and never to speak of a triangle or any of the other figures.....Now the same thing must be said of that nature which receives all bodies. It must be called always the same; for it never departs at all from its own character..... By nature it is there as a matrix for everything, changed and diversified by the things which enter it, and on their account it appears to have different qualities at different times.

Plato, Timaeus, 50.

He had First Matter seen undressed: He took her naked, all alone, Before one rag of Form was on.

Butler, Hudibras I. 1.

That the absolute Substance groundlessly is and is not, that is for us the wonder of all wonders.

Edouard von Hartmann, Kategorienlehre, p. 528.

Except for the point, the still point, There would be no dance, and there is only the dance.

T.S. Eliot, 'Burnt Norton'.

Look within; within is the fountain of all good. Such a fountain where springing waters can never fail, so thou dig still deeper and deeper.

Marcus Aurelius, Meditations, VII. 31.

All around him Patmos lies Who hath spirit-gifted eyes, Who his happy sight can suit To the great and the minute.

E. M. Thomas, 'Patmos'.

Dead forms a never-dying life do shroud; A boundless sea lies in a little cloud.

Robert Southwell, 'Of the Blessed Sacrament of the Altar'

When God to all his paladins By his own splendour swore To make a fairer face than heaven, Of dust and nothing more.

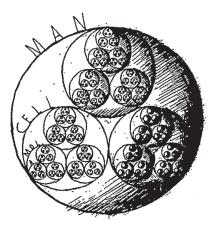
G. K. Chesterton, 'In Praise of Dust'.

Matter cannot be divided into parts of parts to infinity in respect of its spatial dimensions, or of that dimension which appears as temporal. And matter, as usually defined, ... has no other dimensions. It cannot therefore be divided into parts of parts to infinity. And therefore it cannot exist

J. M. E. McTaggart, The Nature of Existence, 362.

1. THE PHYSICAL BASIS.

I appear to be a man. Science is not satisfied, and on closer inspection I turn out to be a society of animals. But these are really molecules; and molecules are, in fact, atoms; and atoms have been reduced to systems of electrons and protons. What, then, are electrons and protons? Are they, in their turn, systems of something else? My observer's quest is the stuff I am composed of, but so far he has found only structure and behaviour in each region. The structure's building materials, and the thing that behaves, have a way of proving to be, in the region below, a struc-



How many boxes are there in the nest of boxes which I am, and what does the smallest contain --- if there is a smallest? "Only the kernel of every object nourishes; Where is he who tears off the husks for you and me?"

Whitman, 'Song of the Open Road'.

ture of even finer materials and a behaviour of even tinier agents. Thus, in his search for my physical substance, the investigator is always being referred downwards. Does this reference come to its natural end at the level of electrons and protons?

Science is an enterprise of yesterday and today, and there is no telling what deeper levels millenniums of research might not uncover in me. The question is: what, if any, are the features of the space between my electron-observer and the centre upon which he projects his content? What would an observer, who could jettison enough to perform the journey, register in this intervening region? Is it, perhaps, uninhabitable by even the minutest observers, and altogether uninfluenced by me, and consequently as good as non-existent? Quite possibly, future scientists will get near enough to me to find a world (it would be a poverty-stricken one) in a proton. Indeed it is conceivable, as Anaxagoras and Leibniz believed, that matter is infinitely divisible, and there are worlds within worlds without limit. + Modern physics, however, suggests that this is not so. Sooner or later, it seems, my observer must come to the end of his search, having found the core of me. What is this core likely to be?

Is it continuous, or broken into units? If the former, is the continuum featureless? If the latter, are the units distinguishable? How can unity give birth to plurality, and sameness arrive at variety? Such questions have occupied philosophers of every age, from Thales, Anaximander, and Heraclitus (who respectively reduced all things to 'water', 'infinite substance, and 'fire'), from Sankara (with his finest matter which is Brahman) \times and the alchemists (with their quintessence), to Spinoza (with his one substance) °, Haeckel (with his world-ether) * Spencer (with his incoherent homogeneity) † Ostwald (with his universal energy) •, Sam- ϕ and Russell \ddagger (with their minimal events). Most who have considered the question have held that there can be no change without that which does not change, and that there must be, as a pre-condition of motion, a thing which moves. Few go so far as Parmenides in one direction and deny change altogether, or as Bergson \otimes in the other and declare that there is only change. And few find it possible to do without a one that is the ground of the many? ¤ "I understand Substance," says Spinoza, "to be that which is in itself and is conceived through itself: I mean that, the conception of which does not depend on the conception of another thing from which it must be formed."

But the question is whether such a substance (whatever name it bears) is, when found or postulated, really worth having. It cannot be its irreducible self unless it is featureless, and it cannot impart information because it is featureless. It is wholly sterile and unprofitable. In short, the philosopher, having postulated a substance to explain the world, proceeds to rob it of every quality that might give it hermeneutic value; leaving only bare existence; he then has on his hands the problem of explaining the difference between existence devoid of qualities, and non-existence.

+ Anaxagoras: 'Nor is there a least of what is small, but there is always a smaller; for it cannot be that what is should cease to be by being cut.' (Burnet, <u>Early Greek</u> <u>Philosophy</u>, p. 258).

Leibniz: 'Each portion of matter is not only infinitely divisiblebut is also actually subdivided, without limit.' (<u>Monadology</u>, 65).

The question of the continuity of the physical substratum is linked with the question of the divisibility of space. Important modern discussions are: Bergson, <u>Creative Evolution, passim</u>, and Bertrand Russell, <u>Our Knowledge of the External</u> <u>World</u>, pp. 132 ff.

- × Max Müller, Indian Philosophy, p. 204.
- ° <u>Ethics</u>, I.
- * The Riddle of the Universe, XII.
- † First Principles, 127.
- Natural Philosophy,
- ⊕ Space, Time and Deity.

 φ E.g., <u>Science and the Modern World</u>, pp. 87, 129.

‡ E.g., Outline of Philosophy, p. 287 ff.

⊗ <u>Op. cit</u>., p. 317.

¤ Many, including Goethe, have held that matter is continuous. Today, however, continuity is found rather in the spatiotemporal field, of which matter is (so to say) a local crumpling.

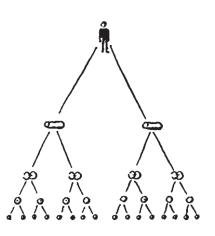
◎ <u>Ethics</u>, I.

2. THE CENTRE OF THE REGIONS: ITS UNITY AND EMPTINESS.

My observer finds that, while he is still short of the centre and there is little prospect of his arriving there, his journey has nevertheless revealed tendencies which hint at what lies at the end of it. First, there is the fact that at each successive lower level the number of the units increases and their variety decreases. Two of my liver cells are in many ways more alike than two men of the same profession. Two of my carbon atoms are probably far more alike than any two of my cells, and electrons are supposed to be all precisely similar. However that may be, there is no doubt that the trend is towards ever greater similarity between ever more numerous units. + Since any remaining differences would only call for further analysis, × the ultimate units are presumably so alike as to be indistinguishable even to the ideal scientist. But in that event what is left to separate them? Are they not one, according to the principle of the identity of indiscernibles? *

Such a conclusion is supported by the second clue noted by my observer: the smaller units are, in actuality, anything but small. It appears easy enough to point to the boundaries of my human body, or of a cell of mine, but the physicist's units refuse to be so confined. They are worldwide, though centred here; each electron is said to be an organization of electro-magnetic tensions throughout the whole of space. My observer seems to be approaching a region where overlapping units finally merge into an undifferentiated field, and the many, at the limit of their multiplicity, melt into the one.

But the matter is finally confirmed and settled by the observer who is already at the goal and centre, and who indeed has never left it --- myself. As an experiencing subject, I am not many, but one. The millions of lives lived in me are one life. The millions of millions of individual molecules and atoms and electrons -- worlds within worlds of inconceivable complexity -- emerge as the simple fact: myself. At the centre there is unity. But not the unity of some mysterious substantial self. As Hume ° showed once and for all, I may search forever in my experience without finding the 'I' who has the experience. The unity here is the unity of the empty receptacle and its contents. "God, who truly knows me, knows that I am nothing", says Sir Thomas Browne. † I am a vacancy for a world, accommodation which is in itself unreal. Thus the view out and the view in agree in this, that at the centre the many are one, and the one is nothing in itself. "The thing in itself is nothing." • Thus far, the observer looking at the centre, and myself looking out from it, are in agreement. What he does not see is the expansion -- the explosion -- of the point. "I become a transparent eyeball; I am nothing; I see all." ϕ There is an old Persian parable of a contest between certain Greek and Chinese painters: while the Chinese painted exquisitely, the Greeks were content merely to polish the surfaces allotted to them, till they reflected the paintings of the Chinese and all the world besides. \oplus So, by following the negative path to the central nothingness, they arrived at all things. "Do but extract from the corpulency of bodies," (I am quoting Page 106



+ Leibniz believed that "there are never two beings which are perfectly alike and in which it is not possible to find an internal difference". (Fourth Letter to Clarke.)

× As Meyerson points out, (<u>Explica-</u> <u>tion dans les Sciences</u>, p. 205) scientific explanation is ideally the reduction of differences to seeming differences between underlying identities.

* See James Ward, <u>Realm of Ends</u>, pp.195 ff., on the unattainable lower limit of pluralism --- indeterminate being, as yet undifferentiated into individuals. Cf. Eddington, <u>The Expanding Universe</u>, II. 6, on the subject of a homogeneous medium as a basis of physical phenomena.

Substance is one of the concepts which logical positivists dismiss -- I believe rightly -- as metaphysical nonsense. Mr Ayer writes, "It happens to be the case that we cannot, in our language, refer to the sensible properties of a thing without introducing a word or phrase which appears to stand for the thing itself as opposed to anything which may be said about it." And so we mistakenly come to think of the thing as a 'simple entity' which cannot be defined in terms of the totality of its appearances. Language, Truth and Logic, p. 42; cf. p. 126 for a similar criticism of the self.

^o "For my part, when I enter most intimately into what I call <u>myself</u>, I always stumble on some particular perception or other, of heat or cold, light or shade, love or hatred, pain or pleasure. I never catch <u>myself</u> at any time without a perception, and never can observe anything but the perception." <u>Treatise of Human Nature</u>, I. iv. 6.

<u>† Religio Medici</u>, II. 4.

- Edward Caird, <u>Hegel</u>, p. 162.
- φ Emerson, 'Nature' (1836).

 \oplus This story appears in Al Ghazzali's <u>Ihya</u>, and again in Jalaluddin's <u>Masnavi</u>.

Browne again) \otimes "or resolve things beyond their first matter, and you discover the habitation of Angels..... the ubiquitary and omnipresent essence of God."

And after all, this void at the centre is what might have been expected: I must have room to be myself, or to be anything whatever. I am nothing if not regional: take away my space, and you abolish me. The centre of my regions is that one spot where, because I am given no elbow room, I am crowded out of existence. It is a very serious thing for me to shrink, "for it might end, you know," said Alice to herself, "in my going out altogether, like a candle." In fact it would so end, if the tables were not turned at the last moment. When all is lost, then all is saved. No-space, viewed the other way, is all-space. +

3. THE CENTRE AND CAUSATION.

The centre is no merely theoretical limit to the spell I cast over space. To say that it is necessary and does work is an understatement; in fact, there are plenty of good reasons why my observer should regard it as his goal --- the very core of me. Two of them concern me here. First, to this centre converges all that which acts upon me. I cannot be got at any other way: the train of events which does not arrive at this terminus is for me non-existent. Second, it is from this centre that I act. I am powerless to initiate directly a motion in the region of my cells, or molecules, or manhood: the disturbance must start at the centre and work its way through each region in turn, developing as it advances.

Here at the centre I really do act, and really am acted upon. \times Here I keep house; here is my innermost sanctum --- the rest is only portico. And I stay at home: those who think they have found me out of doors, wandering in other regions, are mistaken. They see the ghosts of me, manifestations infinite in number and variety, but by themselves ineffectual. They see the appearances of that central reality which, though changeless, is yet the initiator and subject of change; which, though one, is yet the begetter of endless multiplicity; which, though nothing, is yet the seed and the container of all things.

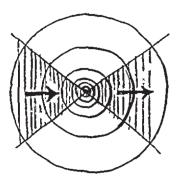
Here I act --- but how? I push this paper-weight. Because it is a cylinder, it rolls across the desk. Yet the paper-weight is itself and I am myself. We are two different things. Nobody could confuse us; there is no secret understanding between us; what is mine is my own, and not to be confused with what belongs to this piece of metal. How, then, do I move it? How can 'motion' leave me, jumping in some unimaginable fashion from the tips of my fingers, and settling in the paper-weight? And how can the paper-weight, which has now rolled back again, in its turn make my hand a present of some of its motion? ° As Hume showed, this bandying about of states, this transition from cause to effect, is not transparently natural: it is only common. * I suffer from the delusion that to witness a certain effect proceed from certain causes a hundred times is to understand how and why it does so, and to discover some underlying

⊗ <u>Op. cit.</u>, I, 35.

There is an amusing yet highly significant anticlimax in Wu Ch 'engen's <u>Monkey</u> (p. 287): Tripitaka, having at last arrived at Buddha's Holy Mountain after ten years of incredibly hazardous travel, to fetch the sacred scriptures, is presented with blank scrolls. Relenting, Buddha says, "As a matter of fact, it is such blank scrolls as these that are the true scriptures. But I quite see that the people of China are too foolish and ignorant to believe this, so there is nothing for it but to give them copies with some writing on."

Cf. Arthur Waley's translation of a poem on the wall of a priest's cell (c. 828 A.D.): "When there are no Scriptures, then the Doctrine is sound." (<u>170 Chinese Poems</u>, p. 159)

+ "Here the figures, here the colours, here all the images of every part of the universe are contracted to a point. O what point is so marvellous!..... These are the miracles.....forms already lost, mingled together in so small a space, it can recreate and reconstitute by dilation." <u>Leonardo da</u> <u>Vinci's Notebooks</u> (trans. McCurdy), pp. 117, 118.



× On the immediacy of interaction between 'bare monads' see Ward, <u>Realm of</u> <u>Ends</u>, p. 255.ff.

To Parmenides the idea of change was unthinkable: how can a thing arise out of that which is different from itself? Herbart held a similar view: either change is internally caused, or externally caused, or uncaused --- and none of the three makes sense.

° Cf. Paulson, <u>Introduction to Philosophy</u>, pp. 211. ff.

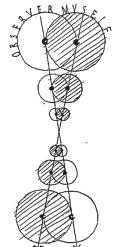
* Causal efficiency (according to Hume) exists not in the objects but in the mind. When I observe a relation between two objects to be constantly repeated, I get the idea of the one causing the other. "For, after a frequent repetition, I find that, upon the appearance of one of the objects, the mind is <u>determined</u> by custom to consider its usual attendant, and to consider it in a stronger light upon account of its relation to the first object. It is this impression, then, or <u>determination</u>, which affords me the idea of necessity." <u>Treatise of Human</u> <u>Nature</u>, I. iii. 14. necessity. I think I know why my paper-weight moves when I push it, but in fact I know no reason why it should not pass through my hand, or explode, or turn into a hundred little paper-weights, or even start a conversation with me on the subject of what it should do. I cannot explain how any effect occurs, much less why a particular effect should regularly follow a particular cause.

Causation is a profound mystery, nevertheless it is a mystery that finds its place in the general schema. Two circles touch, but however great their diameters, the area of contact is infinitely small: the place where they are one is the place where they are nothing. If my paperweight and I act on each other, it is because we meet on the common ground of our nothingness. + We do more than agree: we sink our differences --- or rather we sink, leaving our differences floating, till we reach that lowest level of all where we are identical. × At the centre is no mine and thine, no this and that, no here and there: my paper-weight and I are quite indistinguishable. So it is with my observer: he can only get at me by approaching, but he comes on my terms. When he gets to my cell-region, I refuse to recognize him as anything more than cells; in my molecule region he is only molecules; at the centre he is nothing. I have abolished him, as he has abolished me. Nothing can touch me (perhaps I should say: only nothing can touch me) because to act upon me, or to be acted upon by me, is to come here and share my nothingness. * All action is stooping to conquer, where stooping is absolute abasement. However little we have in common, an individual can always get at me, and I can always get back at him, provided we rid ourselves of every personal peculiarity that stands between us. Whether our commerce is such that the one touches the other, or thinks of him; or eats him, the same rule applies: the self has to digest the not-self, breaking it down utterly, before it can be assimilated.

The Centre ϕ is all-important. Everything depends upon --- nothing! But (to put the matter crudely) there are two varieties of nothing: the nothing that is prior to and independent of something, and the nothing that accompanies and is contrasted with something. Of these the first is virtually meaningless, while the second borrows so much definition from its environment that (like a hole in a sock) it is a very definite something. The Centre belongs to the second category. It is very far from being a mere nothing. It is at once inseparable from, and indispensable to, its system of regions. It is as far from being nothing to me as the still centre of the turning wheel is unnecessary to its revolutions. The worldwide globular organism which I am, has no organ so vital as the empty core. "Thirty spokes together make one wheel; and they fit into 'nothing' (at the centre): herein lies the usefulness of a carriage....... Thus it is that, while it must be taken to be advantageous to have something there, it must also be taken as useful to have 'nothing' there." $^{\circ}$

This central void, out of which springs all I do and into which flows all that is done to me, this ultimate ground of my being, is the most fascinating of mysteries. It is what William Law speaks of as "a root or depth of thee from whence all these faculties come forth, as lines from a centre, or as branches from the body of the tree." It lies at the heart of the Buddhist mandalas. × It is the undifferentiated and unlimited 'principle'

+ The view put forward here is a variant of Lotze's doctrine, expounded in his <u>Micro-</u><u>cosmus</u>, that interaction is only possible if the interacting elements are phases of some underlying substance. Cf. R. B. Perry, <u>Philosophy of the Recent Past</u>, p. 90, and Ward, <u>Realm of Ends</u>, pp. 215 ff. × "When you attain unto the colourlessness which you had originally, Moses and Pharaoh are at peace with one another." Rumi.



* In other words, there is no contact because, at the place and the moment of contact, the contacting bodies vanish. This lines up with modern scientific views on the subject of contact between material particles. Cf. Bertrand Russell, <u>A B C of</u> <u>Relativity</u>, pp.7, 12, 197. φ From here onwards, the Centre, which

has now been sufficiently defined to rank as a special technical term, has a capital C, to distinguish it from centres in general. ° Tao Te Ching, XI. The ancient Taoist literature is full of passages that are relevant here. E.g., the following further extracts from the same work: --- "The sage abides by actionless activity." "The Tao is hollow: use it and there is no overflowing. How fathomless it is!" "Are you able ... to become an (unself-conscious) babe? Are you able, as you cleanse the Mysterious Mirror, to leave no traces of self-consciousness?" "Go on to the limit of emptiness: Hold fast to the stability of stillness." "Home to the root, home, I affirm, to the stillness." \times "In the middle of the square inch dwells the splendour. In the purple hall of the city of jade dwells the god of utmost emptiness and life. The Confucians call it the centre of emptiness; the Buddhists, the terrace of life; the Taoists, the ancestral land, or the yellow castle, or the dark pass, or the space of former Heaven.... It is as if, in the middle of one's being, there were a nonbeing 'The centre in the midst of conditions,' is a very fine expression. The centre is omnipresent; everything is contained in it; it is connected with the release of the whole process of creation." The Secret of the Golden Flower, p. 24, 34, 39.

of Chuang Chou. But the literature of the Centre is immense: in all ages and countries man has found nothing else so well worth searching for. The name it is known by varies with the epoch and the background of the thinker. For Parmenides, it is the unchanging, unmoving, unbroken Uniformity; for Anaximander, it is the Unlimited; for Plato, it is the Receptacle, "the nurse of all becoming"; for Aristotle, it is prime matter; for the alchemists, the Philosopher's Stone; for Bruno, the universal ether which is itself the soul of the world; for Leibniz, naked, slumbering monads; for Boehme, the Ungrund; for a recent thinker, "the yawning abyss of non-being in his (man's) own nature". + In its varied aspects, it is the Atman of the Upanishads; the Synteresis of Alexander of Hales, Bonaventura, Albertus Magnus, and St Thomas; the Fünkelein of Eckhart; ×the uncreated light, the scintilla, the divine spark, of a number of mystics; the Smallness or Rarity of the Pseudo-Dionysius. ("And Smallness, or Rarity, is ascribed to God's Nature because He is outside all solidity and distance and penetrates all things without let or hindrance. Indeed, Smallness is the elementary Cause of all things; for you will never find any part of the world but participates in that quality of smallness..... This Smallness is without Quantity or Quality; it is Irrepressible, Infinite, Unlimited, and, while comprehending all things, is Itself Incomprehensible.") ° I do not for a moment equate all these very diverse notions. Yet they are all, I think, aimed at the Centre. And each of them, in so far as it is a description of something, is bound to be wide of the mark.

(Upon this Centre the mystery of causation is focused † --- whether it be a question of mind acting on body, of body on mind, of body on body, or of mind on mind. And since the Centre (as I shall argue in a later chapter) is also in some sense the Whole, the doctrine I am advocating here is essentially the same as the occasionalism of Geulincx and Malebranche. * God is the real and efficient cause of every event, and the stimulation of my eye is not the cause but the occasion of my seeing, which God makes to occur in me.)

4. IS ACTION AT A DISTANCE POSSIBLE?

To act upon me is (at least at the spear-head of the action) to become me. There is no action by mere contact -- whatever contact may mean -- and <u>a fortiori</u> there is no action at a distance.

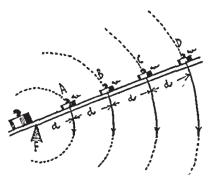
But this is in flat contradiction (common sense points out) to the earlier conclusions of this book. I have repeatedly stated that the secret of power is distance, mutual range, and the more of it the better. If I would act upon a man and be acted upon by him, I must retire to the place where he is human. What is given is the <u>fact</u> of our activity: its <u>quality</u> is what we make it by our interval, by the leverage we can apply. The longer the lever-arm, the greater the mechanical advantage. ‡ Is not this action at a distance; or, more precisely, action by overlapping, where Centre does not meet Centre, but the Centre of one party coincides with the circumference of the other? + Nicolas Berdyaev, <u>The Destiny of Man</u>, p. 54.

× "There is in the soul", says Eckhart, "something which is above the soul, Divine, simple, a pure nothing; rather nameless than named, rather unknown than known. ... Sometimes I have called it a power, sometimes an uncreated light, and sometimes a Divine spark." Cf. the "centre of the soul" of Plotinus -- <u>Enneads</u>, VI. ix. 8.

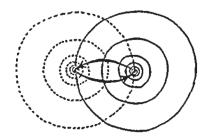
° Pseudo-Dionysius, <u>The Divine Names</u>, IX. 3.

† The realists who father the family of sense-data on a physical nucleus whose role is causal and not sensory (cf. Price, <u>Perception</u>, pp. 283 ff), and the phenomenalists who deny the need for such a hypothesis, are, I suggest, both right. For the Centre is at once nothing and something (in fact, ultimately, it is all things); and if it were merely nothing, or merely something, it would lack the causal efficacy which marks it.

* Descartes had suggested that the pineal gland was the medium that enabled mind and body to interact, but Geulincx and Malebranche make this work devolve upon God. In principle, both were right. For the Centre when looked at is nothing, but when looked out of is all. Causation is at once an affair of the infinitely small and the infinitely great.



[‡] The lever is a <u>regional</u> device: I am of more <u>moment</u> as I recede from the fulcrum (F) of my action --- when I am there (i.e., at the Centre) I am entirely ineffectual. The moment of the given weight <u>w</u> is nil at F, <u>wd</u> at A, <u>2wd</u> at B, <u>3wd</u> at C, and so on.



To get at a man, get away from him. This may well sound odd, for it leaves out half the story. However far I recede, my behaviour is always <u>towards</u> him; each of us acts in the other's direction. Each sets going from his own Centre a train of events that works outwards till it reaches the other's Centre: till they arrive, we are mutually insulated. It is as if each of us lit a fuse destined to explode a charge in the middle of the other's system of defences. Action at a distance is, in fact, delayed action. It is projective action from a Centre to a Centre.

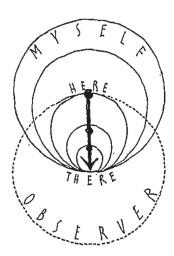
At the risk of further repetition, let me be quite clear about this. I am at my Centre where I am nothing, and my observer is at my circumference where I am a man. But we project what we register, each of us claiming to know what is in the other's place: my observer says I am a man at my Centre, and I say I am nothing at my circumference. Nor are we mistaken. Projection (as I have argued at length) is always effectual. Thus the spot where I am a man is there at the circumference <u>and</u> here at the Centre; and the Spot where I cease to be anything is here at the Centre <u>and</u> there at the circumference. Thanks to the potency of projection, it is as true to say that I am a man here breaking down to nothing there, in order to make way for my observer, as it is to say that I am nothing here building up to a man where my observer is, in order to oust him. After all, then, action by overlapping is not merely the action of a Centre upon a region, or of a region upon a Centre: it is action between Centres. Rather it is the actualization of their unity.

The secret of my power to act is, first, that Centres, though many, are one; and, second, that my Centre is not here alone, but potentially everywhere. I find it in my object. * Our interaction is nothing else than the now familiar projective-reflective game in which we exchange Centres and exchange the contents of Centres. It is that infinitely telescopic arm which, in one gesture, extracts being from the magician's hat of nonbeing, and puts it back.

5. A MODEL OF THE VERTICAL PROCESS.

The question is: how am I built up and demolished? Is it some ineffable virtue of the Centre, or some automatic peculiarity of the space that surrounds it, or some creative effort on the part of my observers, or some combination of these, which is the secret of my growth? The contents of my regions flourish exceedingly, till what was nothing becomes a man. What is the rationale of this development? +

Consider what has to be accounted for: not just the elaboration of more and more detail and greater contrast where before there was uniformity, but the arrival of entirely new qualities. The close view of me is of a world that is neither hot nor cold, of a universe without a whisper, without the palest tint, without the dawning of a thought, or a twinge of feeling. How does such a world -- too drab to be a nightmare, and too featureless to be drab -- give rise to a man and a man's world, to a world which is not only coloured and noisy and scented, but is terrify-



* That is to say, I do so to the degree that I realize what I am, to the degree that I am 'real'. We all fall short of this realization. William Law says: "All the disorder and corruption and malady of our nature lies in a certain fixedness of our own will, imagination, and desire, wherein we live to ourselves, are our own centre and circumference, act wholly from ourselves..." <u>Christian Regeneration</u> (Hobhouse, pp. 25-6). But, in the limit, complete selfcentredness means non-existence.

+ To be more precise, there are three main alternatives: I may attribute the hierarchy of qualities to (1) the Centre's potentiality, (2) 'emergence', or (3) the whole. To take an example of each: -- (1) In his famous Address to the British Association, Tyndall said, "Bruno ... declares that matter is not 'that mere empty capacity which philosophers have pictured her, but the universal mother who brings forth all things as the fruit of her womb' ... I discern in that matter which we... have hitherto covered with opprobrium, the promise and potency of all terrestrial life." (2) Lloyd Morgan maintains that there are "new and distinctive rules of the game at each stage of advance in emergent evolution", and that "no atom could say what must be the rules of the molecular game not yet in play". The hypothesis is: "Not there, till it comes". (Mind at the Crossways, p. 17) (3) In the Phaedo, (98), Plato looks for real causes in the intelligence of the whole, instead of in the efficacy of the part, and ridicules those who make "the causes to consist of air, ether, and water, and many other things equally absurd."

ingly rich in its beauty and ugliness, its good and its evil, its comedy and its tragedy? From what in electrons does this particular reference to them spring? How does the physicist's desire to study atoms emerge from atoms? Latimer was cells, and cells are primitive animals indifferent to moral considerations, yet Latimer's hand did not withdraw from the flame. Why?

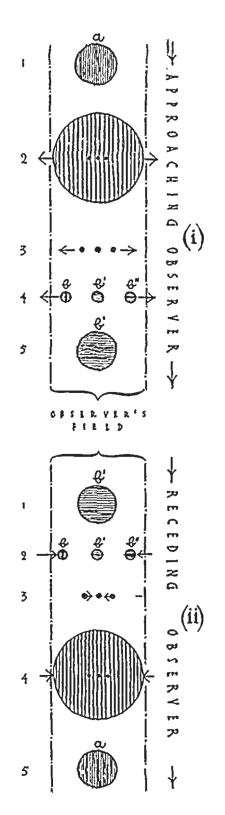
Perhaps my observer can help here. Supposing he approaches me, and reports, not particular features, but the general characteristics which he finds to be repeated in region after region. His field of vision contains a unit (a) of order A. At first it is undifferentiated, but as it grows signs of structure appear. This structure presently resolves itself into tiny but distinct parts of order B. Meantime unit (a) has swollen to such an extent that its boundaries fall outside the observer's field of vision: for him, (a) no longer exists. Its place is taken by the (b) units. These do three things: They grow bigger and bigger; they scatter as if they found one another to be repulsive, or as if they needed room for themselves; they reveal individual peculiarities. The units that were similar tiny objects are now dissimilar large objects, still swelling and withdrawing. But the observer can no longer take them all in, and he has to choose one to attend to. Having, more or less arbitrarily, selected (b'), he studies its behaviour. Everything happens as if it thrust all the others away to their destruction, so as to fill the world itself. In that case the aim is self-defeating, for once more the object shows signs of structure, and its boundaries pass beyond the field of vision. A new order supervenes......

My approaching observer's field of vision is a Procrustean bed on which I suffer successive amputations, but he has only to retire from me to restore me to wholeness. As soon as he increases his range, the behaviour of (b') is in every way reversed. Instead of swelling, it shrinks; instead of elbowing out its colleagues, it seems rather to draw them to itself; instead of accentuating the ways in which it differs from them, it becomes more and more like them. As before, the result is that (b') loses itself, but this time it is the higher order A which supervenes, instead of the lower order C.

The observations may be tabulated thus: --

- (i) Towards the Centre: the transition from level A to level B involves ---
- (1) the presence of unit (a) of order A;
- (2) the development of uniform parts, of order B, and the disappearance of (a);
- (3) their growth and mutual repulsion;
- (4) their differentiation into dissimilar units (b), (b'), (b").....
- (5) the ousting of the rest by (b').
- (ii) Away from the Centre: the transition from level B to level A involves ---
- (1) the presence of unit (b') of order B;
- (2) the introduction of differentiated units (b), (b").... of the same order B;
- (3) their shrinking and mutual attraction;
- (4) their loss of differentiation, and the emergence of unit (a);
- (5) their total disappearance into (a).

Such, according to my travelling observer, is the general pattern $^{\circ}$ of the process by which I am made and unmade. And I propose (seeing that he gets his information by taking part in the process itself) to take



° I say 'general pattern' because there are many variations of detail from level to level. Thus differentiation may appear early or late; and there may be a big interval, or none at all, between the disappearance of a unit of one grade, and the appearance of a unit of the next grade. his account seriously, subject to confirmation by such other evidence as may be had.

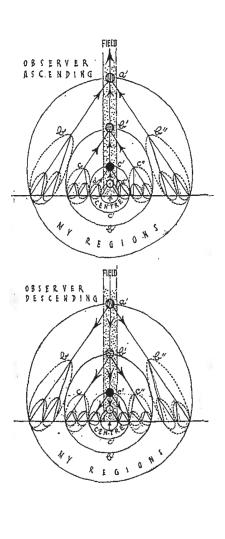
In fact, there is no lack of confirmation. First, note that the travelling observer's account exemplifies the 'law of the spindle' which the previous chapter postulated. Whether he retires or approaches, his object alternately grows and diminishes.

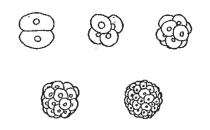
Second, note that the travelling observer's account exemplifies the laws of projection and of equality. As he retires from the object, he sees it conjure up from nowhere (in effect, he sees it project) others of equal status, become less unlike them, less and less distant from them, less and less 'self-assertive': in this instance, projection leads to the emergence of a higher order of things. On the other hand, as he approaches the object, he sees it project equals from itself, only to crowd them out and destroy them: this kind of projection leads to disintegration and the emergence of a lower order of things. Thus, to climb the ladder of being, it is necessary (I) to project equal units, which must be other, ab extra, given as from beyond the field, and very different in detail from oneself; (II) to withdraw the projection, realizing more and more their likeness to and unity with oneself; (III) to cease to project altogether, having reached identity with the object. To descend the ladder of being, it is necessary (I') to project equal units, which are at first mere extensions of oneself, ab intra, and relatively undifferentiated; (II') to increase the projection, realizing more and more their peculiarities, finding them more and more incompatible; (III') to over-project them, and so get rid of them altogether. Now this twofold 'vertical' account agrees remarkably well with what is found at each level. Here the projective-reflective mesh shows two contrary tendencies: first, to become finer, as projections are withdrawn, and second, to become coarser, as projections are increased. The first is the upward, anabolic, creative aspect of projection; the second is its downward, katabolic, destructive tendency.

Common sense asks for empirical details. Let my observer, therefore, in order to discover whether the horizontal scene resembles the vertical, come to a halt in the region B, where I am cells. Can he discover in their behaviour at this level hints of their twofold vertical behaviour, in the upward direction of A, and in the downward direction of C ?

Certainly he can, and the longer he looks the more evidence he finds. I begin as a single cell (a fertilized ovum) which projects from itself a number of very similar cells. As time goes on, however, the projected cells become more and more differentiated. It seems that, in the scramble for a living, they are obliged to become specialists in body and in mode of life. What is beyond doubt is that the organism, which began as one, is now a crowd of potentially ruthless enemies. When internecine warfare increases beyond a certain limit (as it does in a number of diseases) the result is death, the supersession of cells altogether, and the descent to a lower level of being.

It is not difficult to see that this horizontal picture is half the vertical picture (i.e., the centripetal half) over again. The essential stages -- projection from oneself, differentiation, repulsion or over-projection, and the shift to a lower plane -- are repeated. But there is still the second or





Early stages in the development of the embryo, before the differentiation of cells clearly begins.

centripetal half of the vertical picture, which is precisely the contrary of the first half. Does this also manifest horizontally?

Contradiction, which is of the essence of the vertical process, is not absent from its cross-sections. My cells are many; they are highly specialized; they are anything but altruistic. Yet if they had been a company of saints and martyrs, inspired by a single ideal of mutual service and self-abnegation, they could scarcely have done better. Their great differences interlock in a unity that is all the firmer for being heterogeneous. That unity is of a higher order --- the human. What is this but the second aspect of the vertical process, with the stages:- discovery of the differentiated other, the overcoming of this otherness and this difference, merging, and the shift to a higher level? +

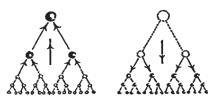
Finally, there is the (by now rather obvious) instance of man. The life of society consists in a constant dying and regeneration, both of which are indispensable. The former is evident whenever I treat other men and women as instruments of mine, as projections of my personality and instruments of my expansion; it is evident when, having discovered that they are, after all, different from myself and have other intentions than my welfare, I project them still further from myself, and seek to grow without their aid. That way lies my own death, no less than theirs. The opposite way -- the way of renewal and creation -- is to discover in men and women what is other than myself, unique, delightful, valuable on its own account; and then to realize the paradox that to enjoy these manifold virtues in others is truly to possess them myself. The initial otherness of the object is the measure of its final contribution to the self. Whereas self-projection ends in self-alienation and decay, projection of the alien object ends in self-realization and renewal. Society itself is compounded of both tendencies. × Again, the differences are not so much abolished as dovetailed together: the resulting supraindividual whole owes its unity to the specialization and mutual aid of its parts.

6. SOCIABILITY AND ITS RESULTS.

In short, the essence of the upward movement is sociability, while the essence of sociability is differentiation issuing in unity. On the other hand, the essence of the downward movement is unsociability, while the essence of unsociability is unity issuing in differentiation. What my observer notes when he retires from me is a hierarchy of social creative-ness, arising out of the discovery and the overcoming of otherness; what he notes when he approaches is the destruction of this hierarchy by the re-assertion and antisocial magnification of otherness. These rules apply to every level. An atom is a 'society' of electrons and protons, a molecule of atoms, a cell of molecules, a man of cells. In each instance there are members differentiated in structure and in function, engaged in maintaining a pattern of social behaviour that is peculiar to the level concerned. In each instance there is a downward tendency towards the disintegration of the society into a rabble of mere individuals, counter-balanced by an upward tendency towards the further integration of the

+ On the essentiality of the otherness, see John Macmurray's <u>Freedom in the Modern</u> <u>World</u>, VI. The people he calls 'unreal' are those whose real interest is in themselves and not in the world outside themselves: they do not love beautiful things, but love possessing them. "Losing the outside world they lose themselves; their inner life dies and goes into dissolution, and they become ghosts and echoes."

× William Morris wrote: "Fellowship is life, and lack of fellowship is death." (<u>A</u> <u>Dream of John Ball</u>, IV) On the other hand, Seneca said that he returned from men a diminished man, and Rousseau that the breath of man is deadly to man. Both schools of thought are right, inasmuch as every individual and every society exists by virtue of concurrent social integration and social disintegration.



It is important to recognize, however, that the character of 'social relationships', no less than their complexity, is drastically modified as we ascend the hierarchy. Whitehead rightly insisted (see, e.g. <u>Modes</u> <u>of Thought</u>, p. 32) that the experience of lowly organisms must be described in terms of 'feeling' and 'expression' and 'emotion' rather than 'thought'. society, and its supersession by still higher social forms. And in each instance the new social level displays fresh and unheralded characteristics. These are, in general, cumulative. × Thus, at a very low level, 'materiality' emerges; at a higher level, 'life' is added; * at a still higher, 'mind'. In addition to these major emergents, there are innumerable minor ones. A molecule of water consists of two atoms of hydrogen and one of oxygen, but the chemical and physical peculiarities of water are very different from those of either hydrogen or oxygen, or a mixture of the two. There is more in this sentence than a vast collection of ink-particles, more than a collection of separate letters, more than a collection of separate words: it is a whole whose meaning does not belong in the parts taken one by one. Indeed, the instances of emergence are endless. Wherever there is 'sociability' -- a togetherness of diverse units of one order, whose diversities are interlocking or complementary -- there is a new whole which is 'more than the sum of its parts'.

This creative synthesis (under such titles as the emergent evolution of Lloyd Morgan, the holism of General Smuts, and the emergent vitalism of C. D. Broad) +, though one of the dominant features of the philosophy of the recent past, is now apt to be overlooked. Unfortunately the implication often was (in spite of the disclaimers of the philosophers themselves) first, that emergence, or holism, or sociability, somehow explained and disposed of the emergent characters, and, second, that the doctrine of creative synthesis was the whole truth instead of, at most, a half truth. Too readily naturalism assumes that the part is prior to the whole, the lower level to the higher, life to mind, materiality to life. Too often it is, even now, taken for granted that progress is inevitable, that evolution is not counterbalanced by devolution, that the world-process is one-way. But in fact the downward tendency is just as real as the upward. ° It is not obvious how I, with all my human qualities, can sink so low as to be a collection of wild animals, and an assemblage of featureless particles, any more than it is obvious how these particles and animals can, by the practice of sociability, raise themselves to manhood in me. Indeed, there is a sense in which it is not the higher levels but the lower levels, with their increasing privation of qualities, that call for explanation. The higher levels, lively, poignant, rich in every sort of contrast, lie wide open to my immediate inspection; they are real beyond doubt. Not so the world of electrons and atoms and molecules --- featureless and difficult country, invaded only by the specially equipped. It is my constant descending into this nether world, no less than my constant rising again, which is the problem.

The hierarchy of qualities and values cannot be accounted for or explained away: it must be discovered empirically, and accepted in a spirit of natural piety. But this much may be said: that the hierarchy is a social one, that its graduated qualities are enjoyed and maintained as social relationships at each successive level, and that where these social relationships fail the qualities vanish. What sociability preserves, unsociability destroys, and the two are inseparable partners. New structures are continually being produced by the building up of raw material; raw material is continually being produced by the demolition of old structures. My electrons are as much my manhood lying in ruins, as my manhood is × Yet there is no real 'carry-over'. Note that the confused social strife at each level issues in peace and unity -- at the next level. As men occupied with and by one another, our interior cellular quarrels are amicably settled; as occupied with and by still higher units, our human struggles are over. It is a consoling thought that on each new hierarchical plane a fresh start is made, as simple capacity free from division and turmoil. This is not to deny, of course, that the history of the strife on one plane is closely correlated with that on other planes.

* On the biological aspect of hierarchical organization, see J. H. Woodger, <u>Biological</u> <u>Principles</u>, pp. 311 ff. Dr Woodger points out that the cell, when severed from its manifold relations in the bodily hierarchy, is not itself, not the same cell.

+ C. Lloyd Morgan, Emergent Evolution; J. C. Smuts, Holism; C. D. Broad, Perception, Physics and Reality, Scientific Thought, and The Mind and its Place in Nature. Other philosophers whose doctrines have much in common with emergent evolution are Samuel Alexander, (Space, Time and Deity), R. W. Sellars (Evolutionary Naturalism), and James Ward (Realm of Ends). Ward's term is epigenesis, which he defines as "the origination by integration of new properties in the whole, which its constituents in their isolation did not possess..... What is thus created are not new entities but new values; and these tend not only to be conserved but to make higher unities and worthier ideals possible." Op. cit., p. 434.

Whitehead also sees nature as a hierarchy of 'organisms' which are societies of societies, but he denies that colours, sounds, scents, geometrical characters, etc., emerge from nature. He calls these 'eternal objects', elements which, though required for nature, belong to another realm. See <u>Science</u> and the Modern World, X.

° With wonderful insight, Heraclitus appreciated the unity of the upward and the downward path, and the futility of ignoring the latter: "Homer was wrong in saying: 'Would that strife might perish from among gods and men!' He did not see that he was praying for the destruction of the universe; for, if his prayer were heard, all things would pass away..... Men do not know how what is at variance agrees with itself. It is an attunement of opposite tensions, like that of the bow and the lyre." Burnet, <u>Early Greek Philosophy</u>, p. 136. the fruition and apotheosis of my electrons. The essential thing is to see the many-levelled whole as a single organism, whose life-blood is the ascending and descending flow of social activity. All levels of functioning coexist in me; nothing is done once and for all. The individualism in me kills me; the sociability revives me; and to live is to unite them. I live, that is to say, by the death-dealing failure of my parts to reconcile their differences, as well as by their life-promoting successes in social organization. +

7. <u>THE MEMBERS OF THE SOCIETIES: PANPSYCHISM OR SPIRITU-</u> <u>AL PLURALISM.</u> *

But what (common sense wants to know) are electrons, and atoms, and molecules, in reality? In the previous chapter I referred to the electron as the <u>observer</u> of the proton, and in this chapter I insist upon the <u>social</u> relationships between such units, their attractions and repulsions, and so on. Am I not guilty here of a vicious anthropomorphism? Have I any better reason for attributing lifelike or mindlike characteristics to atoms, than a savage has for attributing similar characteristics to rocks and rivers and trees?

If common sense is right, at least I may claim that I am in a large and distinguished company of anthropomorphists. It is love and hate, according to Empedocles, which sets the elements in motion. × Bacon, the prophet of the modern spirit of science, wrote: "It is certain that all bodies whatsoever, though they have no sense, yet they have perception; for when one body is applied to another, there is a kind of election to embrace that which is agreeable, and to exclude or expel that which is ingrate." ° Berkeley found reason to believe that the only real causes are the activities of spirits, and Schopenhauer discerns that the inner nature of what the scientist calls force is will. Lotze found that "behind the tranquil surface of matter, behind its rigid and regular habits of behaviour, we are forced to seek the glow of a hidden spiritual activity." • These are a few of the many thinkers for whom 'the total depravity of inanimate things' (to use Gail Hamilton's phrase) was a fiction. †

I am in good company, but what are my reasons for joining it, in spite of all common-sense objections? First, let me consider what is reasonably evident --- my experience of what it is like to be me. As man, I realize some of the peculiarities of this place: namely, those which have human interest, which are important for my practical functioning at this level. I realize them as having pattern, continuity, emotional importance, and thereness. The pattern develops, and apart from this developing pattern I am nothing: I find myself, and the other-than-myself, in it. All this happens at the human level. But I am not only human. The question is: what happens at other levels of myself? I am an immense hierarchy of individuals, all behaving with due respect to their particular circumstances, and if they failed in this I would immediately vanish. How, at these lower levels, do I succeed in reacting appropriately? For example, how do I, as molecules, take account of the position and mass of all the other mol+ Hinduism, in its worship of Kali, Durga, and other horrific forms of the deity, as well as benevolent forms, does full justice to the two contradictory aspects of nature. It is appropriate that Aurobindo should write appreciatively of Heraclitus. (<u>Heraclitus</u>, Arya Publishing House, Calcutta, 1941)

* The panpsychism sketched here, and developed in later chapters, is derived from a long succession of philosophers, including Leibniz, Fechner, Paulsen, Lotze, Wundt, W. K. Clifford, Renouvier, and, in our own day, Whitehead and C. H. Richardson. Perhaps the book to which I owe most is Ward's <u>Realm of Ends</u>.

 \times Cf. Whitehead, <u>Symbolism</u>, p. 53, "Anger, hatred, fear, terror, attraction, love, hunger, eagerness, massive enjoyment, are feelings and emotions closely entwined with the primitive functioning of 'retreat from' and of 'expansion towards." ° <u>Natural History</u>, IX. Even Hobbes had to admit that there was something in the opinion "that all bodies are endowed with sense". (<u>Element. phil.</u>, iv. 25) And Gassendi ascribed a kind of sensation to atoms.

• <u>Microcosmus</u>, i. p. 408. Cf. <u>Outlines of a</u> <u>Philosophy of Religion</u>, p. 54.

† Other notable instances are Spinoza, who believed all individual things to be alive (<u>animata</u>) though in varying degrees (<u>Ethics</u>, II. 13 and III. 6), and of course Leibniz, whose monads, down to the lowest grade, live a life of 'perception'. (<u>Monadology</u>, 66 ff.)

Cf. Plato's Parmenides, 132 ff., in which he discusses the dilemma: either "all things think", or "they are thoughts which exist without being in any mind which thinks them". Nevertheless the opponents of panpsychism (those who join the materialists in denying 'souls' to particles, or the Cartesians in denying them to animals, or the behaviourists in denying them to men) are in an important sense perfectly right. No individual has a soul to call his own: only the social matrix is ensouled, and in the last resort there is only one society -the Whole. If therefore we must speak of particular minds or souls at all, we should do well to copy Lotze, and call them parts of mind rather than minds.

ecules that comprise the planet, and adjust my movements perfectly to them all? Science assures me that this is what, in effect, I actually do at molecule level; but it is the business of science to record the performance, not to explain how it is possible. ϕ

How is it possible? As a man, I lay hold of what is here where I am, and not what is somewhere else; as a molecule I am not likely to improve upon this arrangement. I can only suppose that the molecule takes in the situation where it (the molecule) is, so far as the situation is 'molecular', holding its aspects together in a unity, and actively projecting them upon the environment. + The molecule behaves in a manner befitting the situation because the situation has become part of the molecule's existence. So with all my subsidiary units: each is, in itself, what it is <u>for</u> itself; and each is, for itself, what others are for it. Each exists by taking on certain characteristics of the place where it is, and this 'taking on' has two aspects --- a passive recipience, and an active projicience. As Ward says, "what is nothing for itself, is truly nothing at all Nature thus resolves into a plurality of conative individuals; and the range and complexity of the correspondence between a given individual and its environment marks the stage to which it has advanced in its interaction with the rest." ×

If this seems doubtful, consider the alternatives. The first is that, by some miracle, a molecule in my body is informed about what is going on all over the world, in its inconceivably complex detail. How it gets this information, far excelling in scope and in accuracy the information available to science, is quite inexplicable. Does the molecule send out innumerable scouts to the other molecules, receive detailed reports, and calculate its own motions accordingly? No, the idea is absurd. The second alternative is that some mysterious cosmic Agency or Intelligence is for ever doing for molecules what they cannot do for themselves, adjusting their behaviour, calculating with infinite patience and precision every movement. Such a hypothesis only exchanges one mystery for another. The third alternative is perhaps the least reasonable (certainly it is the most common) of them all. It is that there exists some dark Necessity or Force, some Fate or impersonal Mechanism, some inviolable Law or Order of Things, which rules over the world of molecules by means that are as inscrutable as they are far-reaching. There are other alternatives, but they lead still further into the realms of myth and fantasy, and may be safely ignored here.

I conclude, then, that I function at molecule level as I do at man level; that I <u>am</u> other molecules and they are myself, and there is consequently no question of <u>detecting</u> what they are about; that my supernatural knowledge of their behaviour is the most natural thing in the world, seeing that I am the locus of that behaviour, seeing that they do not behave in themselves but in me, and in their other observers. I conclude, moreover, that the mystery-mongering view, the view which, at first so deceptively transparent, is really opaque to the understanding (if not actually meaningless), the view on which the back-breaking burden of proof rests, is <u>not</u> the panpsychism of this book but the materialism (or mechanism, or energism, or what not) of its opponents. Matter, or energy, or events, or substance of any kind, self-existent apart from all observers --- <u>that</u> is the wild hypothesis, <u>that</u> is the fantastic speculation, ϕ It seems to me that, in so far as science has any relevance at all to the doctrine of panpsychism, it favours that doctrine. Such fantastic works as W. D. Verschoyle's <u>The Soul of an Atom</u> (in which it is claimed that atoms have memory, 'sex polarities', and life-histories), though they have the merit of realizing that the atom is something for itself, have the serious fault of supposing that modern science says anything to the contrary.

+ Whitehead's term is <u>prehension</u>. Things are "grasped into a realized unity, here and now", but "the things so gathered into the grasped unity have essential reference to other places and other times." (<u>Science</u> <u>and the Modern World</u>, p. 87) "The connectedness of things is, nothing else than the togetherness of things in occasions of experience." (<u>Adventures of Ideas</u>, XV.12) Schopenhauer (<u>The World as Will and</u> <u>Idea</u>, i. p. 136) makes the <u>double</u> knowledge we have of our bodies -- inside and outside knowledge -- the key to all nature.

× <u>Realm of Ends</u>, p. 21.

There is no existence outside experience. This fact is better known in Buddhist communities than in the West, with its conviction (as yet hardly shaken by modern physics) of the non-mental substantiality of matter. For instance, it is believed in Tibet that the man who can put a stop to his mental activity altogether becomes invisible to others. (See Alexandra David-Neel, <u>With Mystics and Magicians in</u> <u>Tibet</u>, p. 274.)

Sir Charles Sherrington says, "It is not safe even to suppose that mind is universally present in animal life. Most life is, I imagine, mindless, although the behaviour is purposeful." The Listener, May 5, 1949, p. 755. I do not know what purpose without mind can be; but, apart from that question, the difference between the behaviour of the higher and the lower animals (or, for that matter, between the behaviour of animals and of atom and electrons) is surely never great enough to justify the hypothesis that they are two utterly different kinds of being --- what could be more fundamentally discrepant than a psychophysical object, and a merely physical one? Add to this consideration the fact that mindless matter -- that is nothing for itself, Centre-less, with no accommodation for others -- is something for which we have no real evidence at all, whereas we have first-hand knowledge of minded matter; and the result (for me) is that panpsychism is seen to be the more reasonable alternative. To doubt this is to resemble a cinema-goer who, on his way to a seat at the back of the hall, stops short and complains that all there is to see is a blank wall; or else, walking right up to the wall,

that is the mythical, the occult, the monstrous. +

I have already described myself as a view outwards (I call this my mind) and a view inwards (I call this my body). By far the safest procedure is to advance from this known state of affairs to the relatively unknown lower levels: to do otherwise is to argue from the unknown to the unknown. Doubtless, at the lower levels, the view outwards is very limited and abstract --- that is only to be expected when the view inwards is equally impoverished. The meaner the body the meaner the soul. (St Augustine, it is true, held the contrary opinion: "The meaner body may include the better soul, and the more perfect the worse." * But our difference is only a verbal one. Not mere bulk, not even mere complexity, are the criteria of bodily perfection, but these plus fineness and harmony of organization and of functioning.) It is idle to expect of an atom an adequate appreciation of reality. But some appreciation it must have. \times When my outlook is atomic, I am an atom --- my inlook is atomic; when my outlook is human, I am a man --- my inlook is human. Goethe tells us that "Man is properly the only object that interests man", and Pope that "The proper study of mankind is man". It is the same with the subordinate units in man: they are occupied with their fellows, for the very good and simple reason that they are occupied by them. From the lowest level up to the level of man, my story is one of increasing hospitality to the universe. But the universe is one universe, and it is entertained in essentially the same fashion on every plane of my being.

With Lloyd Morgan, ° I believe that "there are no physical systems, of integral status, that are not also psychical systems; and no psychical systems that are not also physical systems. All systems of events are in their degree psycho-physical." Though this cannot be proved, it is by no means so much a matter of guesswork as common sense would suppose. For I have inside information. All the units under discussion are mine, or fully represented in me. Introspection, as Leibniz pointed out, can yield knowledge of the infrahuman. My subsidiary units are a lower power of myself, myself not yet at my best, and they are like me because they are me. They are at loggerheads, and nothing is achieved; they reach a measure of agreement, and the higher grades emerge; they co-operate smoothly, and the result is the living whole. This whole is the reconciliation of the diverse tendencies in me, the discovery of a common aim. All stages of this discovery coexist in me; it is for ever being made and unmade. The essence of life, as Whitehead says, is "conformation of purpose", • and the essence of death is disagreement. I live by getting animals and vegetables and minerals -- my food -- to agree. Often I am in disagreement with myself, and die as man. Thus it is easy (indeed, all too easy) to inspect my lower or divided nature, and gain direct insight into the infrahuman world.

The opposing view is that there exists a break, or fundamental discontinuity, both in my nature and in nature in general. At some point, impossible to determine, in the evolution of 'matter', 'mind' puts in its unheralded, pointless, and ineffectual appearance. (Or, if mind can move matter, there is the insoluble problem of showing how it gets a purchase upon it.) Some pieces of matter comprising me are minded and others are mindless, yet my observer finds it difficult, and often imposcomplains that there is nothing to see at all --- nobody can persuade him to turn round, and he loudly demands his money back.

+ It is not merely that the psychical basis of material phenomena goes unrecognized: what is <u>overtly</u> psychical is denied even a minor role in the economy of nature. Whitehead says, "Scientific thought is completely dominated by the presupposition that mental functionings are not properly part of Nature." At the other extreme is Whitehead's own doctrine that 'the energetic activity considered in physics is the emotional intensity entertained in life. <u>Nature and Life</u>, pp. 70, 96.

* City of God, VIII. 15.

× In this book I reject the notion of 'unconscious mind' (I mean, absolute, not relative, unconsciousness) --- a notion which is for me, as for many others, a contradiction in terms. I follow Leibniz, Clifford (<u>Lectures and Essays</u>, ii. pp. 61 ff.), and Ward, in believing that there is no absolute unconsciousness.

° Emergent Evolution, p. 26. Wundt (rather like Clifford and Haeckel) linked his ultimate physical units (atoms) with ultimate psychical fact (will), calling the result a 'will-atom' --- the fundamental unit of existence. Renouvier (<u>La Nouvelle</u> <u>Monadologie</u>) similarly insisted that the germs of conscious life are present from the beginning, and unfold as circumstances allow. Renouvier is one of a number of philosophers who maintain that in volition we have true insight into the nature of causation, which is otherwise inexplicable. See also <u>Le Personnalisme (</u>1903), p. 500.

• Adventures of Ideas, XIII. 6. Earlier in the same book, Whitehead writes: "It seems that, in bodies that are obviously living, a co-ordination has been achieved that raises into prominence some functioning inherent in the ultimate occasions." For James Ward (Realm of Ends, p. 148), evolution means that conative beings, which at first interact casually, come to have common ends. But nothing is gained by trying, with J. S. Haldane (Mechanism, Life and Personality, pp.101, 143; The New Physiology, p. 19), to extend down into matter concepts proper to vital levels. We should rather, with Bosanquet, regard physical nature as intelligible along mechanistic lines; -- as Hobhouse urged, where everything is spiritual nothing is spiritual. There is indeed something like mentality at these low levels, but it is subvital and exceedingly habit-ridden.

sible, to distinguish the two kinds --- indeed, it is a sound rule of science proper that they shall not be distinguished. Add to this the fact that the scientist, as scientist, has nothing to say about the inner nature of matter (which may, for all he can tell, be mind in disguise), and also the fact that the scientist, as man, has everything to say about the inner nature of that parcel of matter which he is (he says that it is 'mental' experience of other pieces of matter); and the belief in opaque, one-sided, mindless physical units reveals itself as the superstition that it is. If what lies here for me, at the common terminus of all the incoming and outgoing trains of events, is always a sensation or a percept, or something of that nature, if this event which I am is invariably mental, then to assume without clear evidence that other heres and other events are in themselves utterly different -- that is, material, or non-mental, or neutral -- is to exchange reason for blind faith, and to relinquish the scientific attitude. + It would be different if we knew what we meant by senseless matter and blind mechanism. × There no longer remains to us the excuse (poor as it was) that the behaviour of the smallest constituents of nature proceeds with machine-like regularity. For, as Heisenberg has shown, it is likely that absolute precision and predictability are absent from even the lowest physical level. What looks like hard necessity, or the rigid uniformity of natural law, may well be no more than a statistical effect, the ironing out of individual differences of behaviour by considering only the average performance of very large numbers. And, in any case, the old notion of compulsive law, forcing matter to gravitate, or cohere, or freeze, is now quite discredited. In short, science itself, pushed far enough, makes panpsychism inevitable.

Consider the choice that is presented. On the one hand a hierarchy of purposive individuals, each enjoying (what may loosely be called) social relationships with its fellows; on the other, a hierarchy of inscrutable things-in-themselves, moved around by inscrutable, external agencies. The choice, as that great but neglected genius Fechner saw so clearly * , is between the 'daylight view' that beside our consciousness is still more consciousness, extending below ours and above it, rank by rank, from the lowest or, least-inclusive sentient to the highest or all-inclusive ---between this noonday world and the midnight world of dead, pointless, and unknowable mechanism. Why choose the second, when it is not only unreasonable, but ugly? Mystification is bad enough, but when it takes us straight to a hell of a universe it is a dangerous form of madness. The results of the antipathetic fallacy need no underlining: they confront us all the time.

> "The moveless pillar of a mountain's weight Is active living spirit. Every grain Is sentient both in unity and in part, And the minutest atom comprehends A world of loves and hatreds."

So wrote the poet, echoing the teaching of Thales that "All things are full of gods". $^{\circ}$ If, says Swedenborg, there were not "something analogous to free-will in the soil, in the seed sown therein, and in all parts of the plant there would be no vegetation of any kind. The same is true of every metal and stone...." •

Perhaps I should add here a word on the subject of anthropomor-

In <u>The Human Situation</u>, which expounds a version of panpsychism with a charm rare in philosophy, W. Macneile Dixon writes: "You have not crossed the <u>Pons</u> <u>asinorum</u> of philosophy until you have perceived the necessity of mind, that upon its operations all hinges, that in thought you have the end, and aim, and justification of nature." (p. 158. See also pp. 354 ff.)

+ Something like this point is made by J. W. N. Sullivan, <u>The Bases of Modern Sci-</u> <u>ence</u>, XII.

× Canon Streeter's <u>Reality</u> has an excellent defence of enlightened anthropomorphism, as against the mechanomorphism of so much 'scientific' thinking. He has no difficulty in showing that to interpret the universe in terms of machinery, instead of in terms of personality, is doubly anthropomorphic. For machines are 'anthropomorphs', extensions of man. To amputate an outlying organ and (neglecting the whole) to use it as a world-model, may be justifiable for practical ends, but it is philosophically inferior to taking the whole man (machines and all) as model.

* "The first thought", says Fechner, referring to these alternative world-views, "leads away from all experience and from everything which is conceivable in terms of experience, ... hence it leads us into the dark, because the notion of the 'thing-in-itself' behind consciousness has in fact no basis in experience.... The second thought leads out of the light of common experience only into a higher light, inasmuch as our own consciousness furnishes us with a clue to the more universal, broader, higher and more luminous consciousness, and supplies us with the means for inferring it." Ueber die Seelenfrage (trans. Lowrie, Religion of a Scientist, p. 158).

° Burnet, Early Greek Philosophy, p. 48.

• <u>True Christian Religion</u>, 499. C.f. Rufus Jones (<u>Social Law in the Spiritual World</u>, p. 64): "<u>Our</u> world is the one we know. It is the world which rests immovably on the basis of social experience.... Destroy the social fabric and all that we now call 'nature' would vanish." phism. Every grade of being is the scene of social relationships, occurring between units that experience themselves in terms of each other, but the quality of these relationships is proportional to their level. A naive anthropomorphism, failing to realize this proportionality, \times attributes human characters to infrahuman and to suprahuman grades. Enlightened anthropomorphism, on the other hand, makes due allowances. And this it is able to do, not because man <u>as man</u> can transcend himself (obviously he cannot), but because man in his totality stands at every level, and is entitled to speak for them all. That is to say, his anthropomorphism develops into a world-searching polymorphism, founded upon the great law of equality.

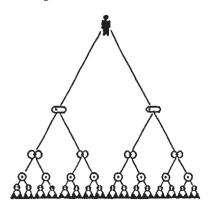
8. THE PYRAMID OF SOCIETIES.

I am a pyramid, broad-based upon nothing, that grows more solid and lively and interesting towards the apex --- a structure that preserves itself in this condition by constantly destroying itself from the apex downwards and rebuilding itself from the base upwards.

I have already outlined the architecture of the pyramid. It is divided into horizontal stages or storeys, namely electrons, ° atoms, molecules, cells, man. To these must be added, at the base, a layer of units corresponding to the minima of Bruno, the bare monads of Leibniz, the point-instants of Alexander, and the primates (or primitive events, or primitive occasions) of Whitehead. I shall call them sub-electrons, by which I mean ultimate and indivisible psychophysical units that, like the waves of the sea, are many above and one below, and are divided from one another only in respect of their crests. They comprise that final stage in the atomization of reality where the extreme of multiplicity issues in absolute unity, because all distinguishing characteristics have disappeared. They are what I have till now called the Centre, or the central nothingness, caught in the act of becoming something. Thus they are (like the pyramid itself and everything in it) two-directional, ascending and descending: they are at once non-being taking on the minimal amount of being, and the minimal amount of being losing itself in nonbeing. But it is necessary to make two provisos. First, I do not suggest that this picture is anything more than symbolic -- it is more like a myth (but a necessary myth) than a hypothesis -- or that it explains what is, after all, inexplicable. Second, I do not mean to imply that there are no levels of organization between the electron and the lowest level; for all I know, science may one day reveal several more. The question has to be left open, and in any case it has no very serious bearing on this inquiry.

The next noteworthy feature of the pyramid is that it has an indefinite number of intermediate storeys, mezzanines, or sub-levels, not clearly demarcated, within the main storeys. Such are the organs and tissues that lie between my human level and my cellular level; such, again, are the chromosomes and colloidal particles that lie between my cellular level and my molecular level +. These pseudo-individuals (or mesoforms, to use Needham's term ×) are like committees and sub-committees

× Thomism, with great subtlety, applies the doctrine of proportionality, or analogy, to the hierarchy of being. The properties of a thing are to its being as the properties of another thing are to <u>its</u> being; and analogy, rightly used, is an important instrument of knowledge.



° In such contexts, to save repetition, I use the term <u>electron</u> generically, to include any other particles (such as positrons, mesons, and neutrons) which physicists may look upon as elementary.

It is not inaccessibility, but poverty of content, which makes this lowest plane difficult to describe. Guiseppe Caponsacchi, in Browning's poem, sees Guido sink to "the doleful end,

At the horizontal line, creations verge, From what just is to absolute nothingness".

Cf. Ward, <u>Realm of Ends</u>, pp. 254 ff., on naked monads, which reach the bottom limit of both mental and physical characteristics. These monads provide the uniform medium required for the interaction of the higher monads.

+ The concept of molecule itself presents a number of difficulties. For instance, silicon atoms may form a regular network in which each atom shares each of its four outer electrons with a neighbour, the whole constituting a crystal; however many atoms this crystal contains, it is, in effect, a single molecule. Again, it is arbitrary whether certain particles, whose constituent molecules lack true atomic union, should or should not be called super-molecules. Many, if not most, of the levels of the hierarchy show this kind of vertical blending.

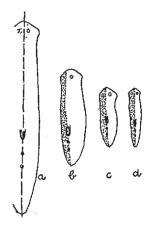
× <u>Time: The Refreshing River</u>, pp. 234 ff. "If we look carefully", says Needham, "at the steps between the successive levels of organization we find that the sharp lines of distinction are only made all the more sharp by the 'mesoforms' which occur between them." formed within a club: they are essential to the running of the whole, but they lack the autonomy, the permanence, and the distinctness, that mark the club as a whole at its level, and the club's members at their level. In any case, the details of the hierarchy must be regarded as provisional: advances in science may call for modifications. Moreover it is in some degree a matter of opinion as to what constitutes a distinct individual, or monad, or definite stage in development. The general pattern alone is likely to remain, and it is only the general pattern which is important for this inquiry.

Nevertheless some sort of working guide I must have, as to what constitutes a true monad or individual. Strictly speaking, there is no such thing on earth. For a true or perfect individual is one whose inner conflicts are all resolved, who is indivisible without loss of quality, who is independent of his surroundings, determined from within, beyond the reach of accident, ϕ clearly defined, sufficient unto himself. The degree to which a thing has these characters is the measure of its individuality. ° Clearly the most self-contained of men falls far short of the ideal, and so does a cell, or a molecule, or an atom. On the other hand -- compared with my pen, my desk, and the cloud I can see out of my window -- their individuality is of a high order. Of them all, the cloud comes nearest to the condition of a mere aggregate: half of it is just as cloudlike as all of it; its boundaries are vague, arbitrary, and changing; its behaviour is more a function of its environment than of itself; its parts are scarcely differentiated at all. * Yet even the cloud is not altogether without individuality: the fact that I can distinguish and describe it shows as much. To be at all is to be, in some degree, an individual. As Locke pointed out, the principium individuationis is existence itself. At the one extreme is the unorganized aggregate; at the other there is the man I should like to be --- a being truly original, pursuing one entirely adequate aim under all circumstances, imperturbable, the same in success and defeat, self-sufficient, many-sided and resourceful, not divided against himself. But even this Kiplingesque paragon of a man would still be far from attaining to perfect individuality. He would still be wholly dependent upon the larger aspects of his environment, subject to major accidents, obliged constantly to change with changing circumstances, in big things practically powerless, and destined to die in the end. If degrees of being and of individuality are linked, so that it may be said of a creature who absolutely lacks individuality that he is not, and of one who absolutely has individuality that he is, then I lie midway. "Man partly is," said Tennyson, "and wholly hopes to be."

Is the individuality of one of my units, then, simply a question of how high it stands in the pyramid structure? Obviously not. My heart has a status far above its atoms, yet in important respects it is less of an individual than they are. In the system of wholes and parts my hand ranks higher than one of its molecules, yet it ranks lower in the scale of individuality. Clearly the architecture of the pyramid is extremely intricate. And one of the complications is that, while there is from base to apex a general advance in individuality (more particularly in its aspects of selfdetermination and independence), this advance is fluctuating and not uniform. Each storey -- it is a common architectural device -- tends to ϕ Cf. Plato, Republic, 380-381 --- "Are not the most perfect things least altered and moved by any outside influence?"

° The relevant literature is immense. On the biological aspect of individuality, Julian Huxley's <u>The Individual in the</u> <u>Animal Kingdom</u> is particularly interesting. Woodger has an important discussion of the relations of the part and the whole in <u>Proceedings of the Aristotelian Society</u>, 1932, xxxii, p. 117. See also L. T. Hobhouse, <u>Mind in Evolution</u>, pp. 413 ff., and Bergson, <u>Creative Evolution</u>, pp. 13 ff.

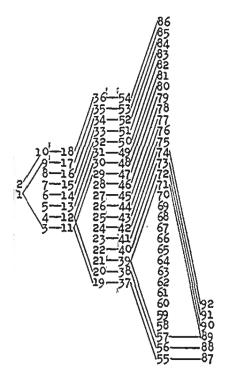
* Half a cloud is a smaller cloud, but half a man is carrion --- that is the price he pays for individuality. But (thanks to the ability, that many lower organisms have, to regenerate lost parts) individuality and indivisibility are not at all the same thing. Half a chair is not a stool, but half a Planaria flat-worm is (before very long) a Planaria flat-worm.



<u>Planaria lugubris</u> (a) cut in half, regenerates itself (b, c) out of its own body-material, till the lost half is made up (d). The result is a complete organism on a smaller scale. Divisibility of this kind, unlike that of the cloud, indicates a considerable degree of individuality. recapitulate some of the features of the whole façade. At the base of the typical storey is the true unit or individual of that stage; a little higher, a number of these units are held together in loose associations whose members are relatively undifferentiated; higher still, more inclusive and better integrated associations, or mesoforms, appear; finally, at the top of the storey (where the cornice of one stage becomes the plinth of the next) there emerges, not a mesoform, but a true individual of a higher order. Thus in some respects each stage is the whole in miniature; it begins all over again the task of achieving unity; it is a hierarchy within a hierarchy. For this reason it is not sufficient to say of an individual that he belongs to such and such a region or grade: equally important are the region within the region and the grade within the grade. In other terms, to specify a feature two particulars are needed --- its storey, and its level within the storey.

And this, after all, is only describing in different language the facts noted by my receding observer. There are for him, between each solitary and distinct unit, intermediate stages where a number of such units are associated, forming groups of varying size and varying integrity. The basis of such unity as the intermediate group or mesoform possesses is, first, the group's presence, as a single pattern, in the observer's field of view; and, second, the interaction (e.g., 'attraction' and 'repulsion') of the group's parts, their differentiation and their interlocking. The observer's story is that, as a rule, a number of preliminary and cumulative essays in unification are necessary, before a new individual of integral status can emerge. And so it comes about that, while the observer's recession, on the whole, sees a gain in the object viewed, it also sees much temporary loss. There is a 'spindle effect'. That is to say, the criterion of individuality is not merely the status of the object's parts, but also the quality of their social relationships. Thus my observer finds in me such well-integrated individuals of a low order as carbon atoms, and such loosely integrated individuals of a high order as bones and hairs.

My architecture has many further subtleties which later chapters will bring out. Here I need only add that, just as the storey tends to reflect the whole façade, so do certain details within the storey tend to reflect the same pattern: even the entablature is the building in miniature. When mesoforms are left out of account, and only the unit of full integral status is considered, this also shows rhythms of increasing and decreasing individuality. For example, stability and self-sufficiency alternate with instability and self-insufficiency in the periodic system of the elements, which is a kind of rough model, in some seven storeys, of the whole fabric. Again, at the human level, the integration of the personality does not proceed smoothly as a man gathers experience. Rather there is a tendency for periods of accumulation, involving loss of unity, to alternate with periods of assimilation and integration. Physically, mentally, and spiritually, growth is a rhythm of ingestion and digestion, of loss and gain of individuality. For most of the time, man is the mesoform of himself.



The Periodic System of Elements, showing their atomic numbers, and which elements are related in the seven groups. Each group is a new essay in the achievement of 'individuality', culminating in such selfcontained or inert atoms as Helium (2), Neon (10), Argon (18), etc. The first atom of a group, e. g., Sodium (11) and Potassium (19), tends to be very unstable.

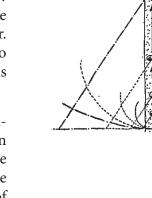
9. THE OBSERVER AT THE APEX OF THE PYRAMID.

What, precisely, is the pyramid which forms the topic of this chapter? It is, almost literally, a castle in the air. At the base is myself here, the central void, the foundation of sub-electrons; at the apex is my observer. Between us lies space --- space that "spreads transposingly from us to things", as Rilke so aptly says. The essential thing about the pyramid is its emptiness.

As my observer moves up and down, so the pyramid grows and dwindles. He can choose his point of view, but not the view it offers. To take in more of me, he must rise, so enlarging the pyramid; to take in less of me he must sink, so reducing the pyramid. In other words, <u>taking in</u> more of me is <u>making</u> more of me, and <u>taking in</u> less of me is <u>making</u> less of me. When I say that I am a man, I mean that a certain area of the base is, in and for the apical observer, a man. When I say that I am a cell, I mean that a certain small fraction of that area is, in and for a less remote apical observer, a cell. When I say that I am nothing, I mean that, at the moment when the descending observer reaches the base, I vanish altogether, because he is no longer in a position either to take any of me in, or to make anything of me.

In short, having built the pyramid, it is now necessary to raze it to the ground. The truth is that it has never been more than the plan of a structure, set out in all its details, somewhat as a building is set out on the ground before the work is started. And certainly I have no right to speak of a pyramid which is me, or of my higher levels, or indeed of my existence. It takes two to build anything. My hierarchical structure is at least as much my observer's as it is mine. Everything happens as if he were an up-to-date archaeologist and I were the confused outline of some long-forgotten ancient monument. On the ground there is not a trace of anything of interest, but when an aerial photograph is taken the plan is quite clear. The higher the archaeologist flies, the smaller the scale of this plan, and the more of it is revealed. Not only does the observer, by ascending, rebuild the structure: he is himself its pinnacle. It is also true to say that, no matter how high he climbs, the object of his study is never raised an inch above ground level. However much he makes of it, it is, in itself, down there, nothing at all.

What is the pyramid's ground plan without one who can appreciate it; what is appreciating it but being in the right position and being able to become it; what is this becoming but the only true fulfilment and execution of the plan? Thus it is far from being a matter of indifference to me whether I am observed or not --- no observer, no apex; no apex, no pyramid, and not even the sketchiest plan of one. All that I achieve is in and for another. And that is why there is more in emergent evolution than the progressive synthesis of diverse individuals, with the arrival of new qualities: at every stage there must be an apical observer to witness the synthesis and to appreciate the qualities. Lacking him, they are nonexistent. But note this --- for him there is only observation, not emergence. All he does is to put himself in a position to discover what <u>really</u> exists at ground level, to discover what sub-electrons <u>really</u> are. + Every so-called emergent quality and value, all the world's colours and sounds



The value of air photographs in archaeology was shown by O. G. S. Crawford in Air Survey and Archaeology more than 20 years ago. Since then many unsuspected sites have been discovered from the air, and the details of many known ones elucidated. Air surveys have been found of immense value in town-planning (see Mr Frank Scarlett's article in the Journal of the Royal Institute of British Architects, June, 1946), map-making, agriculture, geological prospecting, traffic-control, and so on. The fact is that aviation has put man in the position of being his own ascending and descending observer, with practical, intellectual, and emotional consequences that are already of the greatest importance. Thus my simile of the flying archaeologist is much more than a simile: he is a part of my travelling observer come true.

+ As Joseph Needham points out, in <u>The</u> <u>Sceptical Biologist</u>, p. 247, if one knew <u>all</u> about atoms one would know all about animals, but to know all about atoms one has, <u>inter alia</u>, to study animals. I would go further, and say that all our science, not excepting theology, is the study of sub-electrons, and that to know what they really are would be to know everything. As Tennyson said of the flower in the crannied wall,

"if I could understand What you are, root and all, and all in all, I should know what God and man is." and scents, all its beauty and ugliness, all its good and evil, are referred to the Centre. That is where they belong. There is no development; there is only discovery --- the mountaineer does not suppose that the plain changes as he climbs. All my descriptions of myself in this book, all my experience of anything whatsoever, are observation of the base, of the Centre that is nothing yet all things.

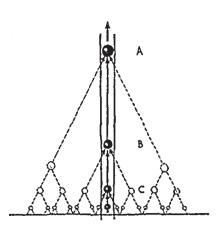
10. THE PRINCIPLE OF NUMERICAL AND SPATIAL LIMITATION.

There are certain additional peculiarities of my pyramidal structure that must be noted here. First, as to the <u>number</u> of units at each level: my observer is occupied with one, or a few at most, and is unable to take in many. Now I make it a rule in this book to take the observer's 'difficulties' and 'limitations' seriously: I regard them, not as accidents of his nature, but as essentials of his object's nature. Since the object is nothing else than its manifestation in its observers, any so-called defects in that manifestation are its own. Thus it is no accident that my observer cannot accommodate more than a small number of my units at a time. There is only one (or a few at most) of me at each level, and the fabulous numbers of cells and molecules that I am said to contain are fabulous literally. That is to say, the rising pyramid with its spreading base, and its ever more numerous bricks, is a fantasy, a half or quarter truth, a secondary and theoretical construction, an afterthought. It is an extrapolation, beyond the observer's field of view, of certain lines that he finds within it. But the primary datum is that, when the number of units (b) in his field exceeds the observational limit, they are replaced by B/A mesoforms, and eventually by a single unit (a). For him, units of level B are nonexistent at level A: they are out of place here.

Of course it is possible (for some purposes it is legitimate, and indeed necessary) to calculate how many (b) units (a) 'must really contain', but it should be clearly understood that the word <u>contain</u> is used here in an odd sense. When a matchbox is said to <u>contain</u> matches, the box and its contents co-exist; they are compresent to the observer. If the matches vanished every time he noticed the box, and the box vanished every time he noticed the box as the container of the matches. In the same way, when I, the man, am said to contain cells and molecules, the cautious observer cannot agree, for at no time is the container-contained relationship evident to him. If the receptacle must be destroyed before that which it holds comes into existence, in what sense is it a receptacle? Conversely, if the contents are abolished by their receptacle, in what sense are they contents? *

This is only another way of saying what I have already said several times: levels will not mix. An individual belonging to one region finds other regions uninhabitable, and is instantly destroyed when it enters them. As a consequence, the population of my regions is kept down to a convenient minimum, and there is no overcrowding. The universe is not so teeming, neither am I so multitudinous, as common sense is ready to

I know of no better description of the pyramid's base than one which was written twenty centuries ago in China: "Thus, open out the Tao, and it envelops all space: and yet how small it is, not enough to fill the hand! So limited and yet able to enlarge: so dark and yet able to make light: so weak and yet able to make strong: so soft and yet able to make hard. It binds all space together and is the container of the Yin and the Yang So delicate and rich, so fine and minute!" <u>Huai Nan Hung</u> <u>Lieh</u> Book, trans. E. R. Hughes, <u>Chinese</u> <u>Philosophy in Classical Times</u>, p. 287.

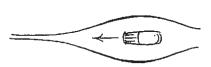


* Professor J. B. S. Haldane (Possible Worlds, p. 6) makes the point that the scientist, because the answers to his calculations are borne out and confirmed in practice, must believe in the unimaginable numbers by means of which the answers were obtained. In a sense this is, of course, true. But note that the mathematician is quite unable to deal with numbers in extenso: he must reduce them to workable symbols whose pattern is easily comprehended within his field. Thus the number of electrons in the universe is said to be about 1079; the mass of the universe about 10⁵⁵ gm; and the radius of the hydrogen atom about 10-8 cm. (Eddington, The Expanding Universe, III)

assume on no very good evidence. For all its inconceivable complexity, existence is simple at the core, and its centres of experience are not lost in an immense crowd. There is one of me, from the lowest to the highest level. The individual is all-important, and he cannot take cover in plurality. There is no safety in numbers.

What is true of the <u>number</u> of units is true, in general, of their <u>size</u>. I am neither more numerous nor less extensive at the lower levels: my dimensions are constant. It may be said that my observer's space expands and contracts in such a way that I remain for him of uniform size. "Space swelled," says De Quincey of an experience in an opium dream, "and was amplified to an extent of unutterable infinity." The vision was not so fantastic as he took it to be, for the elasticity of space is such that the atom is no smaller than the cell, and the man is no bigger than the molecule. + My atom region is just as spacious as my man region, and its inhabitants are built on a human scale. There is only one relevant unit of measurement that covers all levels, and that is my observer's constant field. At one time and at one level, there are, of course, differences of size and of spacing, just as there are differences of number. But these differences are very restricted, and there is no carrying over from level to level. The man that my approaching observer no longer sees does not go on growing unobserved, to colossal dimensions; neither does the cell which my receding observer has lost sight of go on shrinking after the man has come into view. When an aspect of me has passed beyond the field's boundaries, or has lost itself in some higher aspect, it is mere superstition to suppose that it goes on living an unperceived and secret life, as a sort of monstrous parasite upon my observer, swelling and shrinking with every movement of his. * Either a unit appears, in my observer's field -- in which case it cannot be very small or very large -- or it does not appear -- in which case my observer cannot speak of its size. Comparison is only possible within a single field. And so the foot of Berkeley's mite° is in its region as big as Berkeley's foot in its region: in those regions where it does not appear, it is not too small to see --- it is non-existent. My Brobdingnagians are no larger than my Lilliputians, for there is no Gulliver to bring them together; or rather, Gulliver, being subject to the law of equality, cannot see the difference. Where the observer himself thoroughly conforms to the changing scale of his environment, there is, in effect, no change of scale.

For the observer is himself a pyramid, inverted and superimposed upon mine. Pyramids always go in pairs, the apex of the one coinciding with the base of the other. Thus the familiar pattern repeats itself: my observer and I are equals, each projecting his own content upon the other's Centre --- content which grows richer (but not more extensive) as we recede, and poorer (but not less extensive) as we approach. In general, each of us is to the other a single object, but there occur stages in our mutual recession and advance when this unity is lost, and each of us becomes a small group of objects. And in general, throughout this journeying, each of us remains of constant size (with considerable but orderly fluctuation from stage to stage), for the simple reason that we are equals. The surveyor whose instruments swell and shrink along with every object he surveys is one for whom all objects are of uniform size.



It is not unreasonable -- it is only inconvenient -- for me to recognize that the road is only a few inches wide, and that as I travel along it in my car it expands to take me, like the throat of an ostrich that has swallowed a large object.

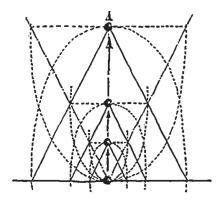
+ Heraclitus and Epicurus held that the apparent size of the sun is its actual size. (See Heath, <u>Greek Astronomy</u>, p. xvviii.) Cf. Bertrand Russell, <u>Outline of Philosophy</u>, p. 311: "There is no need to think of ourselves as powerless and small in the grip of vast cosmic forces. All measurement is conventional, and it would be possible to devise a perfectly serviceable system of measurement according to which a man would be larger than the sun."

Mgr. Ronald Knox (<u>God and the Atom</u>, p. 138) suggests that our present preoccupation with the atom may, at least, have the advantage of making us "less subject to the illusion of size".

"Great fleas have little fleas upon their backs to bite 'em,

And little fleas have lesser fleas, and so <u>ad</u> <u>infinitum</u>."

° Hylas and Philonous, First Dialogue.



[&]quot; 'There's nothing great Nor small', has said a poet of our day,

Whose voice will ring beyond the curfew of eve

And not be thrown out by the matin's bell: And truly, I reiterate, nothing's small!" Elizabeth Barrett Browning, 'Aurora Leigh'

^{*} And so there is, happily, something fundamentally wrong with that disquieting and famous hierarchy:

11. A COMMON-SENSE CRITICISM ANSWERED.

Common sense points out that the limitations of vision are transcended by thought, and that in any case vision is impossible at the lowest levels. Am I not, then, relying too exclusively upon the peculiarities of this one sense in particular, and upon the peculiarities of sensation (or rather, a naive type of perception) in general?

My reply is that, for me, mutual observation in a system of regions is much more than an affair of one of the senses, or of all the senses combined: it is the registration of the object in its concreteness and living reality, with every shade of emotional colouring, with its insistent dynamism and creativity, with its countless indispensable relations to other objects. + The object makes its home in its observers; it exists nowhere else; its concreteness and actuality have no other place but in them. Now it is plain that even the most involved account of observation as so defined must abstract from its fulness. Any descriptive device does injustice to the total facts, and the clarity which is so desirable is inseparable from the incompleteness which is so undesirable. Philosophy is oversimplification: if it were not it would be a substitute for life, the whole of existence instead of a small part of it. The only question is whether the chosen mode of simplification works, whether the sample of experience which it offers is a revealing one, whether there is some life in it, some principle of growth.

With these general considerations in mind, let me try to answer common sense's objection in detail. The first point to note is that, just as the observer is not only a pair of eyes, so his field is not only a field of vision. At some levels there are no direct visual data, and where they do appear it is never alone. Observation has many varieties. Nevertheless there always is what I mean by a field. Consider atoms. How are these presented to the observer, but in the guise of written or printed words, or spoken words, or mathematical symbols and formulae, or diagrams and models, or sensible effects of atomic events, or imagery corresponding to one or more of these presentations? Now In all these modes, data is found in a field, a spatio-temporal frame of limited capacity. What is called the observer's specious present (i.e., the period normally of a few seconds at most, in which some events are earlier and some are later, yet all are present) is simply the temporal aspect of this field, whereby the duration of its contents is limited just as their number and extension are limited. The very slow and the very swift are as unreal as the very large and the very small and the very numerous. Rate of change, like number and extent, is roughly constant at all levels. And all this is true whether the observer is imagining or perceiving, and whether his approach is through symbols or more directly. The conditions of vision are typical, in many important respects, of the conditions of 'observation' in general. Thus my observer is no more able to imagine a billion objects seriatim than he is able to see them; he is no better at thinking of the vastness or the minuteness of the universe than he is at perceiving them. Whether he is a historian reckoning in millenniums, or a physicist considering the vibrations of yellow light from sodium (at 510 billions to the second), he is conscious of no uncommon slowness, of no tearing hurry. All units of + It is a vice of philosophy in general, and of intellectualist philosophies in particular, to ignore feeling. As Whitehead points out, we are in the habit of overlooking the main characteristic of sensa --- their "enormous emotional significance. The vicious notion has been introduced of mere receptive entertainment, which for no obvious reason by reflection acquires an affective tone. The very opposite is the true explanation." <u>Adventures of Ideas</u>, XIV. 7. What he calls perspective is "the dead abstraction of mere fact from the living importance of things felt." <u>Modes of Thought</u>, p. 15. time are more or less alike to him: there is no accumulation of slowness or of swiftness from level to level, for each new level makes a fresh start, on the same basis as all the others.

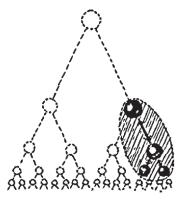
Thought and perception cannot be divorced, and it is no wonder that they should agree so well. While thought can manipulate the data of perception in countless ways, it can build no structure of which they are not the materials, + or which does violence to their most essential properties. For example, my observer cannot represent to himself a new primary colour, or a cube whose six faces are simultaneously visible, or a hundred-thousandth of an inch (let alone 'the size of an atom'), or a hundred thousand miles (let alone the 'size of Sirius'). If, in his thinking of an atom, he uses mathematical symbols, these are arranged in a field, and they are, whether individually or as groups, of limited size and complexity. If, on the other hand, he thinks of an atom in terms of a model or diagram, he makes it of handy dimensions --- the diameter is that of the ball used in his favourite game. It is time we realized that this is not human weakness, but an exemplification of one of nature's fundamental laws.

The method of this book is to work from the relatively known levels (where vision is paramount) to the relatively unknown levels (where vision is difficult or indirect), making such allowances as the principle of proportionality calls for. This method assumes a continuity, an absence of violent breaks, in the vertical structure of nature --- science always has assumed <u>horizontal</u> continuity, but my thesis is that this is not enough. Until I find evidence to the contrary, then, I assume that the broad principles of my functioning are the same at levels where the data are meagre and obscure as at levels where they are abundant and clear. Now this method and these assumptions stand or fail, not by any intrinsic merit they may have, but by their success or failure in practice. Are they effective in co-ordinating the enormous mass of more or less fragmentary scientific information that has accumulated in the past century? Is the result aesthetically satisfactory? Does it comply with the requirements of heart as well as head? Does it support and clarify our intuitions about ourselves and the universe? Does tradition confirm it? Above all, does there emerge a body of cumulative evidence whose parts are organic --members which, however invalid apart, give one another all the mutual support they need?

It is much too early to answer these questions with any confidence. Yet I think it may be said here that the doctrines of this chapter, and in particular the principle of numerical and spatial limitation, already begin to fall into their place in a larger whole. A great deal more evidence is needed to carry full conviction, but it belongs in later chapters. Here I shall confine myself to the following example of the kind of evidence that I have in mind.

The pyramid which I am is organized: it is a miracle of organization. And the essence of organization is (A) that each functionary (excepting the highest and the lowest) shall have dealings with <u>one</u> immediate superior and with a limited number of immediate inferiors, instead of with all alike, and (B) that the work of the organization shall be divided The late Professor Charles-Eugène Guye rightly insisted that what is found depends upon the scale of observation: whenever we change this scale we come upon new phenomena. Thus what really is a green powder at one range really is a collection of blue and yellow lumps at another, with not so much as a speck of green anywhere. But it will not do to say (as Lecomte du Noüy does, in Human Destiny, p. 19), "It is the scale of observation which creates the phenomena. The scale of observation depends on man; it is he who creates it. In nature, different scales of observation do not exist. There is only one immense, harmonious phenomenon on a scale which in general escapes man because of the structure of his brain, a structure which necessitates dividing into arbitrary compartments, and cutting up into isolated pieces." I believe that nothing could be further from the truth than this statement. For me, nature is nothing else than a hierarchy of "different scales of observation" to which the scientist has full right of entry.

+ Thus Locke: "The first capacity of human intellect is, that the mind is fitted to receive impressions made on it, either through the senses by outer objects, or by its own operations when it reflects on them. This is the first step a man makes toward the discovery of anything, and the groundwork whereon to build all those notions which ever he shall have naturally in this world. All those sublime thoughts which tower above the clouds, and reach as high as heaven itself, take their rise and footing here: in all that great extent wherein the mind wanders, in those remote speculations it may seem to be elevated with, it stirs not one jot beyond those ideas which sense or reflection have offered for its contemplation." Essay on the Human Understanding, II. i. 24.



and subdivided amongst the functionaries, so that each minds his own business as if it were the whole business. That is to say: at the root of all organization lie, first, the principle of numerical limitation and, second, the principle of spatial limitation, of the constant field, of the non-existence of the very large and the very small, of the immiscibility of levels.

Let me put this rather more fully. (A) It is common knowledge that the real work of a human organization is done by individuals and small groups working within it, and not by large numbers as such. This is not a device of bureaucracy, but a practical necessity. The general who thinks in terms of many individual soldiers instead of a few brigades, and who gives direct orders to the ranks instead of to a few senior officers, is no general. And so it is with me: the indescribable complexity of my psycho-physical organization is possible only because there is a sense in which it does not exist. From base to apex, I am an essay on the meaninglessness of large numbers. The savage who does not count above ten is a realist of a rather extreme kind; and the common-sense man who refuses to believe that he is myriads of cells is wiser than he knows. Cells only exist at their own level, and at their own level only as individuals or as small groups, for organization abhors multiplicity. (B) Indeed it abhors all excess, whether of swiftness or slowness, of vastness or littleness, of importance or triviality. Divide et impera is a practical rule of universal application because it exposes the fallacy of size. ° The truth is that the district officer does not administer a smaller territory than that of the provincial governor. Subdivision does not diminish, neither does aggregation enlarge. The part is as great as the whole, and the whole is as small as the part --- that is the secret of organization. Each official is, in his own way, just as important as any other, and whatever his rank he must treat his proper task as a large-scale macroscopic problem, as the problem. * If, mistakenly, he sees it as a minute and trivial matter, of no consequence whatever in comparison with the whole, then the whole itself begins to break down. The organism transcends the organ only because it does not do so. The effective member plays its part as if that part were the whole; nor is this a convenient fiction, one of the 'as if' myths of Vaihinger's philosophy. + It is a sober fact, and one which is always being verified, that the scene opens out as the observer descends, and closes up again as he ascends, so that there is just as much room at the lower levels as at the higher. Everything --- countless maxims about the importance of the immediate task and the humblest duty, × the obvious fact that the felt importance of the task does not vary with its grade, our ordinary views as to why some organizations fail and others succeed, and finally my travelling observer's discoveries concerning the constancy of the object's size and number --- everything points to one conclusion: that there operates a law of equality in the vertical plane of the pyramid as well as at each level, and that there is an important sense in which the pyramid is not a pyramid after all, but a cube. • Clearly the twofold principle of limitation is more than an accident of vision: more, even, than an essential of all observation. It is the principle according to which I, and all other hierarchies of observers, are organized.

I cannot be a man and molecules at once, if only because it takes time for my observer to get from my man region to my molecule region --- time in which the man is killed and dismembered. L. Susan Stebbing was right to take Eddington to task for describing a table as an emptiness in which electrical charges are rushing about, as lacking all the solidity, and hardness, and continuity that are usually attributed to tables. (See Eddington's The Nature of the Physical World, pp. xi ff., and Stebbing's Philosophy and the Physicists, Chapter III.) For tables and molecules are incompatibles, that do not belong in the same field; and electrons do not exist where solid things belong. In no sense does modern physics undermine the familiar sensible qualities of objects, and to speak of tables as really insubstantial is nonsense. But Eddington (for all his inaccuracies of exposition) was well aware of this fact.

° "In the superstition of size the mind is merely the dupe of itself." Amiel, <u>Journal</u>, 1st February, 1876.

* For Plato, 'justice' -- the principle which, inter alia, promotes the excellence of a city -- is the principle of "one man one work", and everybody minding his own business. Meddlesome persons are death to the city. <u>Republic</u> 433.

+ The Philosophy of "As if", London, 1924.

× Goethe was particularly fond of such maxims. For example: "If each one does his duty as an individual, and if each one works rightly in his own vocation, it will be well with the whole." Superficially, this is triteness, itself, but the underlying principle is anything but trite.

• It may be said that the numerator and the denominator of my fraction (representing the number and the size of my parts) tend to cancel out. Carlyle is mistaken when he says: "The Fraction of Life can be increased in value not so much by increasing your Numerator as by lessening your Denominator." (<u>Sartor Resartus</u>, II. 9.) The fraction is roughly constant.

CHAPTER VI

THE MIDDLE VIEW

Yet nature is made better by no mean, But nature makes that mean..... this is an art Which does mend nature, --- change it rather; but The art itself is nature.

The Winter's Tale, IV. 3.

Art is the perfection of Nature In brief, all things are artificial; for Nature is the Art of God.

Browne, <u>Religio Medici</u>, I. 16.

The artificial city had become to him nature, and he felt the curbstones and gas-lamps as things ancient as the sky.

Chesterton, The Napoleon of Notting Hill, III. 1.

And cities might be as once they were, bowers grown out from the busy bodies of people.

D. H. Lawrence, 'Work' (Pansies, p. 41).

Weapon shapely, naked, wan, Head from the mother's bowels drawn, Wooded flesh and metal bone; limb only one and lip only one

Walt Whitman, 'Song of the Broad Axe'.

These temples grew as grows the grass.

Emerson, 'The Problem'.

Nevertheless if..... through the Clothes-Screen, as through a magical <u>Pierre-Pertuis</u>, thou lookest, even for moments, into the region of the Wonderful, and seest and feelest that thy daily life is girt with Wonder, and based on Wonder, and thy very blankets and breeches are Miracles, --- then thou art profited beyond money's worth.....

Carlyle, Sartor Resartus, III.9.

Without black velvet breeches what is man?

Bramston, <u>The Man of Taste</u>.

Civilisation is not even skin-deep; it does not go deeper than the clothes.

F.C.S. Schiller, <u>Tantalus</u>, p. 39.

When to my car my money yokes six spankers, are their limbs not my limbs? Is't not I on the proud racehorse that dash by? Mine all the forces I combine, the four-and-twenty legs are mine!

Goethe, Faust (Anster's translation), I.4.

He who has the healthy vigour of humanity in him has the strong instinctive sense that ideally he is limitless.

Tagore, The Religion of Man, p.120.

And not a man, for being simply man, Hath any honour; but honour for those honours That are without him, as place, riches, and favour.

Troilus and Cressida. III.3.

1. THE REGION OF COMMON SENSE.

My observer is back again in the place where I am a man --- in the place where, presumably, common sense comes into its own. His journey, into regions whose scenery is fantastic, mysterious, and obscure, is over; and he ought now to be able to give straightforward answers to the questions: 'What am I, and where am I?' Here if anywhere at all, at this safe and comfortable distance, it should be possible to draw a portrait of me that will be distinct, self-contained, and a good likeness.

My observer's first task is roughly to define me, his object, distinguishing between what I include and what I exclude; he must make sure of my general shape, my chief recognizable characteristics, before going on to a more thorough examination. But at once he finds himself in difficulties. For he discovers that I have no fixed boundaries, no constant shape, no standard set of organs. Even at this ordinary, common-sense range, my body is elastic and my limbs are innumerable. There is no telling what monster -- winged, many-footed, powerful, vast, swifter than the wind -- I shall not become. The little core of flesh and blood is only a fragment (which is neither distinct nor self-contained) of a much larger and very different kind of human body. °

2. A DISPUTE OVER MY BOUNDARIES.

My common sense, however, has no doubt about where I stop and other things begin, or about the way to recognize the frontier. In the first place, there is the criterion of sensitivity. A tear in my coat does not hurt me. For this reason I say that my coat is outside my body.

The reply is that, if sensitivity is the qualification for membership in my body, then a great deal of what is inside my skin has to be ruled out, and a great deal of what is outside my skin has to be admitted. My brain is as insensitive to pain under the surgeon's knife as my hair is under the barber's scissors, and an ascetic or a masochist may actually derive satisfaction from what is, on common sense's reckoning, a bodily injury. On the other hand, even the most casual observer would not agree that I am insensitive to the injury in the jacket. I show every sign of the distress I feel. ×

As for sensitivity in general -- the power of discrimination, the ability to react differently in response to differences in the environment -- the natural organ of flesh and blood is in most ways very inferior to the artificial organ of metal and wood and glass. Consider, for example, how objects are commonly measured. The primitive way is to use natural organs, and to reckon accordingly in paces, forearm-lengths, and handspans. The new organ -- a measuring-rod -- is a great improvement on the old. True, it lacks nerves and the ordinary organs of touch, but that is all to the good. For an enhanced kind of sensitivity, more visual and less tactile +, is now operating, and man knows precisely which parts of his standard and graduated measuring-organ match up to the measured object. By growing many such organs, man has, in a few thousand years, become an incomparably more discriminating organism than he used to be. He is now a giant with a feather-touch, and supersensitive to all manner of conditions which before did not exist for him.

C. When I tear my jacket I do not feel the pain <u>in the jacket</u>, as I do in my finger when I cut it.

"If those who so frequently declare that man is a finite creature would point out his boundaries, it might lead to a better understanding." Samuel Butler, <u>Life and</u> <u>Habit</u>, p. 104.

William James, <u>Textbook of Psychology</u>, pp.176 ff., has an excellent section on the impossibility of drawing any distinct line between the <u>me</u> and the <u>mine</u>.

Cf. Whitehead: "Nothing is more astonishing in the history of philosophical thought than the naive way in which our association with our human bodies is assumed. The unity of man and his body is taken for granted. Where does my body end and the external world begin?" <u>Modes of Thought</u>, p. 155.

° Again language hints at the truth --- I put my heart into my work, and give my mind to it:

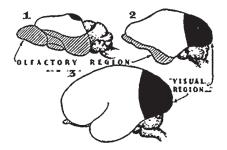
"And a Navajo woman, weaving her rug in the pattern of her dream

must run the pattern out in a little break at the end

so that her soul can come out, back to her." D. H. Lawrence, 'Whatever Man Makes'', <u>Pansies</u>, p.39.

× As Tagore says of our belongings: "They seem to belong to our very nature, to stick to us as a second skin, and we bleed as we detach them." <u>Sadhana</u>, p.77. Conversely, there is the practically universal belief that what is done to the clothes is done to the man (see <u>The Golden Bough</u> Abridged Edn., p. 43). Of course we do, with Descartes (<u>Meditations</u> VI) distinguish between the injury a pilot feels in his flesh, and the damage he sees occur to his ship; but in both instances there may be a feeling of 'personal injury'.

+ In many spheres, advance is a matter of the increasing dominance of vision. Generally speaking, the 'higher' the animal the more vision takes over from the other senses. Similarly, the more enlightened the man the less grasping he is --- it is enough to enjoy the remote object. Gradually we learn that the way to lose things is to hug them to ourselves.



Development of the visual region of the brain: (1) Jumping Shrew, (2) Tarsier, (3) Marmoset. These are probably analogous to the stages in the evolution of the human brain.

P. While there are marked differences of quality between the two experiences, there is no difference of primary location. Both occur here at the Centre, and both involve regional projection. In respect of thereness, I find little to choose between the cut finger and the torn coat.

C. I have no direct control over my jacket, but when my hand is hurt I have the power of withdrawing it or hitting back with it. Therein lies the real distinction between what is my body and what is not my body.

P. Are my involuntary muscles then outside my body? Which is more under my control --- the beating of my heart or the ticking of my watch? If only that which I can move is my real body, then I am a hollow sphere, in which most of my natural organs do not belong, and most of my artificial organs do belong. Nor are the latter mere appendages. They are thoroughly incorporated in me, inasmuch as my whole behavior-pattern shapes itself upon them. They are organs of my life because I live with and through and by them, and, so living, am more alive.

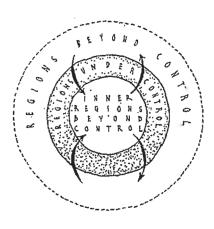
C. But these so-called organs -- my jacket, and pen, and chair -- are dead.

P. So are the mineral salts secreted by my bone cells, the fluid part of my blood, my saliva, the hydrochloric acid of my stomach, the bile of my liver. Yet without these dead things I am dead. Every living thing is a society of dead members: together they live, apart they die. My jacket is one of the dead members of the society which I am. In the totality, it lives. When I wear it, I animate it. Like the tea I have just drunk, it participates in my life.

C. Nevertheless it is discontinuous with the rest. The real distinction between my jacket and my limbs is that I must amputate the first and cannot amputate the second.

P. Decayed teeth have been extracted, filled, and replanted in the jaw, after the socket has been treated with penicillin. The bone reforms round the roots of the tooth, which is good for years after. + Perhaps, by the time I am dying, I shall be able to leave my healthy organs to friends who need them. Hospitals may, at no very distant date, carry stocks of inner organs, just as tailors and furnishers and engineers now carry stocks of outer organs. However that may be, this much is certain --- discontinuity is no more fatal than continuity is life-giving. In fact, one of the most notable features of my cells is precisely their discontinuity: they are separate individuals whose substance does not mingle. Admittedly my outer organs are, many of them, less compactly arranged than my inner ones; admittedly it is easier to remodel the periphery of the organism than the core, and amputation is reduced from a major to a minor operation. × But it is just this elasticity, this loose-jointedness of my outer organs, which is their chief advantage. They are much more efficient instruments of my life, much more vitalizing, much better organized than if they had been permanently attached to the core. They are more a part of me for being less so. °

C. To leave all subtleties of argument aside, the simple, practical truth is that all which my skin encloses is myself, and all which lies outside is



"Often if an accident happens to a gentleman's legs, they can be mended; but if a similar accident happens to the legs of his pantaloons, there is no help for it We know but few men, a great many coats and breeches. Dress a scarecrow in your last shift, you standing shiftless by, who would not soonest salute the scarecrow? Passing a cornfield the other day, close by a hat and coat on a stake, I recognized the owner of the farm. He was only a little more weather-beaten than when I saw him last." Thoreau, <u>Walden</u>, 'Economy'.

+ This operation was performed in 1945 at St Mary's Hospital, Praed Street, London. See <u>Daily Telegraph</u>, June 27, 1945.

Keratoplasty or corneal transplantation, in which a portion of the transparent cornea is taken from the eye of a corpse (or from an eye that has had to be removed from a patient) and grafted on to the living eye, has been practised for a number of years, with some success.

× The fact that tools are detachable from the body of the user is the basis of our 'detached' attitude to them. It is almost impossible to see the hand that holds this pen, in the way I see the pen: the psychological difference is much greater than the logical difference. This is no accident --the price of man's control of matter is his detachment from matter. Cf. H. Wildon Carr, <u>Changing Backgrounds in Religion</u> and Ethics, p. 182 ff.

° Much the same could be said of the grains of sand which certain shrimps pick up and put in their organs of balance: the pressure and movement of the grains give rise to reflex actions which cause the shrimp to remain upright. (The shrimp will use iron filings if only these are available; it then swims upside-down when passing under a magnet.)

other than myself -- mine, perhaps, but not me.

P. Then the parasites and gall-stones, the false teeth, the stitches and metal plates and other orthopedic devices which I may contain, are truly me. On the other hand, if my blood has been passed through an irradiation apparatus, it has become other than myself. +

C. A brief period outside my skin is not enough to deprive my blood of its membership of my body, a membership which it has held from the beginning. But any intruder, anything which did not grow up along with the rest, must obviously be ruled out.

P. There is a foetal disease × in which only a complete change of blood will save the organism's life. Which is really alien, the original blood that kills, or the new blood that preserves life? In any case, would it not be a foolish and a hopeless task to try to distinguish, in the baby whose life had been saved in this manner, the native parts from the foreign? This is an exceptional instance, but there is nothing exceptional about the bacteria that inhabit the human intestines. Many of these guests seem to be neither harmful nor helpful, but there are others which do their host great service by supplying him with vitamins. $^{\circ}$ Now these beneficent micro-organisms were certainly not a part of him when he started life as a single fertilized cell. Are they not, nevertheless, incorporated, sharing in the life of the whole? *

C. Then the real criterion is permanence linked with dependence: what I come to rely upon, what I can neither spare nor exchange, is myself. Clearly, my tools and instruments and clothes, though necessary (in part, at least) are impermanent and easily replaced. And for that reason they must be reckoned external.

P. On the contrary, I need not (to tell the truth, I cannot) refurnish my house every year or every five years, while I can only keep my flesh and blood by constantly getting rid of it. The material of my body is always changing, but the rate of change tends to be faster near the centre of my regions. Thus there is a sense in which my wrist is less permanently mine than my wrist-watch is. •

C. All the same, there is no doubt which of the two I need most. This is the real test --- essentiality. I can do without my watch and my coat, but not without my coat's contents.

P. Without any clothes at all, I die; without clothes of such and such a general pattern, I cannot live a human life; without clothes of such and such a particular pattern, I cannot get a living in society. Are not these integuments just as necessary to me as my blood and my nerves? If I earn my keep with this pen, surely it ranks at least as high among my organs as the fingernail I can do without, and the appendix which is liable to become an active menace. The truth is that I am one, a unity of organs both natural and artificial, native and foreign, central and peripheral, essential and inessential. To speak of a cloud or of a stone as one thing, yet of a man and his coat as two things, is ridiculous. † And in practice everybody admits their unity. The clothes make the man.

C. But everybody admits the vital distinction between the man and

+ Cases of peritonitis and puerperal septicaemia have been successfully treated by passing the patient's blood through an apparatus which exposes it to ultra-violet light.

× <u>Erythroblastosis foetalia</u> --- a disease which has been attributed to a discrepancy between the parents' blood-types.

° Notably vitamin B1. It seems that there are many people who do not contain micro-organisms capable of supplying them with this vitamin: such people have to depend on their diet to provide the necessary quantity of B1.

* The alimentary canal of the ruminants contains a vast population of microfauna and microflora. The functions of the latter have been described by Sir Joseph Barcroft as (1) vitamin synthesis, (2) the digestion of carbohydrates, (3) protein formation. (<u>Science News</u>, III. p. 160) What is functionally a vital part of the animal is, in this as in many other instances, genetically foreign.

• It is noteworthy that the word my is applicable, without any discrimination, to all the organs of my life, from my kidneys to my watch, and from my watch to my country. Mr C. S. Lewis (Screwtape Letters, p.109) finds this usage misleading: the fact is (he says) that we do not own even our bodies. I agree that we do not own them permanently. My thesis is (1) that we own (and are) just as much and just as little of the world as we care to identify ourselves with, (2) that the dimensions of our total body accordingly range between nothing at the Centre, and the whole of things, and (3) that there is no clear boundary between the flesh-and-blood part and the rest.

† The myth of the garment which (having been steeped in the blood of Nessus) became part of the flesh of Hercules when he wore it, is basically true.

his get-up.

P. But which is the man? Is he the interior organs that he had thrust upon him, that are mostly out of his control, about which he knows little and cares less, which he neither desired, nor planned, nor earned, nor made -- is he these, or is he the exterior organs that he wanted and worked for and chose, the organs without which he feels lost unnatural, not himself, the organs which express his personality, which he may have made, and, in any event, knows how to use deliberately and with precision? 6 "And not a man, for being simply man, Hath any honour." + If he is where he lives his life, then he is more present and alive in his outer or artificial organs than in the flesh and blood that they enclose. \times That is why people who do not blame him for the colour of his hair will criticize his tie and his socks. The clothes make the man because the man makes the clothes. "Perhaps not once in a lifetime does it occur to your ordinary biped, of any country or generation ... that his Vestments and his Self are not one and indivisible." † But the ordinary biped is right, humanly speaking, and the contemptuous tone of Carlyle's utterance is unjustified.

A parcel of books or a sack of coals is seen as a quantity of books or of coals in a container, but a man is not seen as a naked body with clothes on. What he is wearing is for me a genuine feature of the man himself. If, taking leave of his senses, he were to undress in the street, the effect would be as shocking as if he had been run over. Besides, why not go by appearances for once? Why not simply accept the man as he is actually given, continuous with his clothes? It takes a sophisticated, tooclever observer to see him as a clear-cut object of any sort, standing out against an alien background. The hard outline of the pen-and-ink portrait is a fake: man is a vignette, shading off into the universe. And even the sharpest black-and-white sketch of a man reveals nothing about the <u>back</u> of him: for all the sketch can indicate to the contrary, he may there be absolutely continuous with the environment.

(Anthropologists have shown how peoples all over the world look upon dress as part of the wearer's personality. Thus the Laws of Manu require bathing in clothes; ° in many communities a man's dress represents him when he is absent; there is an Irish belief that the clothes of a dead man wear out with unusual speed; * in Fiji, the man who puts on the clothes of a chief is said to contract a particular disease. • To shed clothes is to reduce the personality, hence ritual degradation by stripping a soldier of arms and badges of rank; hence also the European's hat-lifting, and the Asiatic's removal of his shoes. ϕ The wearing of poor or very plain garments as mourning has a similar significance. Though we no longer bury a man's utensils or weapons with him, we take it for granted that the corpse should be dressed in a decent suit of clothes. \oplus A quarrel between Indians of British Columbia may be settled by destroying blankets, each party sacrificing an equal number: the injury is certainly felt, seeing that blankets are currency as well as integument. ‡ These few instances, taken from the immense literature of the subject, are sufficient to suggest how general and many-sided is the belief that man is continuous with his clothes. •)

 Θ Nor, in view of Dr. J. B. Rhine's exhaustive experiments on psychokinesis, can it be said with confidence that we always move our bodily 'extensions' by means which are less direct than those by which we move our bodies: the extension does not always, it seems, have to be manipulated, or controlled in any obvious way, by the nuclear body.

+ Troilus and Cressida, III. 3.

× William James, discussing the identification of a man with his clothes, goes so far as to say that few of us would unhesitatingly prefer to have a beautiful body in perpetually shabby clothes to an ugly body in clean ones. (<u>Textbook of Psychology</u>, p. 178) Elsewhere, James finds "the substantive thing which we <u>are</u>" to be the effort we put forth; that which we carry is less truly ourselves. (<u>Principles of Psychology</u>, ii, p. 578)

† Sartor Resartus, I. 8.

The number of writers who have regarded the clothes and instruments of man as extensions of his body is fairly large. For example, there are, besides Carlyle, Lotze (Microcosmus, English trans., i. pp. 586 ff), Samuel Butler (Note Books, 1915, pp. 50, 51), Bergson (Creative Evolution, p. 148; Morality and Religion, p. 267), Julian Huxley (The Individual in the Animal Kingdom, p. 29), and Gerald Heard (Narcissus, An Anatomy of Clothes, I & II). Perhaps the most striking tribute of all to the continuity of the human body and its clothes, is paid by the fetichist, whose sexual desires are entirely gratified by a shoe or a piece of underclothing. See, e.g., Freud, Introductory Lectures on Psycho-Analysis, pp. 257, 292-3.

° The custom of bathing in one's ordinary clothes is still generally followed by Hindus today.

* Earnest Crawley, <u>The Social Psychology</u> of Dress.

• Frazer, <u>The Golden Bough</u>, 3rd Ed., iii. p. 131.

 φ Cf. the privilege, occasionally granted, of remaining covered in the presence of royalty.

⊕ In the U.S.A., day-clothes are favoured (a fact which Aldous Huxley gruesomely exploits in <u>Ape and Essence</u>); in England, more appropriately, perhaps, night-clothes. But in either case to strip the corpse would amount to mutilation.

‡ Earnest Crawley, Op. Cit.

• J. C. Flügel's <u>The Psychology of Clothes</u> is perhaps the most important recent contribution to the subject.

Nor will it do for common sense to argue that, when all is said and done, I live in my body and therefore I am (unlike the outsider) in a position to say how extensive it is. Looking at my left hand as it now rests on this book, I can discover nothing to mark it off from other things, no evidence of privilege, no sign of ownership. For all I can tell to the contrary, it may be a particularly well-made wax model. Often it comes to me as a shock to find that what seems so immediately and indisputably given -- the shape and the boundaries, the nature, the existence, of my body -- is not given at all. Lying quite still in bed in the dark, and attending to what is actually presented at the time, it dawns on me that I have no evidence as to my form and extent: × I might well be a mere point, or a bodiless head on the pillow, or a giant centipede, or a planet floating in dark space, or the universe itself, or any other of a million things. There is nothing to indicate where I stop and other things begin. I cannot, by direct inspection, count my fingers: I cannot so much as be sure that I have any.

Is this simply failure, on my part, to recognize what in fact exists? Not at all. It is an experience that must be taken for what it is, and with the utmost seriousness. So long as this state of attention to the immediately given lasts, there is no sense in which I am a man, or any kind of embodied creature. My boundaries really have vanished. I am no longer a separate thing. Such merging is not abnormal; indeed it is the commonest thing in the world. For the temporary and artificial demarcations of active waking life cannot be maintained. Every night they must quietly obliterate themselves. The man who cannot sleep -- who fails to break down the daily barriers which he erects between himself and the universe -- goes insane. For the sake of health and happiness, no less than for intellectual reasons, I must regain that infant innocence of boundaries which I had before my isolation grew defined, and I came to the fateful conclusion ---

"I am not what I see, And other than the things I touch." *

3. GROWTH AND AMPUTATION.

My body is a collection of tools and instruments. My hand, for instance, is a vice, my legs are propellers, my eyes are optical instruments. But the flesh-and-blood tools which I have grown on my body are altogether inadequate for the sort of life I am accustomed to lead. It is difficult to think of a single human task that I can perform with these bare hands. My 'natural' body is, in fact, no body at all, but only the fragment of one, since it cannot get its living, or even survive, without many additional organs. The only way for me to live the life of a man is by growing and using the complete body of a man --- a body which is very much bigger and more intricate than that of any other creature on earth.

And so I extend the body I was born with. To write this book, I grow a new organ, a sixth finger on my right hand. When I want to break something, I develop a particularly hard and heavy fist -- or hammer-- for that purpose. When I want to take a very close look at something, I grow

Piaget says of the young child: "A pain in the foot does not immediately draw its attention to the foot, etc. It is rather a wandering pain which is not localized and which everyone is thought to share. Even when localized the infant no doubt for a long time still regards it as common to all; it cannot spontaneously realize that it alone is able to feel the pain." <u>A Child's</u> <u>Conception of the World</u>, p. 126.

× It is an interesting question how far one's sense of physical separateness depends upon the contrast between one's body temperature and that of one's surroundings. Cf. Rilke, <u>Duino Elegies</u> (Leishman and Spender's Commentary), p. 136.

"People are never tired of saying that man is but a minute speck," Bergson points out. "Yet, even physically, man is far from merely occupying the tiny space allotted to him ... For if our body is matter for our consciousness, ... it comprises everything we perceive, it reaches as far as the stars." But for various reasons "the habit has grown of limiting consciousness to the small body and ignoring the vast one."

<u>Morality and Religion</u>, pp. 221-2. In point of detail, however, I differ from Bergson here. When I see a star, my body is not extended to include <u>that</u> star, but to include <u>this</u> star, namely the solar system.

* Tennyson, <u>In Memoriam</u>, XLV.

"As for thy body which as a vessel, or a case, compasseth thee about, and the many and curious instruments that it hath annexed unto it, let them not trouble thy thoughts. For of themselves they are but as a carpenter's axe, but that they are born with us, and naturally sticking unto us." Marcus Aurelius, <u>Meditations</u>, X. 38.

"Man is a tool-using animal", wrote Carlyle. "Without tools he is nothing, with tools he is all." (<u>Sartor Resartus</u>, I. 5) new lenses on to my eyeball and call them my microscope. Directly I feel cold, I double the thickness of my skin, and directly I feel hot I slough a layer. When my teeth get beyond repair, I grow another set, by a new and swifter method. Thus my body may be roughly divided into two sections --- the part that I cannot easily change at will, and the part that I can grow and shed as I please (provided I have the money). The organs of the first I always carry with me; the organs of the second I leave lying about the house -- on my desk, in my wardrobe, on my work-bench, in the pantry and the kitchen and the bathroom -- as so much loose, ready-to-grow anatomy. To live a human life is necessarily to inhabit a Bluebeard's chamber or dissection room, since it is impossible to incorporate, at one time, the essential organs, yet impossible to dispense with them. +

When I sat down in this chair to write, I grew four additional legs. It is convenient, at this moment, to have as many legs as an insect. But whereas I leave four legs behind when I get up, a fly is obliged to carry all its six legs about all the while, though they are as useless when the fly is in the air as chair-legs are to me when I am walking. * When I am boring a hole in a piece of wood, there is no very great difference between me and a beetle-grub --- we are both animated gimlets. The vital distinction is seen when, amputating the gimlet and growing a saw, I undergo a metamorphosis that is denied to the grub. It is a rash and a crippling thing to become attached to one's instruments. The lobster's claw, the horse's hoof, the bird's wing, the eagle's talons, so efficient at their special tasks, are in a manner of speaking nothing less than deformities, monstrous growths from which the animal suffers, occupational diseases. The specialized animal is over-successful: it has rashly committed itself for life to an exquisitely efficient set of tools, and to the restricted way of life that goes with them. Man, on the other hand, owes his success to his failure. Because he is an expert at nothing be becomes an expert at everything, for he has perfected the art of amputation. He can grow and remove, painlessly, at a moments notice, without loss of energy, all the antennae and wings and hooves and furs and fins and carapaces and pincers of the animal world.

For the sake of his health, and for aesthetic reasons as well, it is desirable that a man should deposit his waste matter in a place that is fitted to receive it --- the town's sewage works. Now there are three conceivable ways of doing this. He may go there daily. He may grow a natural bowel leading from his house to the sewage works, burying it beneath the pavements --- nature has done more astonishing things than this in her time. ^o Or he may grow an artificial bowel known as a drain, which he can cut away and re-graft on to himself as often as he wishes. The superiority of the third method needs no advertisement: the remarkable thing is that nature was so long discovering it.

4. <u>THE GREATER BODY.</u>

Other creatures reduce the occasion to the measure of their bodies; I enlarge my body to the measure of the occasion. I become the organ-

"A stick and pockets are part of human physiology," a contemporary French novelist makes one of his characters say. "My stick extends my tactile and muscular sensibility by a whole yard, prolonging and transforming all my sensibilities except that of heat It is also an optional antenna which is insensible to pain, and can be replaced in case of accident." There follows an account of the advantages of our pockets over our natural reservoirs, which are far too susceptible to our emotions: a pocket is a container-organ free from the inconvenience of sphincter-control. (Georges Duhamel, Cécile among the Pasquiers, London, 1940, p. 64)

Cf. Tagore, The Religion of Man, p. 33.

+ On first thoughts, it is curious that so few artificial organs are worn, as clothes and watches are worn. Semi-permanent ear-phones, capable of intensifying and of damping sound (thus giving perfect quiet in railway carriages, and perfect hearing at lectures) would seem to be invaluable. They might be combined with a similar device for voice-control, telescopicmicroscopic spectacles, and an arrangement of mirrors which, in effect, gave the wearer eyes in the back of his head. So far, however, man has wisely preferred a number of detachable organs to a single permanent one.

* It is not so long ago when a German peasant would put a chair-leg in splints if one of his sheep broke a leg --- homoeopathic magic, of course, but there is sense in it.

° The extreme elongation of many of our own neurones is a case in point. If, at cell-level, I can extend my body, in a few weeks, to millions of times its own length, why not at man-level also? ism that circumstances require. When I want to address a large number of people, I may grow a set of vocal chords in a million homes. When I want to fly, I add to my body a pair of wings incomparably more powerful than any bird's. Under-water, I turn into one sort of fish; on the water, into another sort --- metamorphoses that are as swift and as complete as they are reversible. On land, the guise in which I appear is governed by the necessities of the moment: whether I am built for speed or am rooted like a plant, whether I am a puny biped or a thousand-horse-power colossus, whether I am a creature whose sense organs are distributed over a few square feet of skin or over the whole civilized earth --- all depends upon the task of the moment. Thus to be a man is to be much more than a man, more than a mammal and a bird and a fish and an insect rolled into one composite organism +. I am a Proteus, a chimera, whose extent and variability no myth-maker had the imagination to foresee. Oddest of all, I go about under the impression that I am 'only a man', not very different in constitution from an ape; whereas there is really far more difference between my body and the body of my great-grandfather (to go no further back than that) than between the latter and the bodies of our simian ancestors --- so rapidly has the human organism evolved in the last hundred years.

The chief virtue of this greater body is the manner in which it incorporates time. × Our blindness to its superiority as an organism is due to the fact that its versatility does not appear at any single moment, but is spread over a period. You cannot take me in at a glance. Give me time, and I will show you what the human body has become. From being three-dimensional, I have grown four-dimensional: I have developed a temporal anatomy, so that of two organs of mine it must be specified how they are related in time, no less than in space. Thus my soup-spoon hand, though coincident spatially with my dessert-spoon hand, is removed from it by fifteen or twenty minutes, and my bed-legs are eight hours as well as eight inches long. The many-limbed gods of the East are a true picture of time-developed man.

Compare the primitive food-gatherer's meal with mine. What is the distinction between his eating bread-fruit and my eating bread? It is that, whereas he eats now, I do not. My meal began months ago, when the wheat of which my bread is made was still standing in the field. Like any other herbivore, I grazed in the field, biting off the corn-stalks with my greater jaws --- the reaping machines. Having eaten, I started to digest my food. Useless husks were removed in my first stomach, the threshing machine. My second stomach was the mill where the grain was ground into flour; my third, the bakery where the flour was made into bread; my fourth, the kitchen where the bread was cut, toasted and buttered. By the time the toast arrives on my table, it has already passed through several outer digestive organs, each of which has brought the raw food one stage nearer to its final form. Lastly, my flesh-and-blood organs having extracted the nutriment they need, the rest is passed into my drain-bowel and returned to the land. Like animals and primitive man, I feed on the land and excrete on the land. The difference is that the body which I use for that purpose is so much vaster, so much more inclusive of time and of space, than theirs.

"Although to be patterned in the form of a man is something to be more or less pleased about, the source of joy beyond all reckoning lies in the fact that a thing like a man's body has a myriad transformations, and there never has been any limit to them <u>Chuang Tzu Book</u>, VI.

+ It is a common fallacy to argue from man's bodily kinship with. animals, to his mental and spiritual limitations. The error lies, not in correlating mind and body, but in the failure to observe that man's body is, even from the biologist's angle, a new <u>kind</u> of organism. The human body is not merely vaster, more efficient, more versatile, than any animal's --- it is organized on another principle. <u>The difference between</u> men and animals is just as great physically as it is psychically.

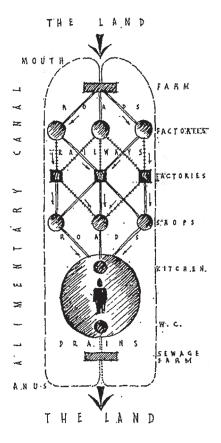
× On the connection between man's use of tools and his appreciation of time, see Leon Litwinski, 'The Psychology of "Mine", in <u>Philosophy</u>, Nov.1947.



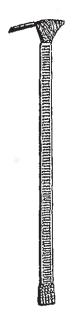
The Hindu god Krishna, from a contemporary wall-painting on a house in Puri, Orissa.

Everywhere I have mouths: the net dragging along the sea-bed, the cow munching grass, the pump raising water from the well, are myself eating and drinking. Everywhere I have eyes: the news-photographer carries one of them slung over his shoulder. Everywhere I have hands, from the micrometer that will measure a hundredth part of a millimeter to an industrial plant covering miles of country. All these, and the innumerable devices of which these are only samples, are my means of life, in the same way that my hands and feet and liver are my means of life. They are true organs, and they make up the bulk of me. The tiny and helpless protoplasmic core is no more my whole body than the animal's brain is the whole animal. It takes a human body to live a human life, and it is an empirical fact that the contemporary human body has far more wood and steel and cloth and paper in it than protoplasm. The personality is mostly personality. If I have one heart that beats inside my skin, it is because I have a thousand that beat outside. Increasingly, modern medicine is forced to take into account (and, if possible to treat), not merely the flesh and blood of the patient, but the whole of him --- home, work, social background. ° The enlightened physician knows that the inner regions of a man are not sick in isolation. Indeed it is obvious that stomach trouble may begin in one of the outer or 'artificial' stomachs, that a lesion of the drain-bowel sometimes proves fatal, that an industrialist's headache is apt to originate in his 'hands'. Less obviously, but not less truly, no man can be called healthy (that is, hale or whole) whose circumstances are chaotic. I have to admit that many disturbances which I had imagined were external are really internal. I can no longer claim that I am free from the manifold diseases that plague my outer organs.

We are as vividly conscious of our tools and machines taken one by one, as we are unconscious of them in their living totality. Why has it never occurred to anyone to write a natural history of man's greater body, to study the whole organism in the same objective spirit in which the core is studied? What would become of medical science if the body's organs were parcelled out amongst specialists, none of whom gave the whole organism a thought? Yet the science of the complete man in his physical aspect is in just such a condition. It is the study of separate limbs, killed by amputation from the trunk, and distributed among a hundred technological departments. Until there is a pure science of applied science, an anatomy and a physiology of the total man, he remains, like the lower animals, ignorant of his body as such, and to that extent unselfconscious. At present he thinks too little of his artificial equipment --too little, and too much. The West makes a god of the machine, and despises it; the East despises the machine, and makes a god of it. In many parts of India an annual puja is held, when pens and pencils, chisels and hammers, and machines of all descriptions, are decked with flowers and fresh paint, and venerated. There is a great deal more sense in this ancient custom than we are prepared to allow. For tools are human. They are the human body prolonged and brought to a fine edge, perfected for and keyed up to some special task, given point and precision. And, if the human form is divine, its divinity can hardly be contained in the core: it must spread to the outermost cog and rivet. Perhaps the schoolboy's worship of fast cars, and the rapture of the youth tinkering with his first motorcycle, are, after all, mystical communings with a minor deity that



° It is a fact of the greatest importance for medicine that (to quote William James) "a man's Me is the sum total of all that he CAN call his, not only his body and his psychic powers, but his clothes and his house, his wife and children, his ancestors and friends, his reputation and works, his lands and horses, and yacht and bankaccount." <u>Textbook of Psychology</u>, p. 177.



Stone adze from the Hervey Islands, in the Cambridge Museum of Archaeology. The shaft is too large and too weak for use --- the tool has become a god. See A. C. Haddon, <u>Evolution in Art</u>, p. 80, and R. U. Sayce, <u>Primitive Arts and Crafts</u>, p. 128. their elders are too clever and too dull to discern.

What is certain is that every machine has life and purpose. A mindless instrument is an absurdity, a contradiction in terms. Since machinery is a true outgrowth of the human body -- a flowering and ripening -- it shares the common life to the full. This is a truth which most materialists and all philosophical mechanists fail to see. When (whether consciously or 'unconsciously') they think of man and the universe in terms of mechanism, they do not take for their model the machine as it is, in its living unity with man; instead, they take a dead abstraction, a figment. La Mettrie arrives at his <u>L'homme Machine</u> by amputating and killing the limb, and then fraudulently equating it to the body. As the late Canon Streeter justly said, "If then you explain Nature -- which is also 'a going concern' -- in terms of mechanism while expressly excluding from the connotation of that word all reference to intelligence and purpose, you are explaining it in terms of something that never has existed and never could." ×

What is called the human body is only its principal organ. To be sure of this, all that is needed is the courage to use one's eyes. For my retiring observer, the vastness and the versatility of my body are a matter of simple inspection. He witnesses my metamorphosis into a house, or, if I am travelling, into a train, or a ship, or an aeroplane. * As he recedes I become these things, in the same way that, when he approaches, I become cells. The discovery of my human body is made in the region where it exists, as a pervasive influence.

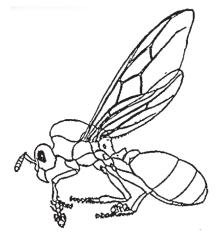
5. <u>POLYMORPHISM IN SOCIETY --- MY DAILY EVOLUTION AND</u> <u>DEVOLUTION</u>.

Organism determines function, and function determines organism --that is the double rule throughout nature. An anthill or a termitary is a community (and not just a crowd) because its members have different tasks, and different tasks mean different bodies. Workers and soldiers, kings and queens, even the guests or domestic animals, are equipped with the tools of their respective vocations, but they are protoplasmic tools that cannot be laid down and picked up again. A community of men is no exception to the rule that the members must take different bodily forms. To the casual observer, humans look much the same -the only considerable differences we notice are those of age and sex, of health and wealth -- but in truth their diversity is extreme, far surpassing the polymorphism of the social insects. Our human physique ranges from the handicraftsman's little body, with its overgrown right arm, to the tentacled, world-wide magnates of big business and big politics. It is upon the immense variability of the human body (a variability not surpassed by the rest of the animal kingdom considered as a whole) that our society is founded. In fact, it is a question whether man does not now rank, on morphological grounds alone, as a new biological kingdom, comprising many families and genera and species. The only valid reason for continuing to reckon him one species is that he is able to revert to

Bergson has pointed out, in The Two Sources of Morality and Religion (p. 268), that the mystical and the mechanical are not unconnected. Mysticism needs the leisure that mechanization can give. On the other hand, "the origins of the process of mechanization are indeed more mystical than we might imagine." But machinery will only find its true vocation when it enables man to stand erect and look heaven-wards. There is more than a touch of mysticism (in the best sense) in Samuel Butler's philosophy of machines in Erewhon, and in Carlyle's philosophy of clothes. I suggest that much of the interest of the artificial organ, and all the thrill of discovering its function to be the further growth of the natural organ, are due to the fact that here the gaping wound between the self and the not-self may be healed, and the blood-stream of the little fragmentary body is joined to a more copious supply.

× <u>Reality</u>, p.12.

* And in fact, to the innocent eye, the ship or the aircraft, with its highly trained and minutely organized crew, is a unitary 'organism', though it lacks full integral status. The intensive training of a bomber aircrew has for its end the creation of a supra-individual unit, or composite being, which shall act as a single highly skilled and intelligent (though impermanent) living thing. But I do not think we can take seriously Mr. Stapladon's suggestion that such a unit could, as such, survive physical destruction.

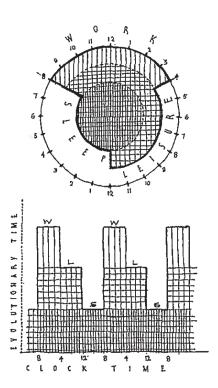


Queen ant carrying blind workers of her own species (<u>Carabara vidua</u>) --- an instance of extreme polymorphism. After Wheeler, <u>Social Life among the Insects</u>.

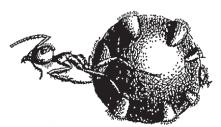
a primitive uniformity for brief periods. The giants and the dwarfs of industry, the big men and the little men in every walk of life, all shrink to the size and the shape of the common man -- to the lowest common physical factor -- at the end of the day's work, when they discard the organs which make them specialists. This they do in order to grow another set of organs --- organs through which society serves the man, in, place of those by which he serves.

Such fluidity of organization is a new departure in life's unfolding, the significance of which has hardly begun to dawn on human consciousness. I can have my cake and eat it; in fact, I can only have it by eating it. I can enjoy the advantages of a physique immensely more specialized than a termite's, yet avoid the penalties. For, unlike the termite, I have, while evolving a differentiated body, retained my primitive body. Off duty, I have the good sense or the good fortune to be several thousand years behind the times. In his professional capacity the doctor is almost as neuter as the worker ant, the trooper as burdened with arms (note the apt ambiguity of the word) as the soldier ant, the air-pilot as dependent upon his wings as the young queen ant. Yet, when his work is done, each is inexpert, entire, undifferentiated. Every morning I telescope into moments the evolution of millenniums, and every evening I take off twenty thousand years with my working-clothes. Wiser than the ant and the termite, I have not burnt my bridges: I retreat across them nightly. My human status, the whole nature and manner of man's life, the existence of civilized society, arise out of this rhythmic growing and ungrowing, this diurnal ascent and descent. To be consistently progressive and up-todate is to progress backwards, like the ant. Solomon could not have chosen a worse exemplar. It is not as if there were no danger of our forsaking the detachable limb for the permanent. We all tend to the idée fixe, and the fixed organ that goes with it. Thus there is the functionary who identifies himself with his office, with its instruments and uniform and ritual, which he dare not (and, in the end, cannot) shed. The man who cannot climb down is rightly judged inhuman. Then there is the narrow specialist who is as attached to his test-tubes or his text-books as the lobster is to its claws, and the snail to its shell. Such over-differentiated persons are literally shallow: they lack verticality, or time-depth. Like the honey-pot ant that, lacking a barrel, is obliged to become an animated barrel itself, they are deformed.

If I am to avoid a similar fate, it will not be by avoiding expertness, but rather by achieving it, and confining it to the regions where it belongs. My inner human region -- the region where I am observed to be 'a mere man' -- is an unspecialized layer sandwiched between layers that are extremely specialized: between my cells below and my machinery above. In the lowest of these three regions I am fifteen billion workers which, instead of equipping themselves with tiny machines and implements, have actually become them, turning their bodies into so many chemical retorts, telegraph wires, panes of glass, vacuum cleaners, and what not. In the uppermost of the three layers this condition is repeated. The machine is the human tendency exaggerated, pushed to its logical conclusion, because it is no longer held in check by conflicting tendencies; it is the caricature of some primitive human feature. Now it is not in spite "By the institutions and state of science under which a man is born it is determined whether he shall have the limbs of an Australian savage or those of a nineteenth century Englishman. The former is supplemented with little save a rug and a javelin; the latter varies his physique with the changes of the season, with age, and with advancing and decreasing wealth...... If he be a really welldeveloped specimen of the race, he will be furnished with a large box upon wheels, two horses and a coachman." Samuel Butler, <u>Note Books</u>, pp. 50, 51.



To illustrate the daily rhythm of human life, with its three evolutionary levels of work, leisure, and sleep.



Replete honey-pot ant (after Wheeler). The crops of some of the workers or soldiers are used for storing the honey-dew collected during the summer. The 'repletes' cannot walk, and are suspended from the ceiling of the nest, where they regurgitate their contents as required. See <u>Social Life</u> among the Insects, pp. 179 ff.

of, but because of, these 'deformities' above and below, that the middle region is saved. The only reason that I can afford to be extremely unspecialized is that I am extremely specialized. But while the layers may be distinguished, they may not be divided. My life embraces all the regions in a unity of process, in an unceasing upward and downward movement whereby the whole is knit together. My freedom from all cramping narrowness is measured by my awareness of this process, which is nothing else than my conscious participation in its rhythm.

6. THE LIVING ORGAN AND THE DEAD.

Common sense is not entirely persuaded. No doubt my body is extended, and most effectively, but can this extension or prolongation properly be called <u>growth</u>? Firstly (common sense argues), our instruments are artificial; secondly, they are dead; thirdly, they are generated in a fashion all their own; \times lastly, their structure and their functioning are on utterly different lines from those of living organs. In short, the common-sense verdict still is that I stop at my skin. What lies beyond that boundary is frequently helpful, and sometimes indispensable; but it is addition, not true growth. And its removal is subtraction, not amputation.

Such great and fundamental distinctions between the flesh-and-blood instrument and the manufactured instrument cannot be explained away. On the contrary, they need emphasizing. They are as valid as the common-sense conclusion from them is invalid. For, oddly enough, it is by the deadness of my outer layer that I chiefly live. What is this deadness? What does it mean, in practice? It means the tapping of vast reservoirs of energy denied to the living. It means a discontinuity of parts which allows of piecemeal replacements (or what the biologist calls regeneration of organs, hastened and made more precise), of 'cannibalization' (as when six defective army trucks furnish parts for three complete ones), of lightning repairs and periodic overhauls and rebuilding, of sudden evolutionary advances to meet sudden changes in the environment --all of them inestimable advantages without which life has somehow to get along. It means all the benefits of extensiveness with none or few of the disabilities from which very large living organisms are apt to suffer. It means the choice, from a practically limitless range of materials, of that one which (in respect of strength, hardness, weight, durability, appearance, conductivity, elasticity, and so on) is most perfectly suited to the given task, whereas life must make shift with what a very special kind of jelly can do and be. It means the brilliant use of brilliant inventions --- the wheel, the clock, the mariner's compass, standard weights and measures, the internal combustion engine, the dynamo, are samples --which protoplasm could never attempt. It means the devising of novel instruments, without any obligation to adapt or make shift with old ones. (Nature, on the other hand, is always hampered by having to re-model existing structures: + thus the primitive pentadactylic 'hand' has to do for wings, hooves, talons, paddles, and paws --- rather as if all ships had to be altered carts, and all aircraft altered ships.) It means insensitivity to pain and to other irrelevancies, with supersensitivity to the selected as× Samuel Butler, while admitting "that we are never likely to see a fertile union between two vapour engines with the young ones playing about the door of the shed," points out that machines do nevertheless have their own kind of reproductive systems. See <u>Erewhon</u>, XXIV.



The use of tools is not entirely restricted to man. A wasp (<u>Sphex urnarius</u>) has been observed to select a pebble and use it to tamp the earth over the burrow in which she has laid her egg. See W. M. Wheeler, <u>Op. cit.</u>, p.55.

One of Köhler's apes spontaneously fitted two sticks together to make one long enough to reach a banana that lay outside his cage. (<u>The Mentality of Apes</u>) The immense variety of animal artefacts (such as birds' nests, the hives and hills of the social insects, and beavers' dams) are more impressive but less remarkable than the occasional use of true tools, which are useful, not in themselves, but indirectly.

⁺ As Darwin remarked, "new organs appearing as if created for some special purpose, rarely or never appear in any being." <u>Origin of Species</u>, 6th Ed., p. 156. The rule is: make-do and mend. "A well-developed tail having been formed in an aquatic animal, it might subsequently come to be worked in for all sorts of purposes, as a fly-flapper, an organ of prehension, or as an aid in turning, as with the dog." (pp. 157-8)

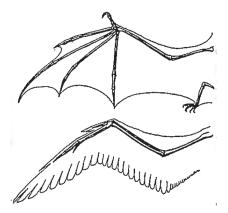
pect of the environment. It means the revelation of a vaster, more lovely, and immeasurably more abundant universe, by means of such instruments as telescopes and microscopes, cameras, seismographs, barometers, spectroscopes, radar. It means an accuracy and a speed in mathematical calculation far beyond the power of the best brains. * Above all, it means more skill, more awareness, more effort, more vitality on the part of man. ("We face the paradox", says Mr. Gerald Heard, × "that it is the machine, blind and invariable, which has forced back on the mind of man the initiative which he thought he had lost for good.") Or, if machinery does not evoke such qualities in man, at least it cries out for them: it sets him the tremendous task of living up to this creation of his, of becoming alive enough to cope with it.

The deadness of my outer organs means all this, and much more than this. What is such deadness but more abundant life, life becoming more alive as it works out towards the periphery? Making full use of what common sense calls my dead extensions, I am a thousand times more vital than the naked savage. That is to say, I am freer from accident, more extensive, more informed, more adaptable, more in control of circumstances, more of a force in the world, more of an individual --- in a word, more alive. I would not be more alive, but much less alive, if it took a surgical operation to remove my coat, if my hammer and piano and bicycle were built of cells, if my wings sprouted from my shoulder-blades like an angel's. Fortunately my tools are dead. And it is because they are dead that they are so very much alive. The telephone and the pen spring to life in my hand. °

How did I get such a body? I got it by being patient, by refusing the living organ and waiting for the dead. Consider my power of flight. If I had grown enormous fringed scales on my hands like the bird, or stretched a membrane between my fingers like the bat, or contrived wings from folds of my skin like the fly, I should have thrown away my chances of becoming human. I am so much more alive because I preferred the dead wing to the live one, aluminium to feathers. The unspecialized grasping hand as the universal joint, and the specialized tool which fits into that joint; have been our greatest educators; they have at once expressed and called forth the superior psychic organization that goes with them. Racially, the mind of man is the correlate of his total body, with its 'living' core and 'dead' periphery, and to divorce his mind from his peculiar physique is to fall into many errors. Individually, also, my mental organization arises from my gradual discovery and incorporation of the 'dead' organ. There are three stages in the process. At first, the organ does not exist for me --- I use it unconsciously or not at all, or it is used on my behalf; next, I become aware of it as an external object; finally, I learn by practice to incorporate it, I have grown in mind and body. Thus as a boy I enjoy what others make for me, then learn the look and the feel of my materials and my tools, and end as an expert who is sensitive at the tip of his brush and the point of his pencil, who feels, not the handle of his chisel, but the grain of the wood parting against the blade. Every toy or tool which enables me to act in a new way, with enhanced power, or at a distance, gratifies my impulse to mastery. • Extension of the organism is here no theory, but direct experience. The whole point of flying a kite is

× <u>The Code of Christ</u>, p. 68. "Above all," writes Bergson of the tool, "it reacts on the nature of the being that constructs it; for in calling on him to exercise a new function, it confers on him, so to speak, a richer organization, being an artificial organ by which the natural organism is extended." <u>Creative Evolution</u>, p. 148.

° Thus Bruno: "Thy boots and spurs live, when thy feet carry them; thy hat lives when thy head is in it; and so the stable lives when it contains the horse or mule, or even thyself."



(1) Bat's wing, showing the enormously elongated digits. (2) Bird's wing, which has lost some of the original five digits. The evolution of the horse provides another instance of the mutilation of the 'hand': in the end, each limb terminates in a single gigantic 'finger'.

"Man is the manipulative animal; he owes his supreme position among living creatures to his handiness. As for the tool, it may be regarded generically as an extension of the hand." R. R. Marett, <u>Head,</u> <u>Heart and Hands in Human Evolution</u>, p. 233.

• Cf. Robert S. Woodworth, <u>Psychology, A</u> <u>Study of Mental Life</u>, pp 556 ff. that I feel with it and feel into it: I am alive in this new, buoyant, fluttering, gaily coloured limb. Learning how to use an instrument is incorporating it. The difference between the novice and the expert is a difference of size. Whereas the driver or the pilot begins by extending to his fingertips and boot-soles, he ends by extending to his bumpers or wing-tips or keel. He has grown his machine. To adapt Lewis Carroll's Haigha, he is twice as large as life, and twice as natural. The feeling is general, but few are as aware of it as the under-sized operator of a big mechanical shovel, who thought his job 'champion' because (he explained) it made him feel like 'a bloody giant'. * Our way of speaking of machines indicates the way we really feel. Thus we say 'he ran into me', rather than 'the car which he was driving ran into me'; and 'his lights dazzled me' rather than 'the lights of his car dazzled me'. This is not slovenly speech. When the baby grows into the boy, he is held responsible for what his body does; in the same way, when the boy grows into the man, he is held responsible for what his car does. For he becomes his car. ϕ

And, in any case, who but an onlooker blinded by prejudice would call a yacht in a stiff breeze, and a racing car on the cinder track negotiating a bend, and a jet aeroplane taking off and landing, dead things? Here are all the beauty, and more than the performance, and much more than the energy, of the merely alive: with their human core they are doubly living. One of the most impressive spectacles I can call to mind was a parade of dozens of species of earth-shifters (bulldozers, angle-dozers, scrapers, mobile grabs, and the like) brought on to show their paces: a parade of Saurians would have been as tame as a cattle show by comparison. I really do not see why a Mappin terrace should not be devoted to these splendid fauna, in one of our larger zoos.

7. NATURAL AND ARTIFICIAL EVOLUTION.

Let it be agreed, says common sense, that the artificial organ is recruited from outside into the service of the natural organ, and that life rises to new levels thereby. But in origin and in development (common sense goes on) there is no comparison between the two. If it could be shown that one set of laws described the evolution of this hand and the pen that 'grows out of it', then, indeed, there would be less reason to doubt their continuity. †

I reply that it is the differences, and not the similarities, between the inner and the outer organ which make their union so fruitful. The second does not just prolong tendencies already inherent in the first. There is continuity, but it is creative continuity, for the artificial is a new departure in evolution. If the rationale of the new mode of evolution had been identical with that of the old, there would have been no advantage -- no survival-value -- in forsaking the old and well-tried mode of advance. But in fact the two ways are not independent: they are interlocking, differentiated aspects of a greater way, diverse parts of a whole whose broad features they nevertheless share. × Thus it is equally mistaken to ignore and to overrate the common characteristics of the old and the new evo-

"We feel the ground at the end of the stick we carry, not at the finger which holds the stick: the stick has become part of our body." Alexander, <u>Space, Time and Deity</u>, i. p. 105.

* Report in <u>The Listener</u>, Sept. 11, 1947, of a broadcast by Sir Henry Dale on the 1947 British .Association annual meeting. In 1950 the British Army issued a recruiting advertisement illustrating a mobile gun, with a description of the thrill of "handling giant weapons"; the caption ran --- <u>A</u> <u>50-ton punch in your fists</u>.

 ϕ In short, as Samuel Butler puts it (<u>Erewhon</u>, IXIV), man's very soul is a machine-made thing --- where the word 'machine' is used in its broadest sense. And animals' souls are what they are because they are not machine-made.



A nineteenth-century barque, the product of thousands of years of evolution, has all the subtle perfection of form that comes of many-sided adaptation ---the kind of fitness, or organic rightness in every part, that a cat and a gull have. Glory be to God, Gerard Manley Hopkins exclaims, for "all trades, their gear and tackle and trim". And Rupert Brooke praises "the keen

Unpassioned beauty of a great machine," in his most famous poem.

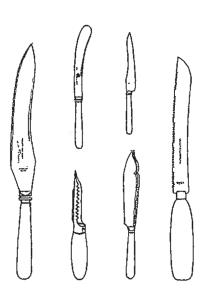
† In rejecting Paleyism, the 19th century lost almost as much as it gained. At least Paley realized (as did Samuel Butler in his very different way at the end of the century) the underlying identity of the natural organ and the artificial. Darwinism inevitably meant a vicious bifurcation in man; and failed to see that one law governs the evolution of every part of him.

× Biologists in general do not yet pay sufficient respect to Dr. Julian Huxley's hint ---"The evolutionist can often gain valuable light on his subject, on what one may call the economics of the process, by turning to study the development of human inventions and machines. There, although the ways in which variations arise, and the way they are transmitted, are different from those of organic evolution, yet the type of 'pressure', the perpetual struggle, and the advantages of certain kinds of variation therein --- these are in essence really similar." <u>Essays of a Biologist</u>, p. 36. lutionary procedures: both errors do injustice to the organic unity of life in general and of man in particular. In the following sketch (under the heads of Adaptation, Integration, Variation, Selection, Degeneration, and Exuberance) I distinguish some of the factors which are common to the two phases of evolution, but it is essential not to underrate the respects in which they differ. (I should add that modern evolutionary theory involves much more than I can suggest here, and that a full-length treatment of the subject would have many qualifications to make.)

Adaptation. An organ develops by becoming adjusted to its changing environment on one side, and to its owner's changing needs and constitution on the other. My legs, for instance, are the original fins (or fin-like structures) of my marine ancestors, adapted, by an age-long series of changes, to locomotion on land. But a limit to their development was reached. Apparently, further adaptation was feasible only through externalized evolution, whereby my legs grew wheels. Starting as the crudest kind of wheeled platform, the cart or carriage progressed by cumulative adjustments to its surroundings (hence the friction-brake and the irontyred wheel) and to its passenger (hence the springs and the hood). This dual modification went on till, in the fulness of time, my car appeared, with its many adaptations to outer circumstances (its tyre-treads taking account of the road, its indicators taking account of the traffic, its stream-lining taking account of the air, and so on) and to the protoplasmic body which it prolongs (as in the tilt and springing and upholstery of its seats). In all this, the evolution of the outer organ is not so much repeating the old procedure as developing it. If the new mode of adaptation is not in all respects as subtle as the old, at least it is incomparably swifter and more elastic.

Whether adaptation occurs by means that are called natural or artificial, the result of adaptation is variety. The fin becomes every sort of paw and claw, of wing and hand and foot. And so it is with the foot's extensions. The primordial vehicle has developed, from carts and wagons and tumbrils, through stage coaches, coaches of state, hansoms, growlers and cabriolets, to touring cars, taxicabs, sports cars, lorries, motor omnibuses, low-loaders, armoured cars --- but the list would be endless. And, just as many primitive fins and claws survive amongst the latest adaptations, so do carts and wagons, changed very little from their early forms, survive in the days of the limousine. +

Integration. Progress does not only mean increasing multiplicity and distinctions. As I have already noted in other contexts, the many and the one alternate in me, and this is as true of my temporal aspect as of my spatial. Both in my flesh and blood and in my outer body, I evolve by integration following upon differentiation. There was a limit to what I could achieve as a single cell; accordingly, I became many cells of various kinds --- cells which, by intimate co-operation, constitute one animal with greatly enhanced powers. My legs consist of a multitude of specialists pulling together, working in unity; so do my legs' extensions. My car incorporates scores of separate inventions (the wheel, the spring, the pump, the internal combustion engine, the clock, the pneumatic tyre, the dynamo, are instances) which began apart, but are here no longer divided. Thus the scattering tendency in me is balanced by the merging



Some of the varieties of knives to be found in the home. Note the adaptation of this hand-extension to different aspects of the environment, and the differentiation which this involves.

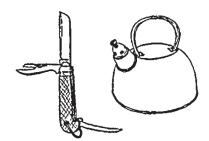
+ See Dr H. S. Harrison, <u>British Associa-</u> <u>tion Report</u>. 1930, for an account of the evolution of artefacts in terms of variation (random, numerical, and directional), mutation, and cross-mutation. Cf. R. U. Sayce, <u>Primitive Arts and Crafts</u>, IV.

tendency. +

Variation. One of the most characteristic peculiarities of living things is their tendency to change. Whatever the cause, every new organism has unique features. These are of three kinds --- (i) small individual differences, (ii) variations, or more notable departures from the specific norm, and (iii) mutations, or major changes involving something novel. Of these three, mutations (when they happen to have survival-value) are more likely to be preserved in future generations, and abrupt modifications of this sort have probably played a principal part in life's unfolding. The further, (or artificial) evolution of the organism continues along the same lines. Thanks to the organism's inventive genius, to mixtures in various proportions of luck and cunning, and to what seems to be mere accident, tools and machines come to vary. The novelty may consist in a new material (as when rubber tyres are substituted for steel), or in a new use (as when fire-engines or petrol tanks were first mounted on motor vehicles), as well as in a new structure. But plenty of variation there must be if there is to be progress. A further condition of advance is that variations and mutations shall alternate. For example, small improvements in the design of cars (such as brighter headlamps, better finishes, more cylinders), however frequent, are not enough; they must succeed and be succeeded by sudden changes of principle, as when pneumatic tyres and pneumatic brakes were first introduced. Life advances by alternately crawling and leaping. That is to say, there comes a moment when the improvement of the old device cannot go much further, and a new departure is demanded.

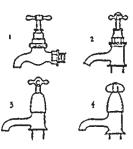
Selection. But it is not sufficient that variations and mutations should occur. If there is to be any progress there must also be discrimination, to conserve the valuable few and weed out the valueless or harmful many. Of itself, the organism's variability leads nowhere. When a new structure or function appears, one which gives the creature some advantage in the competition for food and for mate, and is capable of being handed down to the offspring, then the tendency is for the new type to establish itself, and perhaps to oust the old type altogether. Thus outer circumstances (including the inorganic environment with its climatic and geographical changes, the organic environment with its shifting and many-sided struggles and mutual aid, and intra-specific competition) mould species and genera by subjecting all hereditable novelties to the severest tests; and by continually altering the tests, so that the viable mutation of one epoch may be the doomed freak of another. A cataclysm may at a stroke turn the scales in favour of a hitherto obsolescent organ or species or genus, which forthwith flourishes. It is by such unceasing interaction of organism and environment that the core of me has been fashioned, and the core's extensions also. The same ruthless competition shapes the inner and the outer organ. \oplus Circumstances have selected these legs of mine from innumerable versions that have been discarded; and circumstances have selected the organ which prolongs my legs -- namely my car -- from many prototypes. In their 'struggle' for continued existence, very few inventions, and still fewer accidental variations, survive: the mounting scrap-heap is the price of progress.

But note three important differences. (i) In the selection of the outer

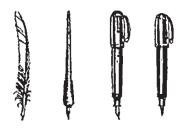


Two examples of integration: a pocketknife, and a whistling kettle.

+ Where I use the term <u>integration</u>, Dr H. S. Harrison uses the term <u>cross-mutation</u>. I prefer the former because it is not so easily confused with <u>mutation</u>, which does not necessarily involve the merging of two or more types of artefact.



<u>Variation</u>: four stages in the development of the domestic water tap. Note the progressive (or 'orthogenetic') adaptation to the housewife's labour-saving requirements, resulting in the selection of (4) and the obsolescence of the others.



<u>Mutation</u>: the quill-pen, the steel pen, the fountain pen, and the stylo. In the struggle for existence only the first has, so far, succumbed.



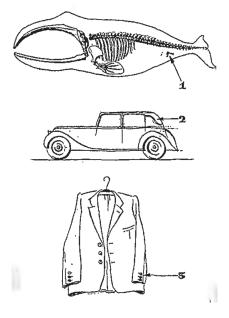
A victim of selection: the first motor car in England. (Science Museum, London.)

⊕ "The evolution of machines is a perfectly real evolution. Two different types of machines capable of performing the same general function --- such, for instance, organ, the organism's intelligence plays an increasing part, with the result that evolution is here much less haphazard, and wasteful, and slow, than formerly. (ii) The partial separation of the outer organ from the inner means that the outer organ now takes the brunt of the struggle, leaving the inner organ relatively unaffected and insulated. (iii) The less compact arrangement of the outer organs means that they are selected individually rather than <u>en masse</u>: the whole creature is no longer inevitably doomed on account of a single defective peculiarity. The value of this detachment cannot be exaggerated. Man is thereby more subject to selection, and less subject. He has hit upon a piecemeal way of evolving, a method of non-committal, by virtue of which countless new organs are tentatively grown, and sloughed without serious injury to the body as soon as they prove failures.

Degeneration. Progress is only one side of the picture: the other is degeneration. Evolution's necessary counterpart is devolution. The organism or the organ which the world selects is well-adapted; it is not necessarily higher in the scale of life. As I have already emphasized, there is an essential downward movement in life towards the less alive, counterbalancing the upward movement towards the more alive. My evolution is of a piece with the devolution of other species. In my body also the advance of some organs has meant the retreat of others. Thus only vestiges are left of the tail and the fur I once had, and my feet have lost their grip. My inner and my outer layers alike retain degenerate survivals from their past. The buttons on my cuffs, the button-hole in the left lapel of my jacket, the dummy hood-arm which decorates the fixed hood of my car, the petrified beam-ends and dowel-pins of my Doric mantelpiece --- these are some of my vestigial organs which, like the ostrich's wings and the whale's hind legs, have outlived their term of usefulness and are likely, sooner or later, to be discarded altogether.

Exuberance. Finally there is the tendency (which is a kind of degeneration) for organs to go on developing in size and elaborateness far beyond the limit of their efficiency. Examples are the fantastic, spinal plates of some of the mesozoic reptiles, the tail-feathers of the peacock and the lyre-bird, the hornbill's 'helmet'. Sexual selection is often responsible (at least in part) for such decorative monstrosities, but it cannot be said that they have been explained. Everything happens as if, during the progress of an organ, momentum were gained, and there were no brakes to bring the progress to a halt at its destination. That the natural part of the human body remains undistorted by overgrowths of this kind (the forebrain is the great exception) is mainly due to the fact that the artificial part is full of them. Art, the love of display, the ostentation of wealth and power, the requirements of ritual, the changing preferences of the other sex, the multiplication of devices for their own sake --- these have produced in man's outer constitution an endless playfulness of form, an unparalleled free creativeness, in which function gives place to fantasy. Particularly in clothes and in architecture, life has, in man, departed from organic necessity. And this exuberance became possible, on such a scale, only because evolution had taken a new turn. Till then, man was content to stay plain and undistinguished. His reward is that he now far surpasses in his finery all the species who impatiently incorporated theirs.

as the motor-lorry and the goods steamengine --- do come into a very real competition with each other, and the issue of the struggle is decided by a form of true natural selection, depending in the long run upon which of the two pays the better. Here again the study of machines throws light upon the course of events in animals." J. B. S. Haldane and Julian Huxley, <u>Animal</u> <u>Biology</u>, p. 251.



<u>Vestigial organs</u>. (1) Vestige of the hind limbs and pelvis which belonged to the whale's terrestrial ancestors. (2) Useless hood-arm retained as ornament, and now obsolete: (3) Buttons and imitation buttonholes, surviving from the time when cuffs were turned up.



Hornbill (Buceros rhinoceros).



A seventeenth-century French gentleman.

8. THE NATURAL AND THE ARTIFICIAL.

"Machines", Samuel Butler tells us, "are the manner in which man is varying at this moment". × They, and his other artefacts, are the actively growing part of him. It may be said that he is more alive in them than in the core of flesh which they encase. But his body is one, and the instrument of an indivisible life. There is no break in the building-up process that works outwards from the centre, or in the breaking-down process that works back to the centre: both flow as smoothly through the artificial regions as through the natural. The fact is that the distinction between the natural and the artificial is itself artificial. If, in man, life arrives at some measure of self-consciousness and self-control, life does not thereby do violence to herself, or become unnatural: on the contrary, she gives expression to her inmost nature. "This is an art which does mend nature, -change it rather; but the art itself is nature". * Shakespeare does not make the mistake of Pope, who was shocked that a woman could give as her reason for admiring the stars that they twinkled like so many candles at a birth-night. To the innocent, childlike eye, as well as to the eye of reason, stars are as artificial as candles, and candles are as natural as stars. ° In preferring Fleet Street to any rural scene, Dr Johnson is only preferring one of nature's aspects to another.

This pen is as natural as my hand, the roulette-wheel as the daisy, Regent Street as a forest glade, the latest dance number as a lark's song. Nothing in the world is artificial, yet everything is. Truly speaking, only a First Cause could be wholly natural, and only a Last Effect could be wholly artificial, for everything that is being achieved is artificial, and everything that is serving as the basis for further achievement is natural. What I reckon artificial is simply that fraction of the universal creativeness in which I happen to be playing some part. Here in the human region, where I have inside knowledge of the world-process, I find the artificial; the rest of that same process, viewed externally, I call nature. If a cell in my backbone could think for itself, it would describe a vertebra as a cellular engineering feat. An electron has as much, and as little, right to call its atom artificial as I have to call this book and this sentence artificial. The artifice of one region is the nature of the next. But to an observer used to travelling between regions, the lip and the lipstick, the gum and the denture, the scalp and the wig, are one in an all-embracing nature.

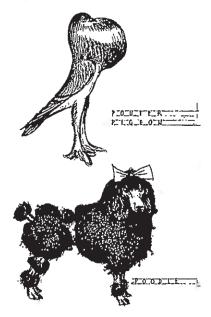
It is instructive to note where artificialization begins. Those objects of which man first becomes distinctly conscious, upon which his analytical intelligence is first exercised, are in all probability the objects be handles and fabricates. \times In this, the sphere of his practical attention to life's problems, he comes gradually to free himself from the tyranny of custom and from the habit of taking all existent things for granted. Here lie the beginnings of that detachment which is of the essence of the artificial --- a detachment which is always its opposite, inasmuch as conscious participation in the process and detachment from it go together: the tool is more a part of man for being less so. At length the infection of analytical intelligence (that is, of artifice) begins to work inwards to the natural core of the man, and outwards to his natural environment.

× Life and Habit, p. 225; my italics.

* The Winter's Tale, IV. 3.

Chesterton was a notable champion of the urban, particularly in <u>The Napoleon</u> <u>of Notting Hill</u>. Here he commends the man who models his hat "on a chimney pot; the ensign of civilization", rather than the woman who models hers "on a flaring cottage garden of flowers". His hero does not see in his mistress's complexion the rose and the lily contending, but "the red omnibus of Hammersmith and the white omnibus of Fulham fight there for the mastery". This is comical only because of our artificial bifurcation of nature into nature and artifice.

° Romanes records the case of a child for whom the gas-light, the candle, and the firelight, were each "a star".



Examples of the artificialization of nature, by selective breeding and by 'surgical' methods.

× According to Bergson, the ideal towards which animal intelligence tends is the manufacture of tools. As for human intelligence, mechanical invention has from the first been its essential feature. <u>Creative</u> <u>Evolution</u>, p. 145. The belt of artificiality broadens. The machine, as Berdyaev says, "steps in between man and nature; and it conquers not only the natural elements for the benefit of man, but also, in the process, man himself." + First, let me give instances of the outward movement. Architecture, once 'organic' and uncriticized, a semi-natural thing, becomes deliberate and even eclectic, and styles are created overnight; the planning and the administration of the town are made the subjects of study and reform --the civic pattern no longer just happens; again, the economy of the State is brought to fuller consciousness, manipulated, and in some measure controlled. Man begins to take himself over. He invades ever remoter regions, employing scientists as his spies and advance guard. In the human and the biological spheres this invasion is more obvious than in the astronomical; nevertheless, when man is about, no time nor place is safe for nature. There is a sense (this, in later chapters, I shall make clearer) in which Newton found a natural solar system and left an artificial, and in which our own times have done as much for the galaxies.

The inward movement is in principle the same. Our tools, clothes, and flesh-and-blood bodies are gradually brought under inspection, detached from the rest of our physique, and seen for what they are. Science probes man to the core. But this artificialization is tentative and temporary: nature is always reclaiming her lost territory, and in many ways we are all pre-scientific. Indeed, until quite recently, our clothes (to probe no deeper) came near to being unintentional natural products, growing upon our bodies much as our hair grows. Their evolution remained part and parcel of the organism's evolution. Even now, as Gerald Heard points out, ° we are trying to 'repress' our clothes, to thrust them below the level of full consciousness: they are still personal (to comment upon a man's house is not bad manners, but to comment upon his tie is to be 'personal', and almost as offensive as commenting upon his nose); they are in many respects tabu, not to say magical. To judge how reasonable and objective we are on this subject of clothes, it is only necessary to imagine the effect of arriving at a dinner party in a nightshirt or in khaki shorts. Even the gaffe is regional --- the more central, the more devastating. Thus, while an impropriety in the use of tools (such as putting your knife in your mouth, and drinking out of your finger-bowl, and scratching your head with your fork) is dreadful enough, an impropriety of dress is apt to be worse --- wearing your shirt outside your trousers, for instance. As for an impropriety of the flesh, such as undressing altogether in the course of the meal, the very thought of it is enough to make a respectable person turn pale. Impropriety in conversation is equally significant: unless among intimate friends, it is bad form to talk about your body, or your clothes, or your possessions, on the one hand; or about the larger spheres of politics, or science, or religion, on the other. The approved region -- the region of the artificial -- lies between these two realms of nature, and its contents are minor items of news, sport, and, in general, all those matters concerning which the average person has arrived at some degree of detachment. ×

To say that small talk is necessarily artificial is not to condemn it. If there is merit in being natural, then the artificial, which is doubly natural, is doubly meritorious. If evolution is a showing forth of what the + <u>The Meaning of History</u>, p. 152. Berdyaev regarded the machine as breaking the organic tie that joined man to nature, as cutting him off from the sources of his life. He was right, of course. The devices which link man to nature in so many new ways, also cut him off from nature in so many new ways. The question here is: are we present at our artificial extremities, sensitive at the tips of our antennae, and in touch with nature there; or do we use the tool as an insulating medium, as a weapon to hold off and subdue nature?

° "It is useless", says Mr Heard, "to attempt to except clothing from the broad and unbroken band of organic evolution which carries forward the whole gear of man from his retina to his spectroscope, evolving the whole of him, body, clothes, and tradition, first racially, then subconsciously, and finally self-consciously and on purpose." <u>Narcissus</u>, p. 14.

[×] For Mr Clive Bell, only those persons who have extended the belt of the artificial in both directions to include all regions, and so are able to discuss without heat or embarrassment any topic under (or above) the sun, are entitled to call themselves civilized. See his well-known and entertaining book, <u>Civilisation</u>.

universe really is, if nature discloses herself more fully in her later and more complex phases than in her earlier and simpler ones, then, indeed, the ship is more natural than the ocean, the field than the forest, Socrates than a savage. Matter, when it is disposed as a Rembrandt, reveals what the nature of matter is, or discloses facts about itself that it has hitherto concealed. The garden is the jungle freed from self-contradiction, and no longer thwarting its proper and natural beauty. The engineer who harnesses the river, pushes back the sea, bores through the mountain, floods the desert, and drains the fen --- he is the practical naturalist, nature remaking nature, nature self-conscious and self-directing. Yet it is here, at the point where nature is most clearly aware of what she is doing, that natural science loses all interest in nature: as if the botanist should consider every part of the plant to be relevant to his studies, excepting the flower. We say that nature is ruthless, blind, wasteful, unconscious, without meaning. And when we are shown overwhelming evidence to the contrary --- purpose, direction, the economical use of means, foresight, in abundance --- we say: this is not nature, but artifice. Of course it is artifice --- what else should it be, what else did we expect? Intentional nature is artifice. The field-naturalist who stays in the field, and never discovers and explores the factories and laboratories and hospitals of the world, misses half nature. He overlooks, for instance, the fact that nature is capable of killing the pain in an organ by severing the appropriate nerve fibres, while leaving the other senses intact; of introducing into the blood-stream an assortment of germ-killing poisons that leave the body's cells unharmed; of removing a bullet from the still-beating heart; of painlessly and purposefully cutting, scraping, boring, stitching, and manipulating the flesh in scores of ways. Those who are so fond of reminding us that nature is red in tooth and claw should note that some of the claws have grown into hands, and some of the hands have grown into scalpels and all the instruments of healing.

Even the artificial conforms to the great law of elsewhereness. Unconscious of the naturalness of our techniques and tools, we confine them to a separate realm insulated from and opposed to nature. The result is that they flourish exceedingly, and nature is served by our ignorance of the fact that she is served. On the other hand, the philosopher-scientists of ancient Greece made no such hard-and-fast distinction, but looked on human invention as a valuable clue to nature's processes rather than as a means of combatting them. The mind of the gods, says one writer of the period, teaches men to copy in their arts the functions of their bodies. + The tool that in our hands is a weapon pointed at nature, was in the Greek's an organ joining him to nature. But the result of this enlightenment was that Greece, for all her mature intellect and her science, was less inventive mechanically than a modern schoolboy. Awareness is not to be had for nothing, and it is apt to be an expensive luxury. It might well be argued that this book, and in particular this chapter, is one small indication (amongst many others) that our powers of invention are about to decline, seeing that, in realizing their wider significance, we dissipate them. Certainly there are indications that naturalness is like goodness, like life, like existence itself, in that it must be located elsewhere to be real here. The direct approach is not an approach. Just as the man who finds virtue in himself instead of in others is to that extent

The following is an example of what nature can do when she really tries. A girl's oesophagus was destroyed; accordingly, a new 'mouth' was opened, just beneath the ribs. After some years of fairly normal life, she re-entered hospital, had a length of intestine removed and attached to the stomach at one end and the throat at the other; and emerged as a healthy and normal-looking young woman, feeding through her proper mouth once more. The only difference between her anatomy and other people's is that her new oesophagus is outside her breast-bone instead of inside. And this difference is invisible --- so carefully was the skin of the chest moulded about the new organ.

+ The Hippocratic writing; Regimen I, chapters XI to XXIV. (See Benjamin Farrington, Greek Science, IX.) The unknown author of this extant work seeks, in techniques, information about the nature of man; and for this purpose he goes to the blacksmith, the fuller, the cobbler, the carpenter, the builder, and others. While the Greeks were fully alive to the uniqueness of man and his works (witness the famous Chorus in the Antigone of Sophocles) they severed neither from nature in the way that we do. As G. Lowes Dickinson points out (The Greek View of Life, I. 2.), the Greek said of nature, 'It is something like myself', and felt at home in the world. Though he despised the mechanical arts, and even called them unnatural (Plato, Republic, 495; Aristotle, Politics, 1337), yet they were clues to nature, and were never allowed to insulate him from the universe in the modern fashion.

less virtuous, so the man who finds nature working in himself, instead of in the outside world, is to that extent a less efficient tool of nature. For this reason it is essential, as well as inevitable, that for the greater part of the time I should ignore the considerations that I have advanced in this chapter, and should live as if I, with all my extensions, were set in opposition to nature. (A working dualism is of the essence of life, and premature unity is death.) But what is even more essential is that, for the rest of the time, I should realize the underlying unity which is the ground of the opposition. There is everything to be said for a deliberate and temporary suspension of awareness, but nothing at all for making it permanent.

9. THE TOTAL BODY --- (i) ITS EXPANSION AND CONTRACTION.

In this chapter so far, I have for the most part taken the outsider's view of my greater body, the view in towards the Centre. I propose to conclude by taking the view out from the Centre. How does this extended body of mine appear to me its proprietor?

It is, of course, headless. But what it lacks in the way of head it certainly makes up for in the way of limbs. It might be described as 'all legs' --- legs radiating from a mere point, like the triscele, × and extended as if by stilts of unlimited length. My limbs of flesh, their ramifying prolongations of every sort, the millions of my own species who build and maintain these prolongations, the still more inclusive community of animals and plants which sustains us all, atmosphere and soil and sea, the planet itself, and even the solar system --- all are organs of my life. It seems to me that either the whole of this organism of mine lives or none of it lives, and to say at any point 'Here the living body stops and the dead outer world begins', is a kind of parochialism. If I claim the nearer organs, I must, in the end, claim with them all those extensions without which they could not function for a moment. + If the true boundaries of this body are not reached before they contain a living whole, then they do not stop short of the universe: what I depend upon I virtually incorporate. Until I discover that there is only one Body after all, I mistake organs for organisms, and am a fragment setting up as a whole. °

It has been necessary, in the foregoing pages, to treat the manufactured organs of man at some length, so as to break down the vast system of barriers which have been erected between the inner half of the body and the outer half. But now the Chinese Wall of artificiality has been breached (if not demolished) there is nothing to stop my expansion indefinitely, as the following chapters will show in detail. Meantime, some general reflections on the subject of this expansion are necessary.

The body I look out upon is a nest of concentric zones, marked off from one another by the nature of their contents --- such as molecules or cells or multi-cellular organisms in the nearer zones, and planets or stars or galaxies in the further zones. Now the essential point is that, while all these contents without exception comprise my body, how much of this body I appropriate is entirely a question of what I choose to take for my



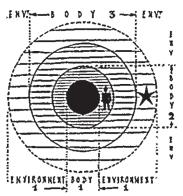
× Triscele from a vase of the 6th century B.C., in the British Museum. It is the badge of Sicily and the Isle of Man. It is also one of the most revealing of all 'mandala patterns' --- a symbol that, with the utmost vividness and economy, sums up the principle of the headless body. The spiral, which is a favourite central feature of mandalas, fills the same role, but less explicitly.

+ How, asks W. E. Hocking, "can any self lay claim to its own body unless it is prepared somehow to lay claim to all of nature with it?" <u>The Self: Its Body and</u> <u>Freedom</u>, p. 122.

° Cf. Charles Hartshorne, in <u>The Phi-</u> <u>losophy of Alfred North Whitehead</u>, (Ed. Schilpp) p. 549, for the doctrine that the universe is the Body of God.

As Külpe rightly says, "Theoretically, there is no reason for marking off our own body, as an individual spatial form, from the other bodies in space, and setting it over against them as ego against external world. Our own body may itself be regarded as a datum of experience, and considered under the two rubrics of subject and object." <u>Introduction to Philosophy</u>, p. 205. object. When I attend to a star, I shed the stellar layer of my body and call it 'environment', while all the rings that this layer encloses are 'myself'. In the same way, when I cease attending to the star and attend instead to a man, he ceases to be a part of my organism; he is no longer internal to me, and so taken for granted. He is over against me, another, an aspect of my environment. I have shrunk so as to discover him within me, and to exclude him; I am now a man facing a man, whereas before I was, along with him, a star facing a star. My feelers are infinitely protractile: I get into touch with my object by instantly growing up to it, or ungrowing down to it. As body I reach to the frontiers of the thing I have in mind.* That this is no wild speculation, but a matter of everyday experience, I have already shown in this chapter. When I take up my knife and fork they cease to be objects; moving over from the object side to the side of the subject, they are truly grown, incorporated, absorbed, nullified, and my attention is focussed upon my new extremities, where they make contact with my food. These words are not written by a hand holding a pen, but by an undifferentiated subject who is capable of extruding a pen and a hand. Here is a cosmogony which is empirically verifiable --- the universe is born from the body of man, and returns there. He projects from himself all that he experiences, and re-absorbs all that he projects. His ability to unify the limitless plurality of the world, to reduce to absolute simplicity an its manifoldness, to soften and to break down altogether its adamantine resistance, is so perfect that he scarcely ever suspects its existence. Too little does he realize that, when circumstances become overwhelmingly difficult or disastrous, he has a sovereign remedy --- he can take them in. ° He can melt down and absorb what offends. The world and its problems are soluble.

At any moment I am as much of the universe as I need to be: I have the body I want. + But I have it to use, not to admire. The basilisk is no myth, for I am one myself: my gaze is deadly, suicidal. I have only to look upon an organ of mine and it dies immediately, and falls away. The observer is unobservable. My life is one long process of shedding organs, alternating with the process of regenerating them. The observed of one stage is a part of the observer of the next higher stage. In this sense, subject and object are relative terms, and the one is always turning into the other. At one extreme, when my organism down to the last electron is objectified, I am altogether disembodied; at the other, when I cease to be self-occupied and am content to take all of myself for granted, I am altogether embodied. Midway, common sense is content with partial embodiment. × But my double task is, instead of resting satisfied with this compromise, to convert all my body into environment and all my environment into body. Either, by itself, is no advance on common sense, and is worse than useless: growth and ungrowth must balance one another. I cannot deal effectively with external disharmonies by absorbing them (and so ceasing to contemplate them), unless I deal with internal disharmonies by extruding them (and so becoming aware of them). As a remedy, mere bigness is worse than the diseases it seems to cure. °



* "To the tyro, his instrument is at first a foreign object and nothing more; but as he masters it, he becomes less conscious of what it is and attends only to what it does. The surgeon, for example, while operating, feels not his sound, but what it is probing; when he lays it down however, it becomes for him but an object once more." James Ward, Realm of Ends, p. 463. G. Kingsley Noble, of the American Museum of Natural Science, once pointed out that a mackerel cannot see or touch itself; therefore it has no inkling of what it is like. But really we are all like the mackerel: what we see and handle is always another, and only what we see and handle with is ourselves. ° "He drew a circle that shut me out ---Heretic, rebel, a thing to flout. But Love and I had the wit to win: We drew a circle that took him in!" Edwin Markham, 'Outwitted'. And Huai Nan Hung Lieh: "You can catch anything if your net is large enough --for instance, if the world is a cage, what creatures escape?" + Schopenhauer's doctrine that my body

is the objectification of my will, is at once true and capable of indefinite extension. Not only are my legs the objectification of my desire for locomotion, but my car, by which they are prolonged and made more swift, is the objectification of my desire for greater speed and range. At another level, the earth is the objectification of my desire to circumambulate the sun: it is precisely what I want to be and need to be at the planetary level. But to know that I have this body is to lose it for the time being. × On the earliest concept of the self as that of the 'body-self', see Ward, Psychological Principles, p. 365. It is at a later stage (racially or individually) that the self becomes distinct from the body.

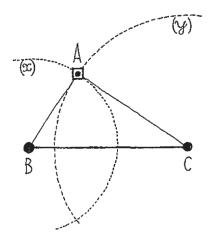
° In <u>Être et Avoir</u>, Gabriel Marcel distinguishes between what we are and what we have: the latter's existence is, up to a point, independent of the owner. We <u>have</u> our bodies only in so far as we externalize or alienate them, treating them as exterior tools; but normally the sphere of having is the sphere of our artificial instruments. What Marcel does not sufficiently admit, I think, is the relativity of having and being, the ease and frequency and scope of their transmutation each into the other.

10. THE TOTAL BODY -- (ii) TAKING IT OVER.

For every visible there is an equal and opposite invisible. Seeing my hand, I am a head yet headless; seeing Mars, I am the earth yet earthless; seeing Rigel, I am the sun yet sunless -- my object's day is my night. Thus I am as much of the universe as I must sympathize with in order to equal, and to find accommodation for, that which occupies me. That is to say, I am as much of my total body as is no longer numb and insensitive and dead to me, as much of it as I can feel myself into. I am as many centres as I can make mine and so unify, combining their varied perspectives into one perspective. Quite literally, my status is a question of broad-mindedness: the primate or sub-electron enjoys the narrowest possible world-view ---- the view from one centre only; the whole enjoys the broadest possible world-view ---- that which organizes all other views into a unity; the man enjoys a partial view, using half his eyes to look at the other half.

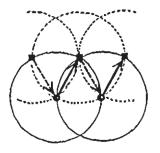
The limitations of the view from a single centre arise out of two requirements: first, that an object must be appreciated from all angles, and second, that it must be appreciated from all ranges. And the only way to meet these two requirements is to base oneself upon an increasing number of centres, enjoying and unifying their diverse perspectives. Centre B, knowing object A as inhabiting region (x), does not know the A that C knows, because, for C, A is in the remoter region (y). For example, A(x) may be a pain, and A(y) a wound. My broadened base of observation B-C provides me with two angles on A: my single view has two aspects. Normally, so long as A is confined to a single region (x) or (y), the diversity of its appearances for me is very limited; but when I broaden my base, A shifts to a remoter region, and is transformed. Not only are the contents of different regions different in character, but they are differently apprehended. Thus the nearer organ-objects are 'felt' in various ways but not seen; those in the middle distance are both felt and seen; those in the far distance are seen but not felt. As for the nearest of all and the furthest of all, they are conceived and not perceived or sensed. + In every instance, however, (and not merely where vision is involved) the adequacy of my observation, the status of my object, and my own status, depend upon how much of the universe I can convert from environment into organism, from object into subject, from many into one. ×

What prevents my indefinite extension by this method? First, I lack the imagination and the humility to see the world through others' eyes; these are my only windows on the world, and if I fail to use them I am in darkness. There is no such thing as private information --- perfect privacy is perfect ignorance. Second, I lack the imagination and the humility to share in, and identify myself with, the desires and actions of others; again, theirs are my only hands and feet, without which I can do nothing. Every centre of experience has (in so far as it joins itself to other centres) these two sides -- presentation and will (or reception and projection, or stimulus and response) -- and when I take on a new centre I must take it on in both these aspects. All the cognition in the universe is mine potentially; all the conation or striving is mine potentially. So long as I fail to see any point of view, so long as I utterly disclaim any action, just so long am I at odds with myself: I am ignorant of my own The opinion that the <u>whole</u> body is the seat of the soul has the double merit (as Paulsen points out in his <u>Introduction to</u> <u>Philosophy</u>, p. 133) of being both true and popular. The fact is that I have the body that is worthy of my soul, the appropriate and sufficient physical basis for what I am psychically. But the extent and the elasticity of this physical basis is rarely appreciated: the knower must have a physical organization comparable with that of the object known. The unextended body of man is the physical basis of a mind incapable of appreciating anything superior to man.



+ As Whitehead observes, "The internal functioning of a healthy body provides singularly few sense-data, primarily associated with itself. When such sense-data appear, we send for a doctor." <u>Modes of</u> <u>Thought</u>, p. 156.

× The most familiar example of this multiplication of points of view, with diverse modes of appreciating a single object, is the simultaneous seeing and handling of things. It is largely by the correlation of touch and sight that we build an objective world in space. And in our evolution from simian stock, this two-centred method of observation doubtless played an important part.



nature: my limbs are out of control and do not belong to me. * I grow by recollecting what I know and admitting what I do, by ceasing to repress my knowledge and my behaviour. Ultimately, all guilt is my guilt, and all merit is mine to make mine. I must confess to every crime. No insight, no work of genius, no prejudice, no atrocity, no perversion, is foreign to my nature. I am at liberty to disclaim them all (and indeed I must do so, for the greater part of the time), but only because it is part of my nature that I forget part of my nature.

Common sense, of course, tries to draw a permanent line between a body that is under my control and a world that is not under my control, but in fact no such line can be drawn. For, in the first place, my willed movements pursue their course in the environment, with results that I may foresee and desire. And, in the second place, the world within my skin is (as I have already shown) at least as mysterious and as far beyond my conscious control as the world outside. Even those organs of mine which are moved by voluntary muscles, are, when I attend carefully to their behaviour, no more <u>forced</u> by me to act as they do than the earth is forced by my will-to-live to pursue its path in the heavens. At least I can detect no agency or power whereby my tongue is governed when it frames syllables, or by which this hand is guided as it sets down this sentence. It is as if the letters shaped themselves. The words come to me. I am critical of them when they arrive, but I seem to have no more power to determine what shall arrive than I have power to prevent the sun rising tomorrow morning. All I can safely say is that my total body, right up to and beyond the sun, is a going concern, however much or however little I attend to and acquiesce in its transactions. And the outer part, which ordinarily I dismiss as environment and not body at all, is just as effectively organized, just as serviceable, just as necessary, as the inner part --- and just as capable of being taken over consciously. Working inwards, the Eastern yogi rescues his physique from (what appears to be) automatism, making more and more of it deliberate. + Working outwards, the Western scientist studies the physiology of his greater body, bringing more of it under control, and leaving no part of it unexamined. So does man come to know himself, and become aware of the behavior of his 'limbs' --- after they have ceased to be 'limbs'. My task is not to observe them and their acts always (this would be to amputate them permanently), nor to incorporate them and identify myself with them always (this would be to lump them together in a permanent and undifferentiated unity); on the contrary, it consists in living movement from level to level, in a rhythm of growth and ungrowth. My life is built out of innumerable acts of sympathetic imagination leading to growth, balanced by innumerable acts of detachment and withdrawal leading to ungrowth. It is the transition between states rather than the states themselves, which is all-important. The pulse, the rhythm of bodily expansion and contraction, is the essential thing, and the greater its range above and below the common-sense norm the greater the vitality. \times

Just as the gradual discovery of what is happening inside my skin is the discovery of what I have been doing there, so is my study of the outer world an autobiographical exercise. Why do I see the stars as plainly as I see my hand? Because I use them. ° Until I feel responsible for the sun, * Or, in the words of Josiah Royce, "the real world is just our whole will embodied." Reality is what I <u>mean</u>, but the trouble is that I do not yet know all that I mean. By increasing my knowledge I discover my purpose. But the condition of my separate existence is that I do not complete the discovery, that I am never quite at home in the world. See <u>The World and the Individual</u>, i. pp. 26 ff.

Freud (<u>Moses and Monotheism</u> (1939), p. 165) says that a man's work "grows as it will and sometimes confronts its author as an independent, even an alien, creation." And (I suggest) the better the work the more marked is this experience. Thus Boehme: "I can write nothing of myself but as a child which neither knows nor understands anything" --- to mention one out of countless instances.

+ Mr C. S. Lewis, commenting on the 'mistaken' belief that men own their bodies, well describes those bodies as "vast and perilous estates, pulsating with the energy that made the worlds, in which they (i.e., men) find themselves without their consent." <u>Screwtape Letters</u>, p. 108. And certainly they need to capture something of the innocent surprise of Milton's Adam: "Myself I then perused, and limb by limb Surveyed, and sometimes went, and sometimes ran

With supple joints, as lively vigour led; But who I was, or where, or from what cause,

Knew not."

Paradise Lost, VIII.

× The great discovery of German idealism was that nature is realized mind. Thus Schelling, in his System of Transcendental Idealism, regarded nature as the self made object, as the dialectic of the self's life outwardly manifested. The way to selfconsciousness, accordingly, is the study of nature: what I am as knower is revealed in the world that I know (See Royce, Lectures on Modern Idealism, pp. 101 ff.) The danger of this attitude is the premature and uncompensated absorption of the not-self into the self. The philosopher with half an eye on himself is a poor student of the nature that he eulogizes --- as poor, perhaps, as Schelling himself.

until I own to its behavior, I suffer from a kind of St. Vitus's dance. When I was a child, my parents knew what was good for me; they knew better than I did what I really wanted and thwarted my wayward impulses on my behalf. They were in charge of my higher will. Growing up, I take over from them my own control. And in the same way I go on to recognize, in the duties required of me by nation and humanity, in the dictates of religion, and even in the discoveries of science, my own hitherto unrealized intention. At the same time I accept responsibility for the acts of these larger units. In my total body there are no involuntary muscles. †

What is the goal of such growth? Surely it is that I should say, with Marcus Aurelius, "Whatsoever is expedient unto thee, O World, is expedient unto me; nothing can either be unseasonable unto me, or out of date, which unto thee is seasonable. Whatsoever thy seasons bear, shall ever by me be esteemed as happy fruit, and increase." * Those all-too-rare moments when we are able to surrender our partial wills to our total will, when we make no demands upon reality, when we are sure that (despite all appearances to the contrary) what <u>is</u> answers to our deepest needs, when the universe is exactly what we intend (no matter how little we understand why this or that detail is necessary) --- such moments we know to be our best: they have their own hall-mark of supreme quality. At such times we seem to come to ourselves after long self-alienation, to be in our right minds at last.

Of course it is impossible to live in this exalted end rarefied atmosphere. Indeed to do so would be to lose all. Life has to be lived at every level, and for most of the time we must be strangers to most of what we are. In any case, the highest and the lowest levels meet, and the extreme of self-realization is the extreme of self-abnegation. There can be no growth to the circumference which is not ungrowth to the centre. The paradox is that only by complete surrender to the supreme will, only by ceasing to assert my personal will, only by giving up the struggle and admitting complete dependence, can I win through to integrity and self-control. 'Whoever not only says, but <u>feels</u>, 'God's will be done,' is nailed against every weakness. +

Such are the reflections which follow upon the breaking down of the artificial barriers between the self and the not-self. At present they are little more than unsupported assertions. In the remaining chapters of Part II I intend, if not to prove them, at least to show that they are not unreasonable, and to clothe the dry bones of theory with the living flesh of concrete facts.

° I cannot agree with Bergson's view that the stars' visibility is a kind of accident. See <u>Morality and Religion</u>, p. 144.

"Seek not to have things happen as you choose them, but rather choose them to happen as they do." Epictetus, <u>Enchei-</u> <u>ridion</u>, VIII.

† Thus Gibran: "And when the earth shall claim your limbs, then shall you truly dance." <u>The Prophet</u>, P. 99.

* Meditations, IV. 19.

"The free man is he who wills without arbitrary self-will", says Martin Buber. "He listens... to the course of being in the world; not in order to be supported by it; but in order to bring it to reality as it desires, in its need of him, to be brought..." <u>I and Thou</u>, pp. 59, 60. This is a more balanced attitude than that of the Stoics, with their too-great emphasis on resignation.

+ William James, <u>The Varieties of Re-</u> <u>ligious Experience</u>, p. 285. James has a telling description of the two ways of 'accepting the universe' --- the grudging way, when we are stunned into submission, and the way of enthusiastic assent. "It makes a tremendous emotional and practical difference to one whether one accept the universe in the drab discoloured way of stoic resignation to necessity, or with the passionate happiness of Christian saints." <u>Op. cit.</u>, pp. 41 ff. See also pp 109, 201 ff., 275 ff.

CHAPTER VII

THE DISTANT VIEW --- HUMANITY

Through courts and cities the smooth savage roams Feeling himself, his own low self the whole.

Coleridge, 'Religious Musings'.

Knowest thou not that, as the foot, alone, is not a foot, so thou, alone, art not a man?

Epictetus, Dissertations, II. 5.

In the sight of God all man is one man, and one man is all man.

Julian of Norwich, Revelations of Divine Love, 'Anent Certain Points'

And at last she knew that there was not any man but mankind, not any human being, but only humanity.

James Stephens, The Crock of Gold.

Man is to God a whole, a colossal individual ... and this unity has at once an ethical and a physical character.

Fairbairn, Philosophy of the Christian Religion, p. 165.

Every man is from infancy introduced into that divine Man whose soul and life is the Lord, and in that divine Man and not apart therefrom, he is led and taught from His divine Love according to His divine Wisdom.

Swedenborg, Divine Providence, 164.

Mutual in one another's love and wrath all renewing We live as One Man; for, contracting our infinite senses, We behold multitude; or expanding, we behold as one, As One Man all the Universal Family

Blake, Jerusalem, II. 38.

March, then, men in Man! But is it men who attain? Or Man? Or not even He, but God?

G. Lowes Dickinson, <u>A Modern Symposium</u>.

The abstract individual is not truly man, but only a fragment of humanity, a being as devoid of the moral and spiritual elements which are of the essence of man's life as the amputated limb of participation in the vital existence of the organism.

Principal Caird, Introduction to the Philosophy Religion, p. 229.

Man, oh, not men! a chain of linkèd thought, Of love and might to be divided not.

Shelley, Prometheus Unbound, IV.

That therefore which is chief in every man's constitution is that he intend the common good.

Marcus Aurelius, Meditations, VII. 30.

Cato, after the downfall of the Roman republic, could live no longer: his inner reality was neither wider nor higher than it.

Hegel, Encyclopaedia, 406.

1. <u>THE 'CREEPER'</u>.

What am I? The common-sense verdict on the answer which the last chapter gave to this question is that I have been made far too central. The world appeared there as a kind of service-flat, with all manner of labour-saving devices installed for my special benefit. But it is nothing of the kind (says common sense), as I would soon discover if I were to look at myself from outside, impartially. If I were to stand back I would see this little life for what it is, namely one of some thousands of millions of George Herbert's lines,

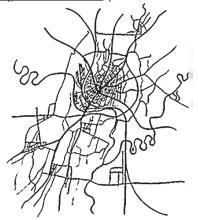
"The whole is either our cupboard of food, Or cabinet of pleasure", need much qualifying. Bergson says of the animal, "it obviously behaves as though everything in nature were combined solely with a view to its well-being and in the interest of its species. Such is its conviction, not intellectualized, but lived, a conviction which sustains the animal and is indistinguishable from its effort to live. You bring reflection into play, however, and this conviction will vanish..." <u>The Two Sources</u> <u>of Morality and Religion</u>, pp. 149-50. separate little human lives -- ephemeral, ravaged by war, famine-stricken, disease-infected, bedevilled in countless ways -- that are wresting a living out of an unfriendly world as best they can. I ought to take an unprejudiced view of myself, such as a total stranger might take when inspecting this planet for the first time.

This common-sense advice is worth taking. Let me inquire from a stranger to this earth, what he makes of me. ° I shall suppose that he is visiting us by space-ship, and that his investigations start when he is flying at a height of a few thousand feet above ground level. Here he can see the broader patterns, but is unable as yet to distinguish such individual objects as buildings, or trees, or animals, or men.

What holds his attention is not the geographical features of the scene below, so much as the curious growth which spreads over them. He does not know whether to call this growth a giant creeper or a species of fungus --- neither name seems fitting. It consists of a vast network of extremely fine stalks or suckers which twist and turn over the earth's surface, (eventually pushing their way round --- and sometimes through --- mountains, across wide rivers, and even under the sea). At varying intervals, they ramify into reticulated nuclei of all shapes and sizes. For the most part there is no regularity of form, but here and there suckers run quite straight, or follow regular curves, or blossom out into recognizable patterns. Though the creeper has spread over the greater part of the land surface of the planet, it appears to have a preference for the temperate zones. Rivers also seem to attract it. The white polar caps, and the brown patches of desert, it avoids. Wherever the earth is green it tends to flourish.

The observer feels that such an extraordinary Plant (if it is a plant) deserves a Botany, and he decides to devote some time to its study. For many thousands of years he sees the creeper growing slowly and sporadically, withering here and there, and reviving again. It seems as if a kind of winter sets in from time to time, sapping the creeper's vitality and causing large branches of it to die, partially or wholly. The thing survives, however, and even shows, on balance, some progress. And suddenly it starts to grow as it has never grown before. New, stout, healthy, stalks -- millions and millions of them -- thrust their way over hitherto untouched areas, span the widest rivers, expand into thousands of fresh nuclei at an unprecedented rate, and greatly enlarge many of the old nuclei. At night, the nuclei glow far more brightly than before, and by day they breathe out large volumes of dark vapour. For some reason, this living thing (whatever it may be) is enjoying a remarkable rejuvenation.

Pursuing his studies, and combining observation with inference, our observer discovers how the creeper feeds. Vast stretches of the land surface between its stalks are patterned in mosaic fashion: it is as if the stalks had grown rectangular green leaves that fitted edge to edge, for the purpose of deriving from sunlight and air above, and from earth and water below, the nutriment which the creeper needs to live on. Then there are the roots which it sends down into the earth --- roots which tap solid and liquid substances that provide abundant energy. Other roots go in search of water, to supplement the supply which the creeper de° <u>Ripplemark</u>: "Flying, Mr Hooker, is no bad training for a philosopher..... For example: your valuation of the planet is quite different when you are 15,000 feet above from what it is when you are on the surface.... A man should fly, sir, before he graduates in philosophy." L. P. Jacks, <u>The</u> <u>Legends of Smokeover</u>, p. 258.



"Principal towns," says Alice, making her grand survey of the country in <u>Through</u> <u>the Looking Glass</u>," --- why what <u>are</u> those creatures, making honey down there? They can't be bees -- nobody ever saw bees a mile off, you know -- "

The viewpoint I am adopting here may at first seem peculiar or arbitrary, but in fact it is very ordinary indeed, and quite indispensable. Every large practical enterprise, every considerable measure of biological or economic or political control or research, every effort to grasp our life-history and to estimate future trends, requires that we view ourselves in such a way, 'from a great height'. It is not only that we can do nothing without surveys, maps, topographical charts of many kinds: the condition of all activity at these levels is that the proper regional intervals, or range, shall be observed. In the following chapters I shall show that there is a real sense in which, inevitably, 'our heads are in the clouds'. Not only in books do "cherubim expand their wings, that the soul of the student may ascend and look around from pole to pole, from the rising and the setting sun, from the north and from the sea." (Richard de Bury, Philobiblion.)



rives from lakes and rivers. Among many curious recent developments are the creeper's (most unbotanical) excretory organs, attached to many of the larger nuclei

2. <u>THE CREEPER'S LIFE</u>.

Let it be supposed that our observer ("P") is now joined by a commonsense human being ("C") \times Of their conversation, the following is an extract.

P. Look at this extraordinary object I have found. I call it a creeper for want of a better term, but I suspect it is animal rather than vegetable. More probably it is neither, but a third sort of living creature.

C. That is no living creature. What you take for stalks and suckers are railway lines, and canals, and roads with the buildings that fringe them. What you call stalk-clusters or nuclei are nothing but towns and villages as they are seen from the air. The processes you describe as roots are simply coal mines and iron mines and oil wells and water wells. The 'rectangular leaves' that are attached to the stalks are fields and meadows. The moving stuff that you mistake for sap is only a stream of vehicles of every description. In short, everything you can see from here is quite dead.

P. Dead? How can something that grows complex organs (it makes no difference whether you choose to call them roads and mines and fields, instead of stalks and roots and leaves), that eats and drinks and breathes and excretes, that suffers from diseases and recovers from them, whose activity is increased by sunlight and diminished by darkness, whose body builds and repairs itself --- how can a creature that does all this be dead?

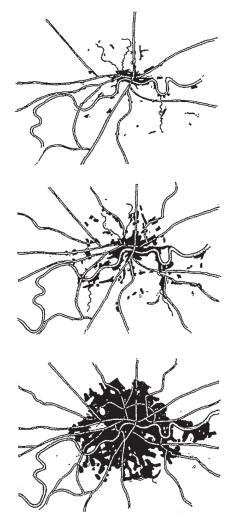
C. Railway lines and trains, roads and lorries and tramcars, mines and wells and drains and cables and buildings, are inert substances of many kinds moulded into useful form by external influences. To shape and to use them is not to breathe the breath of life into them. How can such things possibly live? Up here you are too far away to know what is really happening on earth. Life there certainly is; but what we see from here is its product, not its embodiment.

P. I take your word for the railway lines and so on. But they are not the subject of this conversation. They do not exist for me here. What does exist is this peculiar creature, which is at least as alive as you are --- and alive, moreover, in its own right, just as you are alive in your own right and at your own level. Indeed, what is perhaps more remarkable than the creature itself is the fact that you its organ and representative should deny its life. The creeper's vitality ought surely to be the most obvious characteristic of the planet..... But let me ask you precisely what, if the object of our study is dead, you expect of a living thing?

C. A living thing is a delicate balance of anabolic and katabolic change. The seasons affect it. It grows, reproduces its kind, takes in nutriment and eliminates waste, breathes. It is subject to disease and decay. It strives (or seems to strive) to get a livelihood, and sometimes, in a few

× I call the observer "P" because he speaks for my 'philosophical self', as against "C", who is my 'common-sense self'.

Samuel Butler (<u>Life and Habit</u>, pp.128, 129) imagines "a being as much in need of a microscope for our time and affairs as we are for those of our own component cells." To such a being the whole human race would appear as "a sort of spreading and lichen-like growth over the Earth, not differentiated at all into individuals" But we have no right to infer, from its plant-like appearance, that this being is an inferior evolutionary type. Dr. Inge's opinion, in <u>Out-spoken Essays</u> (2nd Series), that "The 'social organism' is a very low type of organism', needs (to say the least) much qualification.



London, in the middle of the 17th, 18th, and 19th centuries.

instances, its striving shows that versatility and economy which we call intelligence.

P. You have described the object we are studying.

C. I admit that your argument has a certain show of reasonableness. It is specious, but misleading and indeed dangerous. For it suggests that there is, beyond individual men in their varied and essential social relationships, some higher being in whom they are superseded. * It is a fallacy to suppose that the State or Man or any such community of men is a living individual. Bertrand Russell rightly points out that the sentence "Mankind is fond of apples" is nonsense: there is no such thing as a creature called Mankind, who munches apples. + The mistake here is to assume that the <u>class</u> (Mankind) has the same kind of reality as the <u>particular</u> (a man). It is absurd, if not actually damaging, to try to revive the ultra-realism that Abelard and others killed so long ago \times --- the ultra-realism which held that there is in the members of a species one numerically identical substance (in this instance the substance Man, or Humanity) of which individuals are accidental modes.

P. All of which, though doubtless true at its own level, is irrelevant for us here at our level. Do you suppose I can be talked out of seeing what I now see? I wish Abelard and Mr. Russell could join us here, and actually observe this sprawling creature munching apples, and other foodstuffs, by the train-load. But this eater of apples is certainly not man-as-a-class, but quite a different order of being. I have only to compare its shape with yours to be sure of that. The object of our studies is concrete, unique, individual, not an abstract class whose content decreases as its scope increases. Here, call it by what name you will, is a visible and audible and odorous thing, fit in every way to provide the subject matter of a special department of physical science.

C. The doctrine that society or the State is a kind of god or superorganism is one which encourages and seeks to justify every sort of tyranny, and its social effects are always deplorable. Along with all rightthinking persons, I believe in the wholeness and responsibility of the individual man. He is the end: States and all other organizations are the means. And the State is like a corporation, which, as Thurlow pointed out, "has no soul to be damned, and no body to be kicked." °

P. What kind of science is it which says, "This physical object exists, but publicly to admit its existence, would be to commit a political blunder; therefore we shall deny its existence"? Is there not as strong a case (and perhaps a stronger case) for banning nuclear physics, on humanitarian grounds? Science is concerned with what is true, not with what is convenient. Besides, if this object that we are now inspecting really is the menace you say it is, surely that is all the more reason for investigating its nature dispassionately, in order to know wherein the threat really lies, and how best to meet it. Meanwhile, here is this living creature, behaving before our very eyes. No doubt many of its parts are dead: so are yours. No doubt some of its dead parts are big, whereas yours are small: that is only to be expected --- the texture of so large a body may well be coarser than yours. No doubt much of the creature is shapeless: it is not more so than many other living things. No doubt there is discontinuity, and

* Thus, near the end of <u>The Martyrdom of</u> <u>Man</u>, Winwood Reade proposes that we "fly some distance backwards into space" till we can see the being which he calls the One Man, of whom we are components, mere particles. And Olaf Stapledon, in <u>Death into Life</u>, describes an airman's view of a bombed city --- "the great living, wounded creature", with its "tissues of patterned streets and roofs... huge tracts also of roofless honeycomb, the cell-lids sheared away..."

+ <u>Our Knowledge of the External World</u>, p. 206.

× Cf M. H. Carré, <u>Realists and</u> <u>Nominalists</u>,and Richard McKeon, <u>Selec-</u> <u>tions from Medieval Philosophers</u>, i. p. 204, 218 ff.

The parallel between society and the human body is elaborately recognized in our language (witness such phrases as the heart of the city, arterial roads, the head of the government, the body politic), and it has found more conscious expression in all civilized ages. The ancient Taoist philosophers were familiar with the parallel, and there are hints of it in Plato's Republic. The parable of the Vine and the Branches, St Paul's mystical Body of the Church, Menenius' parable of the Belly and the rebellious Organs in Coriolanus, Swedenborg's divine Man (e.g. Divine Providence, 164. v.6), and Comte's Humanity or Great Being, are other instances. Many analogies of this sort were arbitrary and fantastic, as when Nicolas of Cusa likened the offices of state to the limbs, the laws to the nerves, the imperial decrees to the brains, the fatherland to the skeleton, and human beings to the flesh. (Cf. Gierke, Political Theories of the Middle Ages.)

° Wilberforce, Life of Thurlow.

Hobbes is a notable example of one whose absolutist and royalist sympathies are linked with his doctrine of the State as a kind of god. Men, he says, erect a Common Power, to whom they submit their several wills and judgements; and so arises a real unity of them all. "The Multitude so united in one Person, is called a Common-wealth, in Latin Civitas. This is the generation of that great Leviathan, or rather (to speak more reverently) of that Mortal God, to which we owe under the Immortal God, our peace and defence And in him consisteth the Essence of the Commonwealth; which (to define it,) is One Person, of whose Acts a great Multitude, by mutual Covenants one with another, have made themselves every one the Author ... "Leviathan, II. 17.

many spaces separate the creature's parts: but they are spaces busy with the manifold interchanges which make for life. In short, the creature before us is a new order of living thing, <u>sui generis</u>, uniquely versatile and elastic, whose life does not lie in the men, or in the machinery, or in the busy interspaces which are their matrix, but in all three together. The life is the life of the whole.

3. HUMANITY.

There is a region where my observer sees that I am a man --- a creature having a pair of legs, a pair of arms, and a head. Further away from the Centre there is a region where he sees me to be a creature that is legless, armless, and headless, but still a perfectly recognizable living thing. What shall I call this aspect of myself?

I confess I am in difficulties here: there really is no suitable name which is not liable to confuse and prejudice this inquiry. I cannot remain anonymous, however, in this region, and I am obliged to choose a questionable or question-begging title, or to coin a new one. For this creature which I am is neither a gigantic plant, nor a sedentary and amorphous animal, nor an overgrown man °, nor an earth-bound god. It is not a society or community as these terms are usually understood, since (as to structure) it has definite physical shape, and a physique which includes all manner of artefacts and machinery, and domesticated animals and plants; and (as to function) it includes many types of relation, both internal and external, which are not generally reckoned social. Certainly it is not the State, for it takes little notice of frontiers. To call it Man or Superman would imply (along with Hobbes) that it is an enlargement of individual man, and would be no more justified than calling man by the name of Nerve, or Cell. The term Social Organism comes near the mark, but it has had an unfortunate history at the hands of writers \times whose main concern has been to draw (and to force) analogies between the animal body and the social body; I wish emphatically to dissociate myself from this school of thought --- the social organism is a new integral level, a novel emergent, and it needs treating as such.

After much hesitation, I have settled on the term <u>Humanity</u>. That this term, though open to several objections, is not so inappropriate as it may seem, will, I think, gradually become evident.

4. THE BODY OF HUMANITY.

In the previous chapter I found that my body extends, by means of exterior organs, till it covers the earth. I described these organs as mine, but it is obvious that I share by far the greater part of them with other men. Two members of a family living in one house have a single external bowel, a single set of preliminary stomachs, a single shell, a single sys-



Little men comprise one Big Man --- part of the title-page of Hobbes' <u>Leviathan</u>, 1651. One of Hobbes' mistakes is to suppose the Commonwealth to be artificial, a deliberate product of human ingenuity. Another is to suppose that this artificial being is a kind of man, "though of greater stature and strength than the Natural" (<u>Leviathan</u>, Introduction). Nearly all thinking on this subject has been vitiated by failure to see that each new level must be distinguished from all other levels, and that the respects in which it differs from them are at least as important as the respects in which it resembles them.

^o Kahlil Gibran, for instance, refers to:
"The vast man in whom you are all but cells and sinews;
He in whose chant all your singing is but a soundless throbbing.
It is in the vast man that you are vast,
And in beholding him that I beheld you and loved you."
<u>The Prophet</u>, p. 104.

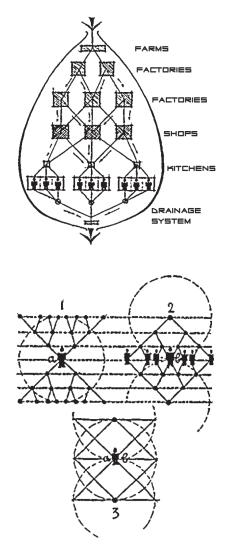
× Notably, Herbert Spencer in Social Statics and Principles of Sociology, and Schäffle in Bau und Leben des Sozialen Körpers. See also Morley Roberts' Bio-Politics and The Behaviour of Nations. W. B. Cannon's <u>The Body as a Guide to</u> Politics avoids the absurdities of Spencer and Morley Roberts, and does not confuse organizational levels. (Morley Roberts calls the State an animal, "which belongs to a low-grade invertebrate order not yet recognized by classical zoologists", while Spencer calls peasants endoderm-cells, soldiers ectoderm-cells, executive scribes nerve-cells, and so on. Nevertheless Spencer is more alive to the dangers of biologism than Morley Roberts is.) There is another school of thought (represented by Walras, and Pareto) which tends to confuse the social level, not indeed with the biological, but with the physico-chemical. Different levels of integration can illuminate one another --- provided they remain apart.

tem of extended ears and vocal chords, between the two of them: they are Siamese twins. And of course there are no discernable limits to this sharing. I share the organs nearest the Centre with my family and my fellow townspeople; those more remote I share with my fellow countrymen; those still more remote I share with mankind, for the nations are parts of a worldwide economic whole. In other words, my man's body expands till it is Humanity's body. It is continuous with Humanity; its actions spread out to the extremities of Humanity; it is always becoming Humanity. On the other hand, Humanity is always narrowing down to the man that I am. And this double transformation is just what my travelling observer notes: he ascends, and I become a planetary network; he descends, and I am a man again.

(Note that here again are the three moments which this inquiry is always bringing to light: (1) central contraction and regional expansion, (2) regional contraction and central expansion, and (3) the synthesis of (1) and (2). That is to say: (1) in the previous chapter I was, at (a), the unitary centre of a multiple system of organs, growing ever more numerous as they receded from the centre; (2) in this chapter so far, I am, at (b), one of myriads of other centres, which are progressively unified in their common regions. But the true picture of me (3), combining (1) and (2), shows me to be at once central and peripheral, at the hub of the universe and at the rim. I am essentially two-centred: the condition of my being anything at all is that I shall be here-centred (or self-centred) and there-centred (or object-centred). Central multiplicity subtends regional unity; regional multiplicity subtends central unity.)

The last chapter extended the man; this chapter observes that to extend man is to transcend him, and pass to a higher level of integration. + The ramification of my own external organs will not serve me. A telephone system in which every subscriber has his own line to every other will not work: it is not genuine growth. For the essence of effective corporeal extension is that the prolonged body shall be a common or supraindividual body. That is to say, though I advance towards Humanity, it is not I as man who arrive at the new level. My development takes me far beyond my original self. My regions are by definition insulated in respect of their content, and I cannot take my separate individuality over into the region of Humanity. Levels are not to be confused. There are natural limits to what a man, qua man, can be and can do. This is evident to my observer, whose field of view is such that he cannot take in a man and Humanity at once. Thus those who deny the existence (or the unity, or the mind) of this being which I call Humanity, are in a sense right --so long as the discussion remains at man-level. The two levels, though they are inseparable poles of a vertical process, are mutually exclusive.

According to Emerson \times , "there is One Man, --- present to all particular men only partially, or through one faculty; and you must take the whole society to find the whole Man." For "the state of society is one in which the members have suffered amputation from the trunk, and strut about so many walking monsters, --- a good finger, a neck, a stomach, an elbow......" In their general intention these words are true, and they drive home a fact that we are always forgetting --- the fact of human solidarity. But they are also misleading, inasmuch as they attempt



+ By the same token, a level cannot be controlled from itself, but only from a higher plane. Thus there is no super-braincell dominating the rest; but, instead, the whole man. Thus there is no superman dominating the rest of men; but, instead, Humanity. The horizontal democracy (so to speak) of the lower plane is guaranteed by a kind of vertical monarchy. The rule is, to find the unifying principle, retreat from your object.

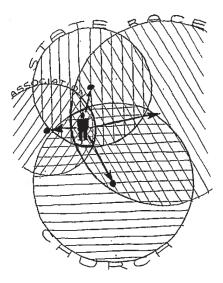
The Kabbala teaches that in the beginning, before the Fall, all men were combined in one undifferentiated Man. And Boehme has the doctrine that God created only one Man, of which Stem all other men are the twigs. <u>Mysterium Magnum</u>, XXIV. 17.

^{× &#}x27;The American Scholar'.

to equate two very different orders of being. + Humanity is not a swollen man, neither is man the nail-parings of Humanity. Each is, on his own plane, an individual of integral status. And each is an aspect of myself. In the outer region, I have put off my manhood with my cell-hood, and am Humanity, a new creature having a new body. To describe the parts of this great body in any detail is quite unnecessary: the anatomy and physiology are familiar enough. What is anything but familiar is the fact of his existence as a unique and concrete individual, more alive and (in a sense) more real than man himself. To appreciate this gigantic creature (not that he is really gigantic, for to appreciate him is to get him into a limited field of view), to be vividly aware of him, requires a realism and a detachment, which are all too rarely mine.

But whether my awareness is real and vivid, or remains theoretical and dim, I have no difficulty in seeing that Humanity is nothing like a man, or an animal, or a plant, or a machine, built on a larger scale. This creature has its own organs and systems of organs, the most obvious of which are the town, the county, the State, the federation of States. Ignoring and cutting across the boundaries of these pseudo-individuals, there are all manner of voluntary associations -- religious, artistic, philanthropic, scientific, professional, political. Again, cutting across all other units, are natural economic units composed of mutually dependent parts, racial groups, language groups, and so on. In this interweaving of structure, Humanity is unique: the scope for internal organization is much greater than at lower levels. Indeed, the kind of organization is itself one of the many novel emergent characters of the new level. This creature has his own diseases, which are unlike the diseases of men and of animals, and require different treatment. He has his own manner of growth, which is unlike that of biological organisms. He has his own diet, including (besides the kind of food that men eat) coal, ores, clay, grass, timber, sand, cotton, oil Naturally enough, his 'organs of digestion' are of a totally different pattern from those of man. Intercommunication within his body is of many new evolutionary types, remarkable for their swiftness: instead of relatively slow nerve-impulses, radio and telephone and telegraph keep the parts in touch, with a time-lag that is, ideally, never more than a small fraction of a second --- that is, the time a signal takes to encircle the planet. In short, Humanity (which is to say, myself at this level) has neither nerves, nor brain, \times nor blood, nor hands, nor any other organ of the biological level, but an 'anatomy' and a 'physiology' that are all his own.

Perhaps the most important difference of all is Humanity's length of life compared with man's, and all that this longevity has made possible. Only an individual of very great age and vast experience, able to go on developing physical and mental organization for millenniums, could achieve cultures, cities, industries, or could elaborate the language, religion, art, and science, that I now enjoy. Man, as mere man, is much less than human: he has no time to raise himself to such a level. He has time only to link himself to a creature less transient than himself, and so borrow what he is too young to own. Or rather, he has time only to realize the unity of his lower and ephemeral self with a higher and more permanent self. Neither as man alone, nor as Humanity alone, am I human; to + Much needless controversy over the nature of society hinges on the ambiguity of the word organism. When Dr R. M. Maciver (Community, p. 73), Lord Samuel (Belief and Action), and many others deny that society is an organism, they take organism to mean biological organism; and, naturally enough, they make short work of the organismic theories of society. But many, if not most, writers on this subjectgive (like Whitehead) a much wider connotation to the word organism, which is applied to an organized whole or system of any level. And clearly society is such a system. But there are some writers who reserve the word organic for particular kinds of society or State: thus Mr T. D. Weldon, in States and Morals, distinguishes between the 'organic' totalitarian State and the 'democratic' State based on consent. This peculiar use of the word organic adds to the confusion.



Hans Domizlaff, in <u>Analogik</u>, describes a hierarchy of social organisms ranging from the family, through the State to Humanity, which is itself subject to the supreme organism, which is the Universe. All these, except Humanity and the Universe, are to be distrusted; freedom involves becoming aware of their manifold operation in us, and subordinating it to the higher organisms.

× Nevertheless he may one day grow something like a brain. H. G. Wells considered a World Brain (by which he meant a world encyclopaedia, kept up to date, co-ordinating human knowledge in all fields, and using it for political and economic planning) to be necessary for human survival. UNESCO have considered the creation of a 'brain' of this sort, equipped with the most elaborate calculating machinery, and recording, coordinating, and making available, the results of scientific research wherever it is conducted.

° Cf. F. H. Bradley, <u>Ethical Studies</u>, p.188 (footnote): "Is the body the social organism or the individual man? ... It is really

both."

be human is to be bi-polar --- Humanity-man. °

5. THE PRACTICAL MAN'S TASK.

In my daily work I help to maintain Humanity's life. I am not called upon to supply him with physical energy (this he derives from his principal foods, + such as coal and mineral oil) so much as to see that this energy is properly used in self-maintenance and growth. I am a part of the means whereby this great being is able to regulate his vital processes, recover from his diseases, and grow new organs when they are needed.

Let me take an example. When a new town is about to be grown, body-building nutriment -- trees, sand, clay, stone, ores, and so on -- is needed in great quantities. This is devoured on the spot, the eater using saws, and mechanical shovels, and pneumatic drills for teeth. The raw food is then passed into such digestive organs as furnaces and mills and kilns, which treat it and break it down into small units of wood, brick, stone, and metal. Other organs now proceed to build up these basic units into doors, windows, and prefabricated fittings and furniture of all descriptions. These, assembled and integrated, become the house. And houses become the town.

Note the two inseparable and complementary aspects of this process --- katabolism or breaking down, and anabolism or building up. And note that every stage in this twofold transformation is man's concern. Lumberjacks, miners, government officials, designers, all manner of craftsmen and experts, see to the physiological processes of this great body, exercising various grades of practical intelligence. × This practical intelligence is man's strong point. He understands to perfection how to improve and to operate machines, how to plan and to erect buildings, how to manipulate matter in countless ways. Common sense is in its own element, and the results are impressive. Here common sense participates fully in the two-way world process, and belongs in the mainstream. Earth's ideal naturalists are engineers and architects, mechanics and inventors, for they cannot help but know thoroughly those parts of nature for which they are responsible. They have chosen for study a subregion which is man's original and proper business, where he makes the nature he studies, and studies the nature he makes. And their technical efficiency is increased rather than diminished by the fact that they are (with rare exceptions) no more aware than their cells of the being that they build.

In fact, common sense kills Humanity: and must do so, in order that Humanity may live more abundantly. A surgeon operates, not on me, the man, but on this organ and that. Temporarily, I vanish: there is a sense in which every operation is fatal. If the surgeon could not cease to look upon me as a living whole, he could never get beneath the skin. So it is with the surgeon of my greater body: he does not murder to dissect, but murders unconsciously in the course of his dissection --- and all dissection is murder. Regarded separately, the greater part of Humanity's

+ Here and elsewhere in this chapter I am deliberately applying biological terms to the sociological level, because there are no other terms which do justice to the wholeness of society and to the unity of its functioning. Just as enlightened anthropomorphism is, in theology, less misleading than mechanomorphism, so biologism is here less misleading than the only alternative, which is to describe the anatomy and physiology of society in technological terms --- terms which are too specialized, too atomistic, too committed to the part as distinct from the whole to be of use here. What is really needed is a new vocabulary for each integral level, a vocabulary which does equal justice to the law that levels reflect one another, and to the law that they differ widely from one another. After all, if we may use words like organism and digestion of unicellular and multicellular organisms, we may use them of social organisms also; for the hierarchical interval is much the same between the cell and the metazoon as between the metazoon and society. A cell in me has no less, (and no more) reason to insist that I am not an organism, than I have reason to insist that society is not an organism.

× One way of distinguishing such grades is in terms of time-grasp. Normally, the unskilled labourer's concern is the day's work; the craftsman's interest extends to the completion of the job in hand; the high-grade technician sees the entire project through; the business of the administrator or planner is the whole social body and its long-term development; finally, there are those whose vision in time and in space is unbounded - the prophets, for lack of whose vision the people perish. On this subject, see Mr Gerald Heard's important book, Man the Master. Mr Heard associates with each social grade (as thus distinguished by its grasp of time and space) a distinctive and cumulative morality.

organs are dead, and it is the technician's business to regard them separately. As a practical man, he amputates them from the body whose life they share, so that he can repair and maintain and redesign them, and eventually restore them to the whole. Thus it happens that those men who are least concerned with Humanity, whose attitude is the death of him, are often his most efficient means of life. + In this field (as I noted in the previous chapter) awareness and effectiveness rarely go together.

6. AN INTELLIGENCE-TEST.

Here common sense has some urgent questions to put. This fungus-like creature --- what does it really amount to as a mind? Is it conscious as a whole? Is it intelligent? Is it self-conscious? Doubtless man owes all that is human about him to his participation in Humanity. But it is a very different matter to go on and postulate a consciousness above and beyond the individual's --- a group-mind or a group-consciousness. * Have not many thinkers of reputation rejected such a notion, and held that society exists nowhere but in its members? Thus Maciver writes, "If I love and honour my country, it is the love and honour of a mind, of a uni-centred spiritual being. But if a country loves and honours one of its members, that multi-centred love and honour is a very different thing. He loves it as a unity, but it cannot as a unity love him in turn. Many hearts may beat as one, but the heart-beats are still many. In a sense, perhaps in more senses than one, that is true of community which Spinoza said was true of God --- if we love it we should not hope for a love reciprocal to our own. The community which we love does not as such think or feel. It has no unitary mind or will or heart. \times

Now the answers we give to questions about the mind of society are so dogmatic, so discrepant, so heated, so swayed by temperamental and political and even national bias, -- in a word, so subjective -- that a new approach to them is urgently needed: namely, the behaviourist approach. The invaluable method of introspection is, when unchecked by the method of outside observation, as untrustworthy a guide at the sociological level as it is at the individual. What is needed in both instances is an unprejudiced observer who pays more attention to what the subject does than to what he says. ϕ Unfortunately there is no outside observer of Humanity to whom I can appeal, unless it is the hypothetical visitor to this planet, whose services were engaged at the beginning of this chapter. As a projection of myself, his views are not likely to be impartial; nevertheless he should prove an aid to such objectivity as is possible. In the first instance therefore (and as a prelude to a more interior and conventional approach to the problem) I shall consult this visiting observer.

He has already concluded that Humanity is a living creature. But the behaviour of living creatures is of many grades, from tropisms (or simple, more or less 'mechanical', reactions) to the higher manifestations of 'instinct' (or more elaborate unlearned responses) on the one hand, and of 'intelligence' (or a kind of learned responses) on the other. ° Which of these grades of functioning characterizes the creeper-like organism that

+ I should add that Humanity has many needs besides the maintenance of physical energy and complexity, and is, in fact, often better served by thought than by action. The need of the moment is the realization that (to quote Emerson) "There is one mind common to all individual men. Every man is an inlet to the same and to all of the same." ('History') Further success in technology, combined with further failure to see that Humanity is, as Heard says, "a living thing, a unity, an organism", may well mean Humanity's downfall. '(See <u>Man the Master</u>, p. 206.)

* A number of French sociologists have used the concept of a collective consciousness, particularly in connection with the psychology of such low-grade groups as the crowd. See le Bon's Psychology of the Crowd, Sighele's La Foule Criminelle, A. A. Marie's Psychologie Collective, and Fouillée's La Science Sociale Contemporaine. Espinas (Le Sociétés Animales) saw man's consciousness as the fusion of his cells' consciousnesses, and the groupconsciousness as the fusion of men's consciousnesses. And Lévi-Bruhl postulated 'collective representations' which are in some sense independent of individual representations.

× <u>Community</u>, <u>A Sociological Study</u>, p. 83. For a view opposed to Maciver's, see McDougall, The Group Mind, I and II. McDougall attributes to society a mental life greater than the sum of the mental lives of its individuals, a 'collective mind' (mind being defined as "an organized system of mental or purposive forces") but not a 'collective consciousness'; for consciousness can hardly be "used twice over", once in the individual, and again in the group. But why this cannot happen, he does not disclose. Here he seems (wrongly, as I think) 'to regard consciousness as a substance other than the objects of consciousness (which are usable over and over again), and as other than "purposive and mental forces ."

 ϕ Cf: Trotter's emphasis on "the biological significance of gregariousness"; and his proposal that the biologist should "study the affairs of mankind in a really practical way... Thus might be founded a true science of politics which would be of direct service to the statesman." <u>The Instincts of the Herd</u>, pp. 18, 99.

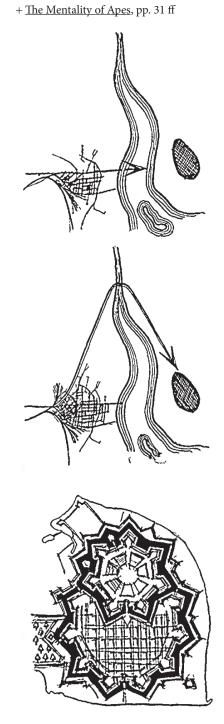
° The ability to learn by experience, as H. S. Jennings showed, (<u>The Behavior of the</u> <u>Lower Organisms</u>), is possessed by some of the protozoa, and is possibly a characteristic of all living things. On the other hand, there is no such thing, even at the top of the biological scale, as pure intelligence. It follows that there are no rigid distinctions between animals, on the score of behaviour.

confronts the observer?

The only satisfactory way of settling the question is to note how the organism conducts itself when faced with a problem. Thus Köhler + places a stick in the cage of one of his apes, and a banana outside the cage, just beyond the animal's reach: instead of continuing in his vain efforts to reach the banana by direct means, the ape turns round, fetches the stick, and uses it to get the banana. We say that (subject to the necessary checks and qualifications) the animal's behaviour is intelligent. Suppose, now, that our observer confronts the organism he is studying with a similar problem. Food, taking the form of a rich deposit of coal, is located on the far side of an estuary that is too wide to bridge. How does the subject react to such a stimulus?

The first thing that the observer finds to report is a quickening in the stalks or limbs near the river. Their 'sap' flows plentifully; they tend to thicken; new networks form. It is as if the organism had noticed the food and were preparing to go and get it. Now a stupid creature would probably waste time and energy trying to put a limb over the river directly opposite the coal deposit, and failing every time because the river washed it away. But just as an intelligent ape turns his back on the banana he cannot reach, and goes to fetch the stick that is necessary to his success, so our organism (if it is intelligent) will make sure of the end by postponing it, and by compassing first of all the means to that end. Without making a false move, it will proceed up the near bank of the river, leaving the objective far behind, till it arrives at the spot where the river is just narrow enough to be safely bridged; then it will return down the further bank of the river till the goal is at last attained, and a plentiful supply of coal is assured. And that is precisely what the observer sees. Instead of rushing straight at the objective regardless of consequences, the organism takes steps to attain the object economically, with a minimum of effort. Far more elaborately than the most intelligent of Köhler's apes, and dispensing with most of their blunders and random movements, the organism adjusts its behaviour to circumstances, dividing its procedure into well-marked stages, each of which has its subsidiary goal.

Sometimes, however, economy of effort demands the direct approach, and the organism's intelligence appears in the way it makes straight for the objective, undeterred by the most formidable obstacles. One perfectly straight limb is extended, instead of a number of hesitating and devious feelers. For the first time, among the amorphous features of the planet, large-scale geometrical figures appear --- the presumption is that mind is here at work. × Even more significant are the seemingly unrelated outgrowths (e.g., those involved in a long-term town-planning project) whose unity and economy only become evident when the links are put in, perhaps years later. Everywhere the observer finds evidence of ingenuity and foresight, such as the exploitation of natural features to form reservoirs and dams, elaborate preparation for floods and seaerosion and earthquakes when there is no immediate threat, the reclamation of submerged land that can yield no immediate returns. And if the observer pursues his studies at a closer range, he will find that the organism breeds many useful varieties of animals and plants, fights its enemies by subtle and indirect means (as by draining marshes to reduce



Mannheim in the seventeenth century.

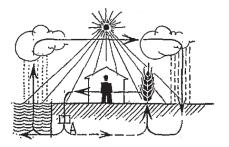
× M. le Corbusier makes this point in <u>Vers une Architecture</u>. Also it has been suggested that the surest way of showing the inhabitants of other planets that intelligence is present on this planet, would be to construct here giant illuminated geometrical figures. Anopheles), and sets one species against another for his own ends. +

In all this, the organism's grade of behaviour in relation to its environment is certainly not inferior to that of the individual man in relation to his much narrower and very different environment. But there is another side to the picture. The organism does not always anticipate disaster, or provide against the unfortunate consequences of its own actions. Thus it continues to deposit faecal matter in the sea wherever this is convenient, to the impoverishment of the soil on which it lives. It pollutes rivers with its chemical excrement, killing most of their fish. It has practically wiped out the whales of the northern hemisphere; the Antarctic whales may well follow. The unrestricted felling of forests has resulted in the scouring of the upland soil and the flooding of the lowlands: the desert grows at the organism's expense. × Crops, taken in too-quick succession, exhaust the land. Vast grasslands are ruined by overgrazing. Mineral resources are being squandered. Now a more intelligent subject would learn to restrain its appetite, eating less today in order to have something to eat tomorrow, and in the years to come. In many ways and, in many places, the organism is still taking the short view, and failing to learn by experience. °

In some directions, however, there are signs of improvement. Though the organism wastes natural resources, creates dust-bowls, and kills off valuable species, the patient observer can detect many signs of concern, and tentative efforts at reform. Possibly it is the will, rather than the knowledge, that is lacking, and the organism's defects are defects of 'character' rather than of intellect. Moreover, the observer reflects that the tempo of the organism's life is likely to be slow: to expect it to learn its lessons at the same speed as individual man is to confuse two distinct levels of functioning. A man has a lot to learn in a little while. Humanity can take its time.

(Note that, to judge of the organism's intelligence, it is necessary to study its external relations -- its dealings with the objects of its environment -- and that internal relations are here irrelevant. The fact that the organism embodies many brilliant devices, many wonderfully efficient organs, furnishes no direct evidence as to its mental calibre --- an idiot is as clever as a physiologist when it comes to the growth and conduct of his tissues. Nevertheless there are no hard-and-fast distinctions here: the relatively pure science, which is Humanity's knowledge of the outside world, is continuous with the applied science whereby the internal physiological processes of his body are governed. In fact, a single item of knowledge may have aspects which give it a place at numerous hierarchical levels. But the rule for all observers must be: one level at a time. Look to the behaviour of the whole; do not mix your levels; do not concern yourself with a region till you get there.) + A notable instance is the control in Fiji of the coconut scale insect, by means of ladybird beetles specially imported from Trinidad. In eighteen months, the scale insect, from being a serious pest, was reduced by its ladybird enemy to a rarity. See T. H. C. Taylor, <u>The Biological Control</u> of an Insect in Fiji.

× Thus the countries of the Mediterranean and the Near East were, at the time of the Roman Empire, fertile and prosperous in many areas where they are now deserts or near-deserts. Today, due to soil erosion, the growing world-population is living on a dwindling area of fertile land. Cf. the classic work of George P. Marsh, <u>The Earth</u> <u>as Modified by Human Action</u>.



The cycle, rain-crops-man-sewage-seaclouds-rain..., is constantly transferring organic matter from the land to the sea and leaving it there. The remedy is to add to this cycle a reverse cycle, by providing at A a disposal plant that separates the organic matter from the sewage and returns it to the land.

° Dr Hugh H. Bennett testified before a U.S. Congressional Committee in 1939, that 282 million acres of fertile land in that country alone have already been destroyed by human action, and that every day the equivalent of 200 forty-acre farms is lost by soil-erosion. And it takes nature hundreds of years to bring back a single inch of topsoil. See William Vogt, Road to Survival. At least, thanks to warnings like these (notably the warnings of Sir John Boyd Orr) the world is gradually becoming aware of its peril. Cf. Food and People, by Aldous Huxley and Sir John Russell (Bureau of Current Affairs Pamphlet No 77, April 1949, sponsored by UNESCO), and Fairfield Osborn, Our Plundered Planet.

7. SOME COMMON-SENSE OBJECTIONS ANSWERED.

C. Let it be agreed that this creature does exist, and lives, and behaves

intelligently, and, that in some sense our individual human lives flow into and out of its life: still it would be dangerous for men to pay much attention to the existence of this thing. What is its life to men? At best only a means, of which men are the end; ° at worst, justification for all manner of abuses. Its good (or what some dictator or religious fanatic declares to be its good) may very well be the individual's evil. Even if it should be true that there is no divergence of interests, and the "welfare" of the part and of the whole coincide, still the only criterion for us men is men's good. If loyalty to men as individuals does not automatically involve loyalty to the individual of whom men are parts, then so much the worse for that individual.

P. First, I suggest that the proper way to meet such a threat is not to repress it, but to become fully aware of what it is: to damn any inquiry into nature by calling it 'dangerous thinking' is dangerous absence of thinking. Secondly, I suggest that the question of whether the existence of a supra-individual being constitutes, or could constitute, a threat to the individual, turns on the question of what the individual really is. What am I? Now the thesis of this book is that to be a man is to be, in addition, much more and much less than a man. In particular, I am Humanity. To the well-travelled regional observer, "There is no such thing in nature as \underline{a} man" + and even "a chimpanzee kept in solitude is not a real chimpanzee at all." × And my own experience amply bears out the observer's impression. At one moment I find myself thinking in terms of some personal satisfaction (of a meal I am about to enjoy, for example, or of my aches and pains); then, a moment later, perhaps I am thinking in terms of Humanity's well-being as my own well-being. \otimes Who was it that, in the previous section of this chapter, became concerned at Humanity's improvidence? Certainly not man as man. The law of equality holds good, and when the individual takes for his object a supraindividual object (such as a species of insect pest) then he transcends his separate individuality. A man thinking becomes, in Emerson's phrase, 'Man Thinking' * Units of a given grade can only be handled at their own level; action proceeds from above or from below, but operates upon the unit at the unit's level, through the unit's hierarchical equals. In fact a mere man, seeking only individual satisfactions, is a mythical abstraction --- to compass even these he must adopt a wider, self-transcending point of view, if only as a means. "Social solidarity exists only in so far as a social ego is superadded, in each of us, to the individual self", says Bergson. "Its presence is more or less marked in different men; but no one could cut himself off from it completely." † On the other hand, Humanity alone and apart from men, Humanity as a mind or consciousness which is more than the common mind that is in them, Humanity that is not at once wholly immanent and transcendent, is a monstrous superstition, richly deserving the contempt of common sense. Apart, man and Humanity are nothing. Together, as separate yet inseparable poles of a life-process, they comprise human nature.

C. Would it not be less speculative, and more consonant with the spirit of science, to say, with R. M. Maciver, that society exists only in its members. • Nobody could accuse Samuel Butler of undue caution, yet he writes, ϕ "We may be ourselves atoms, undesignedly combining

° The universe, being dead, is for us a mere means to terrestrial life; terrestrial life, being infrahuman, is a mere means to human society; society, having no unitary mind, is a mere means of which individuals are the end; the individual's body in general is a means of maintaining the nervous system, of which the brain is the important part for consciousness --- and so on, to the central nothingness. Such is our modern creed. For us, the Centre is the End. For an earlier age, the circumference was the End. Later on, I shall argue that we must learn to combine these opposite movements, and to see all meaning, value, and life, as converging upon an external transcendent centre no less than upon oneself.

+ Henry Drummond, <u>The Ascent of Man</u>. p. 244.

× Kohler, The Mentality of Apes.

⊗ In his <u>Religion of Man</u> (pp. 144 ff.) Tagore has much of importance to say on the interplay of these two natures in us. What he calls the 'Supreme Man' in ourselves is more real than the 'individual man', and our good consists in the realization that his purpose is ours. Tagore's humanist religion has at this point much in common with H. G. Wells' in God the Invisible King, and First and Last Things (II.11), and with Comte's as expressed in the Positivist Catechism. Of Humanity, Comte writes, "This undeniable Providence, the supreme dispenser of our destinies, becomes in the natural course the common centre of our affections, our thoughts, and our actions. Although this Great Being evidently exceeds the utmost strength of any, even of any collective, human force, its necessary constitution and peculiar function endow it with the truest sympathy towards all its servants." Here Comte erroneously separates the Great Being from men, of whom He is the common self.

* 'The American Scholar'.

† <u>The Two Sources of Morality and Reli-</u> gion, p.6-7.

• Community, p. 97.

 ϕ <u>Life and Habit</u>, pp. 110, 111. Gerald Heard describes the new man, the real genius of awareness, as merging "into the individual-transcending consciousness" of mankind. (<u>Man the Master</u>,p.119). And Belfort Bax has similar hopes of the man of the future. But my point is that man is already, <u>qua</u> man, bi-polar; and one of his poles is not merged in, but actually <u>is</u>, society. To be a distinct and individual <u>man</u> is to be, at the same time, mankind. to form some vaster being, though we are utterly incapable of perceiving that any such being exists, or of realizing the scheme or scope of our own contribution Any speculations of ours concerning the nature of such a being, must be as futile and little valuable as those of a blood corpuscle might be expected to be concerning the nature of man."

P. It is such a view -- a view which, by separating society from its members utterly mistakes the nature of both -- that Maciver is concerned to refute. It is such a view which supports "that most misleading antithesis which we draw between the individual and society, as though society were, somehow other than its individuals. Writers of a certain cast of mind are fond of speaking as if the interests of society and of 'the individual' (not of some individuals) were antagonistic. ° Sometimes they maintain that 'the individual' ought to be subordinated to society, sometimes that 'the individual' ought to be delivered from society..... Properly understood, the interests of 'the individual' are the interests of society. We were here talking not of two distinct things but of two aspects of one thing." * 'If anything, Maciver goes too far here in his emphasis upon the solidarity of the two levels. Antagonism there certainly is, but it is not (in the last resort) antagonism between the self and the notself: it is internal to the self which spans all the levels of the hierarchy. The rubric is: economy, no duplication. Whenever I take up Humanity's point of view, I do not copy it, but participate in it. Only a man can think as a man; only Humanity can think as Humanity. The risk, then, is not that an alien and suprahuman being may override my interests or my individuality, but rather that one level of myself may unduly dominate the rest. Part of the insurance against this risk is self-consciousness. Men are, as Schiller believed, subservient to a 'power' or 'intelligence' whose ends they serve unconsciously. And the remedy is neither to oppose nor to deny that power, but to claim it. †

C. To take on all Humanity, to feel for the whole as one feels for this little private part of the whole, may be possible for the saint. But it is unrealistic to suppose that more than a handful of men have ever felt this way, or ever will. A little altruism is possible, even common. In general, however, self- interest rules.

P. Not in general, but invariably, self-interest rules --- ultimately, there is no self-sacrifice. In the last analysis, to love one's neighbour as oneself is to love oneself, for one's neighbour is oneself. When a man seems to act against his own interests for Humanity's sake, he is (so far as that action goes) Humanity; when he 'looks after number one', he is 'number one'. Is altruism then a myth? Not at all. It occurs every time the part sides with the whole against itself, but it is not a permanent state or plane of behaviour: it consists in the momentary shift from the lower level of functioning to the higher level. The man who deliberately gives his life for Humanity is self-sacrificing --- and self-regarding. For his act is the self-realization of Humanity in him. The animal's 'instinct' is to live and die in the service of its species. In man, this 'instinct' becomes a duty. * The species still acts; the race is still what counts. But man takes over. Becoming the species, he recollects (as Humanity's history) his own past experience, in the light of which he makes for his own (that is, Humanity's) goals. Thus he is able to extend both sides of his nature -- the cog"He raises sedition in the city", says Marcus Aurelius, "who by irrational actions withdraws his own soul from that one and common soul of all rational creatures." <u>Meditations</u>, IV. 24.

° Thus Benjamin Kidd says of man, "He is undergoing a social development in which his individual interests are not only subservient to the interests of the general progress of the race, but in which they are being increasingly subordinated to the welfare of a social organism possessing widely different interests, and an indefinitely longer life." <u>Social Evolution</u>, p. 81. My point is not that there is no such conflict of interests, but that it occurs internally, within the self.

* Community, pp. 92, 93.

One of Edward Carpenter's principal themes, in <u>Pagan and Christian Creeds</u> and other works, was that the 'Race' or 'Mass-man' is a spiritual pole, present in each individual or unit-man, as part 'of. his higher nature.

† Freedom is freedom to be oneself --- a self that embraces Humanity. Hegel says, "Man is free; this is no doubt the substantive nature of man; and in the State it is not only not abandoned, but in fact it is therein first established. The freedom of nature, the capacity of freedom, is not the actual freedom; for nothing short of the State is the actualization of freedom." (<u>Philosophy of History</u>, III. 401.) What Hegel says here of the State, I say of Humanity. Later in this chapter I discuss the relation between these two levels of integration.

"Man cannot contemplate himself as in a better state.... without contemplating others, not merely as a means to that better state, but as sharing it with him," says T. H. Green. (<u>Prolegomena to Ethics</u>, 199) Man's good is necessarily the common good, and his well-being necessarily involves the well-being of others --- ultimately, of all others.

* "The voice of Conscience is the voice of our Father Man within us; the accumulated instinct of the race is poured into each one of us, and overflows us, as if the ocean were poured into a cup." W. K. Clifford, <u>Essays</u>, 'Decline in Religious Belief'. I would add that it is a mistake to suppose that the voice of Man is more than a <u>part</u> of the voice of Conscience. nitive and the conative -- from the lower to the higher level, or rather to discover them there.

C. Theoretically and ideally, he may be able so to extend himself. But how many actually do so?

P. All rational creatures do so. When I make even the simplest statement (as, for instance, <u>this</u> statement) I intend it to be true for all men, whatever their age or race or country or religion. + I pass universal judgements, and in so doing I speak, not only for myself, or for my family, or for Englishmen, or for Europeans, but for mankind everywhere and at all times. Thought is a function, not of man, but of Humanity-man --- at the very least.

C. Doubtless there exists such a psychical system, in which all rational beings play their part. But the mistake lies in confusing it with, or tying it to, the reticulum noted by the observer at the beginning of this chapter. Society is no animated map, but an organization of minds, and its unity is a psychological unity. 'All social relations.... are psychical relations, relations of minds. Whatever their physical and organic bases, it is psychical laws alone that directly bind man to man in society. ° This is the starting-point of all knowledge of community,' writes R. M. Maciver.×

P. Objections of this sort, commonly urged against 'organismic theories' of society, are naivety itself, the curious products of academic specialization. Such theories, it is said, fail to do justice to the mental relations within society. Of course they do. Are they to be blamed for minding their own business? Is it any condemnation of physics that it ignores biological fact? Does any sane person expect neurophysiology to do justice to the soul of man, or call it nonsense, or irrelevant for psychology, or false, because it fails to do what it never hoped or pretended to do? Our experimental psychologists who avoid the introspective method wherever they can, our behaviourists who practically deny the existence of 'mind', are more than tolerated: the value of their work is universally admitted. Yet to apply the same method to the study of society (while never denying the overwhelming, importance of the psychical aspect) is misleading, or even absurd! The function of science, however, is clear: it is to observe, and to formulate the 'laws' of, phenomena --- no matter how sacred they may be, no matter what other aspects they may have, no matter what cherished 'illusions' about human freedom and human uniqueness are threatened, no matter whose susceptibilities are offended. We have nothing but contempt for the bigots who told Galileo to look for the truth about nature in books and not in nature --- and we imitate them freely. At least it can be said in favour of the wise men of Pisa that they turned from nature to Aristotle, not to Professor R.M. MacIver. +

The observer who supposes that the exterior aspect of the organism is all-in-all is utterly wrong --- as wrong as one who denies that there is such an aspect. At every level of myself there are the outside story and the inside story, and apart from each other they do not make sense. The state of my mind at any one of its numerous levels, and the state of my body at that level, are bound up together intimately. Goethe is not less + When I say that the temperature of this room is 70°F, I mean this to be an objective fact which all suitably equipped and rational observers would acknowledge; but when I say that I feel hot, I make a subjective judgement, inasmuch as I do not expect all observers in my place to feel hot. But my judgement is also objective, inasmuch as I expect them all to acknowledge the fact that I feel hot, no matter how they feel.

° It is true that certain deplorable varieties of organismic theory (like 'nothing-but' theories in other fields) run to the opposite extreme, and use the physical as a stick with which to beat the psychical. Thus Mr. Morley Roberts, having discovered nations to be 'low-grade invertebrates', sneers at internationalism, and peacepropaganda, and even at friendly contacts between nations: national ruthlessness is his gospel, and Machiavelli is his prophet. (The Behaviour of Nations, passim; also Bio-Politics.) Into such blind and insane despair are we liable to plunge, when we fail to do justice to aspects of society the physical and the psychical. It seems never to occur to Mr. Roberts that the kindliness he condemns as weakness is (no less than the hate he praises as political realism) a psychic characteristic of the 'low-grade invertebrate'

× <u>Community</u>, p. 98.

+ The twin developments of which we stand in need are (a) the extension upwards of the method of <u>physical</u> science, from the smaller organisms to the larger organisms (of which Humanity is one); and (b) the extension downwards of the method of psychology, from the larger to the smaller organisms (even to those called inanimate). Our denial of the 'mind' of the latter is as irrational as its counterpart --- our denial of the 'body' of the former. On (a) see Joseph Needham's Appendix to C. E. Raven's <u>Creator Spirit</u>, p. 299. corporeal than an idiot, or an idiot than a stone; neither is Humanity less corporeal than man. It is only a kind of puritanical prejudice against the body which believes to the contrary. In fact, there is an important sense in which Goethe is vastly <u>more</u> corporeal than the idiot, seeing that it is the mark of the higher individual that he identifies himself with, and becomes, more and more of the physical world. Great minds go with great bodies. †

C. But unity, internal harmony, and degree of integration, are more important than mere bulk. Is not the strife within Humanity so violent as to make impossible any real unity either of mind or of body? War divides Humanity, and there is always war. Coleridge had good reason, and we have still better reason, for saying,

> Toy-bewitched, Made blind by lusts, disherited of soul, No common centre Man, no common sire Knoweth! ×

P. Without doubt Humanity is sick, somewhat as a man is sick when his personality becomes dissociated into two or more incompatible and alternating phases, ° or when the co-ordination of his bodily members fails. But every grade of individual in the hierarchy of individuals is (with the exception of the lowest) a society of subordinate individuals; and every society is the scene of strife. If disharmony is not the cement of the pyramid, at least it is an essential ingredient. Our worst enemies are sometimes our best friends, and there is such a thing as symbiotic warfare. Roux has taken the Darwinian concept of the struggle for existence, and extended it from the level of the species and the level of the individual to the level of the individual's tissues and cells. Disease, then, whether in Humanity or in man, is an exacerbation of the normal and necessary social conflicts, and by no means conflict per se. The strife, moreover, is apt to seem more severe and deep-seated to the contestants than it does to one who is less involved: it is a commonplace that the outsider can see a unity, amongst the hostile members of a group, which is altogether lost upon the members themselves. To the stranger, the lifeand-death issues which (in our view) divide men irreconcilably, are likely to appear trivial in comparison with the underlying agreement. Above and below the realm of the conflicting many there is a realm of oneness. * The science which arms nation against nation is itself international, and so is a world of assumptions and concepts and behaviour-patterns which alone make war possible. (This is not to deny, of course, that Humanity may now be mortally sick, or indeed at the point of death. I do not believe this to be so, but the possibility must be admitted.)

8. THE STATE AND HUMANITY.

The two-edged threat to Humanity and to man is to be found at the levels which come between them. In fact, most of the criticism which common sense directs against Humanity is misplaced: it should be directed at the separative sovereign State, the Fichtean State which W. H. Sorley • trenchantly (and inaccurately) described as "in instinct a wild beast, in † "What is he but a brute Whose flesh hath soul to suit?" Browning ('Rabbi Ben Ezra') proposes to judge the body by its ability to project the soul "on its lone way". And so it must appear, while we ignore the unlimited evidence of the expansion and contraction of our bodies to suit each occasion.

× 'Religious Musings'.

° As, for instance, the famous Doris and Beauchamp cases. See W. F. Prince, <u>The Doris Case of Multiple Personality;</u> Morton Prince, <u>Clinical and Experimental</u> <u>Studies in Personality;</u> and McDougall, <u>An Outline of Abnormal Psychology</u>, pp. 482 ff.

The Third Citizen in <u>Coriolanus</u>, speaking of the many-headed multitude, declares that "if all our wits were to issue out of one skull, they would fly east, west, north, south; and their consent of one direct way should be at once to all the points o' the compass."(II. 3.)

* Thus Royce: "In the form of finite social intercourse, amongst human beings, we find exemplified a type of unity in variety, and of variety recalling us always to a recognition of unity, --- a type, I say, which permits us ... to go further in our hypotheses for the interpretation of nature, than we can go by the use of any other types of conception." <u>The World and the Individual</u>, i. p. 416. I would add that the variety and the unity, or the strife and the resolution of the strife, belong at different levels. They are not strictly compresent.

• In his article 'The State and Morality', in <u>The Theory of the State</u>, Oxford, 1916.

Mussolini's formula was "all in the State, nothing against the State, nothing outside the State". 'The fascist State, the highest and most potent form of personality, is a force, but a spiritual one. It assumes all the forms of man's moral and intellectual life.... Fascism reaffirms the State as the veritable reality of the individual." (Scritti e <u>Discorsi</u>, 1926; <u>Dottrina</u>.) Here is a double error - rendering to a mesoform what is due to a unit of integral status, and what is due to the highest unit. intelligence a philosopher, in design a fiend".

It is instructive to note how immensely discrepant are the various estimates of the State. On the one hand, Diogenes was glad to call himself Stateless, and Marcus Aurelius considered himself to be "a citizen of the supreme city, of which all other cities in the world are as it were but houses and families." Athens, "the lovely city of Cecrops", requires the allegiance of a part of our nature, but the universe, "the lovely city of God" should gather up into one all our partial loyalties. × Whereas the Emperor belittles the State in favour of what is more than the State, Nietzsche belittles the State in favour of what is less than the State --- the individual citizen. For him the State is "the coldest of all cold monsters. Coldly it uttereth its lies; and this is the lie that creepeth out of its mouth: 'I, the State, am the people." * And a number of contemporary philosophers and theologians + (though from quite other motives) are as insistent as Nietzsche in their assertion of the moral inferiority of the group to the individual. Their case is greatly strengthened by the extravagant claims of the opposite side --- claims like Treitschke's when he wrote: "The individual must sacrifice himself for a higher community, of which he is a member, but the State is itself the highest in the external community of men there is nothing beyond it in world-history; consequently it cannot sacrifice itself for anything higher." † Another (but far less crudely nationalist) representative of the same Hegelian tradition believes that in the State "we find at once discipline and expansion, the transfiguration of partial impulses, and something to do and to care for, such as the nature of a human self demands. If, that is to say, you start with a human being as he is in fact, and try to devise what will furnish him with an outlet and a stable purpose capable of doing justice to his capacities -- a satisfying object of life -- you will be driven on by the necessity of the facts as far as the State, and perhaps further." Such is Bosanquet's view. °

Which estimate is right --- that which makes the State the fulfilment or higher self of the citizen, or that which makes it his enemy (either a cunning suprahuman enemy, or a stupid infrahuman one, whose selfcentred fierceness is likely to work man's ruin)?

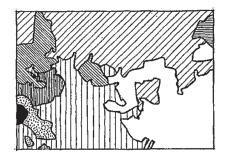
My thesis is that there is much truth in both these estimates. But first it is necessary to decide the rank of the State in the hierarchy. I say that it is not a true individual of integral status, but a very important mesoform, for the following six reasons. (1) Its boundaries are apt to be arbitrary, shifting, and indistinct; for instance, such organs as roads and railways often link up with those of neighbouring States so that there is little evidence of discontinuity. (2) The State is capable of incorporating en bloc an 'organ' or territory taken from a neighbour, and of shedding such an organ, without any radical reorganization either of the 'organ' or of itself. (3) Temporary and permanent transfer of citizens from one State to another is common, and there may exist a class of Stateless individuals. (4) Genetically, national States are as a rule of very mixed origin. It often happens that racial minorities are not thoroughly incorporated, and that they show separatist tendencies. (5) Some citizens are actively disloyal to the State, and some are merely indifferent. The loyalty of many others is qualified by loyalty to organizations which transcend national frontiers: indeed, it is generally held that the more civilized the citizen is, the × See <u>Meditations</u>, III. 11; IV. 19.

* <u>Thus Spake Zarathustra</u>, 'Of the New ldol'.

+ For example, Reinhold Niebuhr, in <u>Moral Man and Immoral Society</u>. He writes, 'In every human group there is less reason to guide and to check impulse, less capacity for self-transcendence, less ability to comprehend the need of others and therefore more unrestrained egoism than the individuals, who compose the groups, reveal in their personal relationships." (pp. xi, xii.) See also the same author's <u>The</u> <u>Nature and Destiny of Man</u>, i. p.223.

† See Lectures on Politics, 'Relation of the State to Moral Law.' Extremes meet, and there is little real difference between Niebuhr's view of the morals of the State, and Treitschke's view. According to the latter, "For one State to sacrifice itself in the interests of another would not only be immoral; it would be contrary to that principle of self-preservation which is the highest duty of a State." <u>Politik</u>, i. p. 100. As to the fact of the State's lawless egoism, these two thinkers are at one; as to their valuation of the fact, they are worlds apart.

° <u>The Philosophical Theory of the State</u>, p. 140. In <u>The Metaphysical Theory of the</u> <u>State</u>, L.T. Hobhouse criticizes Bosanquet's views from the angle of liberalism and individualism. But the remedy for the sins of the State is surely not just to descend in one's sympathies to the level of the private citizen, but to link this descent with an ascent to the level of Humanity. The saving grace of the words that I quote from Bosanquet lies in the tail-piece --- "and perhaps further" --- but there is no question of 'perhaps'.



Part of 16th century Germany

 Brandenburg

 Archbishopric of Magdeburg

 Anhalt

 Bishopric of Merseburg

 Mansfeld

 Electorate of Saxony

 Hapsburg countries

 Kingdom of Poland

more likely he is to find himself in sympathy with international bodies or movements --- scientific, artistic, and religious. (6) Finally, 'mankind is divided by race, language, class, political faith, into units which have little to do with national divisions. $^{\circ}$

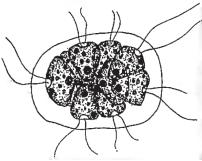
Now none of these six considerations is by itself sufficient to put the State into the class of mesoforms. But together, they are, I think, more than sufficient. The State is not an individual of integral status, though it may approach that condition for a time (for, example, when it is at war, or pursuing a policy of hostile isolation). +

Humanity, on the other hand, is genetically one, and quite distinct from other species; Humanity's members are unlike, and not interchangeable with, the members of any other species; Humanity's boundaries (vague though they are) set common outer limits to the many overlapping pseudo-individuals or bodies which ignore the State's frontiers; but Humanity does not merge, by any comparable overlapping, with other species. Above all, the human mind-body, man's basic concepts, his science, the techniques and the instruments whereby non-human nature is interpreted and controlled, are international: they belong to Humanity, not to the State. That which belongs to the State alone is a minute and recent fragment of our heritage, but that which belongs to Humanity is seen in the difference between a man and an ape. It is by virtue of our humanity, and not our nationality, that we perform our higher functions. That is to say, the whole to which we must look for the explanation of all but the more trivial details of our human behaviour, is Humanity.

There is no objective means of measuring individuality, but I think it is clear that, on balance, Humanity is an individual (a very imperfect one, of course, but sufficiently a whole to be granted integral status in the hierarchy) and that the State is a mesoform, whose hierarchical rank is higher than that of the individual man, but whose individuality is inferior to his. Failure to make this all important distinction between level, or hierarchical status, and individuality, or holistic status, and failure to take account of one or the other kind of status, are responsible for many distorted views of the State. On the one hand, they are responsible for the view of writers who, like Morley Roberts, put the State on the level of the invertebrates, as a sub-moral animal driven by blind instinct to unceasing and ruthless warfare with its competitors in the nutritional field. On the other hand, they are responsible for the opposite view of the State as a god who can do no wrong, a divine being to whom the citizen owes blind obedience. The danger in over-emphasizing the State's real superiority to its citizens is that the State threatens to take the place of Humanity, \oplus pretending to a rank and a function that are not its own: the results are likely to be nationalism, tyranny, and war. The danger in over-emphasizing the State's real inferiority to its citizens is that the State's function as a valuable organ of Humanity is neglected: the results are likely to be suicidal anarchism and self-centredness. In brief, the State is like a middle-grade official --- a treasure in his proper place as an intermediary, but a menace when he tries to fill the office that belongs to his chief.

° On the fact that the Nation-State is not a genuine and self-contained unit, and on the futility of trying to disentangle its history from that of its neighbours, see the Introduction to Arnold Toynbee's <u>'A Study</u> of History.

+ I limit the discussion here to the State and to Humanity as they now exist. When Aristotle wrote, "If all communities aim at some good, the State or political community, which is the highest of all, and which embraces all the rest, aims, and in a greater degree than any other, at the highest good," --- when he wrote these words the oneness of Humanity lay in the racial past and future, rather than in the present. (See <u>Politics</u>, I. 1.)



Pandorina Morum A brief study of the stages of integration that link the colony of undifferentiated cells (such as Pandorina) with the highgrade metazoon, is sufficient to show by what imperceptible degrees the 'pseudoindividual' is separated from the 'true individual'. So also at the next level of integration -- the social -- there is every degree of wholeness, from the human mob and the wolf-pack and the bee-hive on the one hand, to Humanity on the other. (See Bergson, Creative Evolution, p.175, on the bee-hive as "really and not metaphorically, a single organism". Haldane and Huxley, Animal Biology, pp. 234 ff., discuss the role of 'aggregation' -- at first biological, then social -- in evolution.) ⊕ It is a measure of the greatness of Mazzini, the fervent nationalist, that he subordinated the nation to Humanity. "Without the nation there can be no humanity", he writes, in On the Duties of Man. "Nations are the citizens of humanity, as individuals are the citizens of the nation. And as every individual lives a twofold life, inward and of relation, so do the nations. As every individual should strive to promote the power and prosperity of his nation through the exercise of his special function, so should every nation in performing its special mission, according to its special capacity, perform its part in the general work, and promote the progressive advance and prosperity of humanity. Nationality and humanity are therefore equally sacred. To forget humanity is to suppress the aim of our labours; to cancel the nation is to suppress the instrument by which to achieve the aim."

But the mesoform must not be underestimated: functionally, it may well be just as important as the true individual. It is probable, as Sir Arthur Keith has urged × that a fundamental unit in the evolution of man has been the social group (comprising, at first, perhaps fifty or sixty members, and gradually extending to the millions of the nation-State of today). In the constant struggle between such social groups, it is the group as a unit, rather than the individual man, that is passed through the sieve of natural selection. And this selection of groups has put survival value upon the virtues of love and loyalty and ability to co-operate within the community, and upon hatred and ferocity towards other rival communities. Certainly it is a fact that nations are still fearful and hating predators, whose peace is preparation for open conflict.

To leave the matter there is to commit two fallacies --- I call them the fallacy of the single level, and the fallacy of the inaccessibility of levels. The first ignores the existence of the higher units which (however imperfectly) resolve the contradictions, and unify the multiplicity, of the warring lower units: in particular, it denies the reality, over and above the struggling national mesoforms, of the Humanity whose organs they are. Though my tissues are at variance, though disease should presently intensify the wars that are now being waged within my flesh-and-blood body, though I should die of them tomorrow --- yet I am one. Even so there is a plane -- there are several planes -- at which the bitterest enemies amongst men, and ideological factions, and races, and States, are indissolubly united. ° The second fallacy (that of the inaccessibility of levels) is to part the State from man, to make it a being for which man is not responsible, a being that is beyond him (whether 'above' him or 'beneath') and wholly other than himself. The fact is that we all have the right, and indeed the duty, to say with Louis XIV, "L'Etat c'est moi". For to the degree that we think nationally (as we are compelled to do every time we open our newspapers) to that degree do we become the State. There is no valid excuse for shifting the blame for its behaviour on to some political caucus, still less for shifting it on to "a living, breathing 'animal'.... which belongs to a low-grade invertebrate order." * The fear and the hate, the greed and the jealousy, the silly pride, the ferocious cruelty, the stupidity, of the nation --- all are mine, evils in me, calling for my repentance and reformation. And an essential part of this reform is the vivid realization of the fact of Humanity.

To be a proper man is to be man, State, and Humanity by turns, as the occasion demands. • We must grow, but in some respects it would be better not to grow at all than to stop growing at the second stage ---the stage of the mesoform. The organ of Humanity becomes the enemy of the whole. Nevertheless there are grounds for hope, and my duty is plain. To the extent to which I am able, at the national level, to rid myself of hate and fear --- to that extent the nation is rid of hate and fear. To the extent to which I am able to enjoy and to live the oneness of Humanity --- to that extent is Humanity's oneness renewed and perpetuated. Self-love, if nothing more, points the way. The conflict of nations is not external to me: it destroys my own integrity. International problems are, in the end, personal problems. This sounds more odd than it is, for the problem of the rebellious mesoform is no new one in this inquiry. The × <u>A New Theory of Human Evolution</u>. In the latter part of the book, Sir Arthur Keith maintains that the nation (or 'race', as he uses that term) inherits the behaviour and the mental characteristics of its smaller prototypes. Nations are still engaged in the evolutionary struggle for survival, and nationalism is likely to become still more intense in the future. But his doctrine (<u>Essays on Human Evolution</u>, pp. 60, 65) that "the ethical core of a tribe is amity; its crust is enmity", and "nationalism is in harmony with human nature; Christianity is not", are dangerous half-truths.

Of love and might to be divided not,

Man, one harmonious soul of many a soul, Whose nature is its own divine control ." Shelley, <u>Prometheus Unbound</u>. The evidence for the existence of this plane is first-hand, for we visit it occasionally. There are moments when we totally accept the necessity for the ceaseless strife of men and ideas and ideals, when we reject none of them, when the unity that is above the multiplicity, and the peace that is above the storm, are revealed to us. At such times we can say with Miguel de Unamuno, "to be the whole of myself is to be everybody else".

* <u>The Behaviour of Nations</u>, by Morley Roberts. Cf. Alfred Machim, <u>The Ascent</u> <u>Of Man</u> (1925), p. 171; M. R. Davie, <u>The</u> <u>Evolution of War</u> (1929), pp. 46, 233; Sir Arthur Keith, <u>Essays on Human Evolution</u> (1946), XXX.

· Superficially, insect and human societies are very similar. Marais (The Soul of the White Ant) describes the termitary as a single organism, held together by a continuous series of 'orders' broadcast by the queen --- it is suggested that the means of communication are extra-sensory, since a steel plate appears not to interfere with them. But, in fact, the difference between such an insect society and the human is much greater than it seems: for it is of the essence of the latter that man shall continually travel between the level of the individual and the level of the community, whereas any comparable movement on the part of the insect is (to say the least) improbable. Man's supreme accomplishment is his capacity for vertical motion in the hierarchy.

^{° &}quot;Man, oh, not men! a chain of linkèd thought,

threat to my wholeness as a man proceeds from the conflict between one set of organs and another set --- the glutton, the rake, the sluggard, the intellectual, and others, are always striving in me for mastery. × Sin, intemperance, sickness, madness (and who is altogether free from these?) occur when the mesoform usurps the station of the whole. And the unwholesomeness is many-levelled: the man is organ-ridden; Humanity is State-ridden; the State itself is perhaps party-ridden, or class-ridden. He who makes one god of his belly and another of his nation is sick with the same kind of disease on two planes of his body, and falls short both of manhood and of Humanity. +

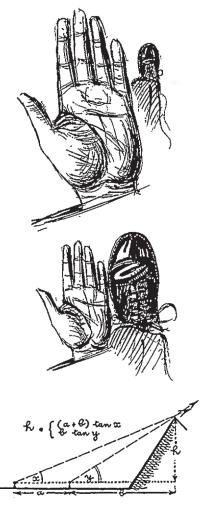
9. THE 'OBJECTIVE MIND' OF HUMANITY.

An encouraging fact is that, in some respects, man attains with ease the level of Humanity: forsaking the subjective outlook of his private or individual self, he adopts the objective outlook of his public or social self --- a self that no national frontiers can contain. "All our judgements", says Kant ° "are at first mere perception-judgements: they hold good simply for us, i.e. for our subjectivity. It is only subsequently that we give them a new reference, namely to an object, and intend that they shall hold good for us not only at the moment but at all other times, and in like manner for all other persons." When we think and act as rational, self-conscious persons, we do so by virtue of that 'objective mind' which is immanent in and transcends individual man. Thus we come to experience a 'real' world in which railway lines are parallel instead of convergent, in which pennies are circular and yet have thickness, in which houses have backs and front and interiors at the same moment; while the 'apparent' world, in which these objects are quite differently constituted, is discounted. Consider this sheet of paper: the curious fact is that I observe it to have four unequal sides and four unequal angles, yet I observe it to be a rectangle. Evidently there are two 'minds' in me (working together so harmoniously that I mistake them for one) --- or two observers, man, and Humanity. The first sees that my little finger is the size of my whole foot; the second sees its 'true' size. The first observes that a cube has, at most, three diamond-shaped sides; the second observes that it has six sides, each a square. The first lives in a world inhabited by men of all sizes, from "men as trees walking" to manikins, and from manikins to mites --- in Brobdingnag and Lilliput combined; the second lives in a common-sense world whose men are always mansize. The real distinction between these two observers in me is that the former is one man, whereas the latter embraces all men. My world becomes Humanity's world. It is only for a moment, and by a deliberate effort, (such as the painter has to make), that I can use my own eyes and see my companion as a creature that lacks an eye or an ear, a leg or an arm. As William James points out, so completely do we dismiss retinal magnitude that we have no notion how the size of the moon as we see it compares with the size of, say, a halfpenny: the only way to find out is to superimpose them. × Long past is the time when I lived in a world of private realism and innocence of eye --- the time when (as a baby of a

× Nietzsche speaks of "men that are naught but one great eye, or one great mouth, or one great belly", or an ear "borne on a small, thin stalk --- and the stalk was a man!" <u>Thus Spake Zarathustra</u>, 'Of Redemption'. To such a condition does Humanity tend, whenever one State, or race, or class, or other mesoform, seeks to dominate all the rest, and mistakes itself for the whole.

+ One of the tasks of the science of the future will be to reveal in detail the interdependence of the various levels of 'mesoform-sickness'.

° <u>Prolegomena</u>, 18.



A solitary man's estimate of the height of a mountain is subjective; a pair of men, pooling their private observations, may arrive at an objective estimate. This trigonometrical example typifies all objectivity, which is in essence the organization of partial views.

 \times <u>Textbook of Psychology</u>, pp. 343 ff.

few months) I was capable of noting that the face of a man, when seen in profile, is terribly mutilated. + Now I have grown the myriad eyes of Humanity, * whereby I perceive my object from all angles and ranges; and my difficulty, as every draftsman knows, is to revert, when the occasion requires it, to my primitive binocular vision. In fact the wholly private view of things is an artificial abstraction: ° the union of my private view with others, to build Humanity's view, is no external and theoretical construction --- I am (in one of my aspects) Humanity, and it is natural to me to see things his way. †

(The essential ambiguity of my nature is physical no less than psychical. Consider, for example, my sensitivity to vibrations. I register visible light (of wavelength between 30 and 15 millionths of an inch) because my eyes are adapted to it: other waves (it is said) lie outside my range of vision. But the truth is that I also register 'wireless' waves and infra-red waves (whose wavelengths exceed those of visible light) and ultra-violet waves, X-rays, and Gamma rays (whose wave-lengths are less than those of visible light). My total spectrum ranges from a wave-length of some 20 miles to some 20 million-millionths of an inch, instead of from 30 to 15 millionths of an inch --- so much more sensitive is my greater body than my lesser body. And, to speak truly, the sense organs of this greater body are neither extensions of those of the lesser body, nor makeshifts, nor mechanical substitutes for natural organs, nor so many orthopaedic devices; on the contrary, they are the proper and natural receptors of non-visible waves, just as the retina is the proper and natural receptor of visible waves. As Humanity, I leave evolution's half-way line for the van; as Humanity, I enjoy the advantages of having a body which, in respect of sensitivity (as of so much else), is as superior to my man's body as my man's body is, in its turn, superior to my cells.) ϕ

To suppose, however, that there is a clear-cut view which is a man's, and another which is Humanity's, and to suppose that I realize them both in their purity, is to over-simplify the case. The base of my operations, the axis of my life, lies midway between man and Humanity. About this axis (which is the original and proper home of common sense) my functioning swings like a pendulum, with more or less symmetrical strokes. The swing back is my shrinking, regression, breaking down; the swing forward is my growth, progress, building up. The deeper the swing, the profounder the rhythm of my living. Thus, on the one side, I need to see and hear the world simply, without intellectual preoccupation, as the artist and the child do; I need to feel spontaneously, unself-consciously, without thought of how I ought to feel; I need to plunge beneath the surface of tradition and good form, to the intensity of the primitive. By itself, however, this movement means disaster. The essential thing is that it shall, on the other side, be balanced by increasing ability to think imaginatively, * beyond merely personal and tribal concerns, to Humanity's concerns. The well-balanced person is symmetrical --- as much more than the common-sense man as he is much less.

+ Charlotte Bühler, <u>From Birth to Matu-</u> <u>rity</u>, p. 58.

* This doctrine has a long history. Aristotle taught that we have to break away from the things that are "first for us" to reach those that are "first for nature", and Averroes (believing that he was interpreting Aristotle) maintained that there is one intellect shared by all men. Kant distinguished objective 'judgements of experience' from subjective 'judgements of perception': in the former, percepts are combined in one 'consciousness in general' (<u>Prolegomena</u>). Above all, it was Hegel and his followers who made clear that the growth of mind is the renouncing of the partial and subjective element in it.

^o Koffka and Köhler hold that the total primary brain response to a situation gives the 'real' size of the object directly. My criticism of this view is that it does not go far enough in its insistence on the subject's wholeness: it takes a much greater organism than the individual man's to see the world objectively.

† Of the many kinds of fact which point in this direction, telepathy is one which is at present much in evidence. Whately Carington's valuable association theory of telepathy (an association of 'ideas' occurring in one 'mind' tends to hold good for others), and its corollary of a 'common repository' or 'group mind', are particularly relevant: see his Telepathy, An Outline of its Facts, Theory, and Implications, Xll, XIII. For me, the significant thing is that the data of telepathy alone are sufficient to lead to the general conclusions which this inquiry reaches by many routes. The fact is that the common mind of Humanity is passing from the phase of speculation to the phase of detailed empirical investigation.

 ϕ As with sense organs, so with brains: I think with the brains of all men (to go no further). F. Tilney (<u>The Brain from Ape to Man</u>) and others need have no anxiety that our psychic development is limited by the size of the cranium, which is in turn limited by the size of the pelvis. This is like fearing that our minds must be small because our brain-cells are small, and their atoms smaller still.

Dr Trigant Burrow, in <u>The Neurosis of</u> <u>Man</u>, attributes most of our troubles and conflicts to exaggerated self-consciousness, to the formation, through social conditioning of an "I-persona" which disrupts what he calls "the phylic, organismic unity of man", While largely agreeing with this, I feel that Dr Burrow does not do justice to the polar interdependence of the individual and the phylic in man, and the necessity for tension between them.

* "The great secret of morals is love; or a going out of our own nature, and an identification of ourselves with the beautiful which exists in thought, action, or person,

10. THE ONE BODY AND ITS MANY MEMBERS.

Can Humanity's good, then, never be man's evil? Are my interests at the higher level never at variance with my interests at the lower level?

In one sense they are never at variance --- "That which is not good for the beehive cannot be good for the bee." ° In another sense they are always and necessarily at variance --- hence the moral struggle, between the lower or private self and the higher or universal self, of which I am the battlefield. + Sometimes this struggle is conducted in public. If I commit a crime, society turns against me. But society's opposition is really mine, and I join in passing judgment on myself; otherwise, justice has no meaning for me. When the prisoner does not stand on both sides of the dock-rail, when the court of law is wholly external to him, then he is no fit subject for trial, but only for the insane asylum. I am a diarchy, Government and Opposition, whose function is to differ. Their agreement is moral death. And there is no reforming my lower self --- made over, rendered altruistic, it is my higher self. O As a private individual, I cannot rise above the standard of self-regarding behaviour proper to that level: further development belongs at a higher level of my personality. But I grow out of or supersede nothing --- every primitive stage, every grade of individual and mesoform, is present and at work in me. Each storey (and each course) of the pyramid is necessary to support the apex. †

My task, accordingly, is not to deny or to suppress the lower side of my nature, but to link it, symmetrically, with the higher, and to allow to the higher its due degree of authority. The whole of me must take precedence over the part. "If ever thou sawest either a hand, or a foot, or a head lying by itself, in some place or other, as cut off from the rest of the body, such must thou conceive him to make himself that commits any act of uncharitableness. Whosoever thou art thou art such, thou art cast forth I know not whither out of the general unity, which is according to nature." ϕ Uncharitableness, hatred, lack of sympathy, are diseases of the greater physique of a man, as surely as paralysis is a disease of the lesser physique. Patients under hypnosis are sometimes sensitive to that which is experienced by the hypnotist, feeling every prick that he feels * --- or so it is reported. Under normal circumstances we are more successful in repressing our fellow-feeling for the rest of our body. But sufficient remains above the threshold to show how true are the words of Alfred Fouillée "All that I owe to you, I owe to myself; what I do for you, I do for myself; what I do to hurt you, injures myself; what I do to hurt you, injures myself." ⊕

In ways that we little realize, the unity of man, and the existence of Humanity as our higher common self, are implicit in our thinking. ° For example, consider the beliefs and practice of the ordinary good citizen. He entertains lively notions of justice, and is outraged whenever he suspects that the innocent are being punished for the crimes of the guilty. Yet he is not outraged when he sees the child with some hereditary taint suffer on account of its ancestors, when he sees one innocent born to not our own. A man, to be greatly good, must imagine intensely and comprehensively; he must put himself in the place of another and of many others; the pains and pleasures of his species must become his own." Shelley, <u>A Defense of Poetry</u>.

° Marcus Aurelius, Meditations, VI. 49

+ The duality and the struggle in man are incomparably described by Plato, and St Paul (Rom. VII). "There is in the man himself," says Plato, "that is, in his soul, a better and a worse, and when the better has by nature control of the worse, then, as we say, the man is master of himself." (Republic, 431) In the famous parable of the charioteer and the two winged horses (one noble, and striving to mount to heaven, the other ignoble and earthly) Plato develops his doctrine that the beast in man should be submitted to the truly human element. The just and temperate man does not try to reform or to suppress the lower part of his nature, but confines it to its proper place in the hierarchy. (Republic, 443)

 Θ "The individual <u>cannot</u> love. When the individual loves, he ceases to be purely individual." D. H. Lawrence, <u>Apocalypse</u>, p 219.

† Some. would say, though I do not think very helpfully, that the lower storeys are less <u>real</u> than the upper ones. Thus Virginia Woolf: "I am talking of the common life which is the real life and not of the little separate lives which we live as individuals." <u>A Room of One's Own</u>, VI.

φ Marcus Aurelius, <u>Meditations</u>, VIII... 32.

* As in the case of Dr Pagenstecher and Senora Z, described in <u>Proceedings of the</u> <u>American Society for Psychic Research</u>, xv. pp. 189 ff., and quoted by G. N. M. Tyrrell, <u>The Personality of Man</u>, pp. 186 ff.

 \oplus <u>Les Eléments Sociologiques de la Morale</u>, p. 282.

° We begin our letters with "My dear" and close with "yours"; we address then to <u>Mon</u>sieur X and <u>Ma</u>dame Y. In countless such apparently trivial ways do we acknowledge human solidarity, and "the unity of man,

One spirit over ignorance and vice Predominant in good and evil hearts One sense for moral judgments, as one eye For the sun's light."

Wordsworth, Prelude, VIII.

ugliness and stupidity and almost inevitable failure, and another born to the opposites of these, or when he sees a good man dying of an agonizing disease while his wicked neighbour enjoys abounding health and prosperity. He is saddened, but he is not indignant; he is perplexed maybe, but he is not embittered, at (what some would call) these shocking inequalities, or gross miscarriages of justice. Certainly he does not curse the universe, or such gods as he recognizes; nor is he made permanently miserable by these circumstances which, had they been of man's contriving, would have dismayed him utterly. Still more surprisingly, he does not feel that the universe is indifferent, not to say hostile, to his ideals of just justice. On the contrary, he accepts (as Job came to accept) the fact that suffering and joy are unevenly and mysteriously distributed, does what he can to mitigate the one and to spread the other, and believes in his heart of hearts that (contrary to all the surface evidence) the Universe is somehow on the side of the values that he cherishes. In short, he accepts the situation as a stimulus, not an outrage.

Now I am sure it is wrong to dismiss this frame of mind as a flagrant example of human inconsistency and dullness. There is more wisdom in the muddled thinking of this ordinary virtuous man than in the 'clear thinking' of the soi-disant rationalist who sets out to shake his faith. For the former is really asserting, by implication, his belief in Humanity (and perhaps in still higher wholes), while the latter denies, again by implication, that there is such a unitary being. There exists a deep and widespread conviction of human solidarity, an unexpressed certainty that the plurality of selves is only a part of the truth. If selves were really insulated from one another, if there were no plane upon which they merge, if there were no level on which we bear one another's burdens, and where pain and pleasure are redistributed or re-compounded, then indeed life would be intolerable --- always supposing (what is unlikely if Humanity, as the basis of our fellow-feeling, is a fiction) that any sympathy or compassion were to survive. If, on the other hand, there is a real being in whom every man is every other man, then there is a real sense in which human inequalities are overcome, and human love finds a sanction in the natural order of things. The kindly man is one who, by his unselfish acts, demonstrates the actuality of the higher self. In truth it is his behaviour which is both made possible by, and makes possible, the existence of Humanity. No more than any other individual of the hierarchy does Humanity exist independently and autonomously. Like man, he is a fact, but not a self-supporting fact. Thus the sceptic is not mistaken when be declares Humanity to be a 'wish-fulfilment', a 'projection', a product of the imagination: it is at once the guarantee of his reality, and the measure of our responsibility towards him, that so many need and intend and mean him so consistently. For man, Humanity is a practical necessity, even as, for his cells, man is a practical necessity.

Humanity overcomes the inequality of men † in the same way, and in the same sense, that man overcomes the inequality of his organs. When my hand is hurt, I am hurt, and the 'I' takes in all the other organs: in me, the suffering of one is the suffering of all. At the lower level of multiplicity, the head might well object that it was unfairly punished for the excesses of the stomach, but at the higher level of unity it may be said To decide what man's good is, you must decide what he is. When G. E. Moore writes: "a maximum of true good, for ourselves, is by no means always secured by those actions which are necessary to secure a maximum of true good for the world as a whole", he assumes that there is no sense in which a man and the world are (or can become) one and the same. See <u>Ethics</u>, pp. 150, 231. The unquestioned assumption that man is a known quantity, and that he is only man, is responsible for much confusion in ethical theory.

On the one side, Seth Pringle Pattison: "Each self is a unique existence, which is perfectly impervious to other selves -- impervious in a fashion of which the impenetrability of matter is a faint analogue." On the other, Maritain: "The love of the saints is a unifying and vivifying force which triumphs over the impenetrability of beings one to another." <u>True Humanism</u>, p. 84.

Mo Ti (the sage of the fourth century B.C., who, according to Mencius, loved all men, and wore himself out in their service) is reputed to have said: "I regard all-embracingness as exactly right. In this way quick ears and clear eyes co-operate in hearing and seeing, arms and legs are measurably strengthened to co-operate in movement and action In this way those who are old and without wife and child have their bodily needs served so that they complete their tale of years, whilst the helpless young, children who are fatherless and motherless, have something they can trust so that their bodies can grow big and strong..... The high-minded knight in the Great Society must regard his friend's body as his own..... The result would be that when he observed his friend to be hungry and cold, he would feed and clothe him " Mo Tzu Book) XVI., Trans. E. R. Hughes, Chinese Philosophy in Classical Times.)

† We need our opponents for our completion: they are our agents, and we are upset if they let us down. Thus, though unbelievers, we deplore lapses in the faith of believers; though sinners, we are shocked when the good fall; though free-thinkers, we are secretly disturbed at the decline in church-going. The wise are custodians of our wisdom, the virtuous of our merit, the brave of our courage; we are not ourselves without our betters. that the stomach does in fact suffer the headache of which it is the cause --- "all the members suffer with it" + Here, on the plane of whole, the many members live a single life. ϕ My eye sees one cat; my hand strokes the fur of a second; my ear hears the purr of a third. Yet for me there are not three cats, but one cat, seen, touched, and heard. At the lower level, my sense experience is divided into separate streams; at the higher level, the streams unite. This does not mean that all distinctions are lost in a featureless compound. On the contrary, the flowing together of the streams (into what used to be called the <u>central sensorium</u> \times) gives additional significance and brings out contrasts. The look and the feel and the sound of the cat are held together in a unity that enhances, rather than sacrifices, the rich detail of its content. And so it is at the next stage of the hierarchy. My cat is legion --- there are as many of him as there are observers of him --- at man level, but at the level of Humanity there is only one cat, who owns and unifies and is every particular experience of him. It is to such public objects (objects which belong, so to say, in the central sensorium of Humanity) that I refer whenever I use language, or reflect at all. According to my capacity, I share in and enjoy the unitary experience of this common higher self, this great clearing-house of all human transactions. Not only the cognitive aspect of this world-wide experience, but also the conative and the emotional, are mine to make mine.

On the one hand, Marcus Aurelius says that "to care for all men generally, is agreeing to the nature of a man." ° On the other, Spinoza says, "The endeavour of preserving oneself is the first and only basis of virtue, for prior to this principle nothing else can be conceived, and without it no virtue can be conceived." * The nature of man is such that there is nothing contradictory in these two statements. Virtue involves caring more, and not less, for oneself --- that completer self which progressively includes other selves. Virtue involves looking after one's own real, long-term interests, and discounting immediate benefits. Virtue involves coming to life in the remoter parts of one's, body --- "We know that we have passed from death unto life, because we love the brethren." But many love without being fully aware of the common self to which their love witnesses. To such, Marcus Aurelius says, "The joy that thou takest in the exercise of bounty, is not yet grounded upon a right apprehension of the nature of things as doing good to thyself, when thou dost good unto others." \oplus

But cool self-love, however inclusive, is far from being enough. Part of the essence of real benevolence is that it is wholly objective, and directed upon that which is, as yet, outside the self: charity "seeketh not her own." † Merely prudential benevolence is not genuine benevolence at all, for the indispensable spontaneity, the grace, the inspiration, are lacking. These come to us unbidden: without warning, our greater self invades our lesser self with unmistakable power. "At such moments we are no longer individuals, but the race; the voice of all mankind resounds in us." • We are no longer external to men, blind to what they are in and for themselves °; mere things become selves, and selves become ourself; the dykes are down, and we rise on the flood to a higher level of what we are. Then at last we realize what dimly we have always known: the feeling + I <u>Cor</u>. XII. 26. The whole chapter is very relevant.

 ϕ In <u>Ueber die Seelenfrage</u>, Fechner argues from the unity of sense experience in perception to the unification of the experience of all souls in God. In some passages, he speaks of souls being entirely closed to one another, except at this highest level; in others, he regards the planetary life as unifying human experience. William. James' lecture 'The Continuity of Experience', in <u>A Pluralistic Universe</u> (also lectures IV and V) should be consulted on the question of the 'compounding of consciousness'.

× Aristotle's theory is that, when the special sense organs are stimulated, movements are communicated, <u>via</u> the blood and animal spirits, to the central sensorium which is the heart; here the plurality and diversity of the separate sensations somehow submit to the unity of the perceiving subject. St Thomas Aquinas has a somewhat similar doctrine of internal 'common sense', which is the faculty common to the five exterior senses, whose data it unites.

° <u>Meditations</u>, III. 4.

* <u>Ethics</u>, IV. 22. See also IV. 24, and V. 41. But Spinoza makes it clear that to determine what is really to a man's advantage, regard must be had to "the eternity of the mind".

Bishop Butler says, "There is a natural principle of <u>benevolence</u> in man; which is in some degree to <u>society</u> what <u>self-love</u> is to the <u>individual</u>." <u>Works</u> (1897 Edn), ii. p. 31. Butler maintains (1) that "The principle we call self-love... belongs to man as a reasonable creature.." and (2) that this self-love approves and is compatible with benevolence. (ii. pp. 18, 158) Cf. C. D. Broad, <u>Five Types of Ethical Theory</u>, pp.71 ff., and Thomas H. McPherson, The Development of Bishop Butler's Ethics', in <u>Philosophy</u>, Oct., 1948. ⊕ <u>Meditations</u>, VII. 10.'

* "The selfish person does not love himself too much but too little, in fact he hates himself," writes an Adlerian psychologist. 'Love of others and love of ourselves are not alternatives. On the contrary, an attitude of love towards themselves will be found in all those who are capable of loving others." Erich Fromm, <u>Man For Himself</u>. I would say, loving others is self-love, till, realizing the fact, we break the spell.
Jung, <u>Contributions to Analytical Psy-</u>

chology, p. 247.

° See William James' essay 'On a Certain Blindness in Human Beings' in <u>Talks to</u> <u>Teachers</u>, for a brilliant statement of the need for imaginative insight into others' experience. He writes: "Only in some pitiful dreamer, some philosopher, poet, or romancer, or when the common practical man becomes a lover, does the hard externality give way, and a gleam of insight and thinking and striving of others are only temporarily not ours, and until we make them ours without reservations, we repress the greater part of our nature. "The only true knowledge of our fellow-man is that which enables us to feel with him" + --- and this knowledge (it must be added) is the only true self-knowledge. The only way to know yourself is to study others. The only way to be at peace with yourself is to love others. Easy to write, but hard to achieve; and harder still to bear the consequences of achievement. The man "who ventures to bring himself to the dreadful point --- to love <u>all men</u>" is, Buber tells us, "all his life nailed to the cross of the world." * into the ejective world the vast world of inner life beyond us, so different from that of outer seeming, illuminate our mind ..."

+ George Eliot, Janet's Repentance, X.

* <u>I and Thou</u>, p. 15.

CHAPTER VIII

THE DISTANT VIEW ---- LIFE

The main shapes arise! Shapes bracing the earth and braced with the whole earth. Walt Whitman, 'Song of the Broad-Axe'. Herbs gladly cure our flesh, because that they Find their acquaintance there.

George Herbert, 'Man'.

This huge compound creature, Life, probably thinks itself but one single animal.

Samuel Butler, Life and Habit, p. 128.

Though the Life Force supplies us with its own purpose, it has no other brains to work with than those it has painfully and imperfectly evolved in our heads.

Bernard Shaw, The Irrational Knot, Preface.

We shut our eyes to the unity of the impulse which, passing through generations, links individuals with individuals, species with species, and makes of the whole series of the living one single immense wave.

Bergson, Creative Evolution, p. 263.

An artist maints a tree, a leaf, a common stone With just his hand, and finds it suddenly A-piece with and conterminous to his soul.

Why else do these things move him, leaf, or stone?

Elizabeth Barrett Browning, 'Aurora Leigh'.

There is only <u>one</u> totality of life and we are part of it.

Hans Driesch, The Great Design (Ed. Mason), p. 291.

Ye ask who are those that draw us to the Kingdom, if the Kingdom is in Heaven? The fowls of the air, and all the beasts that are under the earth or upon the earth, and the fishes of the sea, these are they which draw you, and the Kingdom of Heaven is within you.

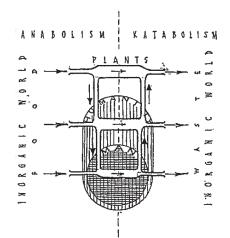
Oxyrhynchus Papyri, IV. 6. (Trans. Grenfell and Hunt).

1. THE FURTHER EXTENSION OF THE BODY.

As a fragment of Humanity, man is no more complete and self-supporting than one of his cells. Is Humanity, then, not a fragment, but a whole? Is he the apex of my pyramid? Can I draw at this level a portrait of myself that has a definite outline, so that I can say: here at last I am completed, or, here I stop and the outside world begins?

Obviously I cannot. This planet-embracing creature is just as bound up with what lies beyond him as man is. He too is a part, shading off into a whole that is indispensable to his existence. He too is incapable of dealing, directly and unaided, with raw nature. He too is extended; he too adds to his body a vast assemblage of external organs that make up for his shortcomings.

For example, Humanity, like any other terrestrial creature, must feed on the planet, taking what he needs from the solid, liquid, and gaseous parts of the earth's outer layers, and using it to maintain his energy and to grow. Now some of this material he can take in more or less directly;



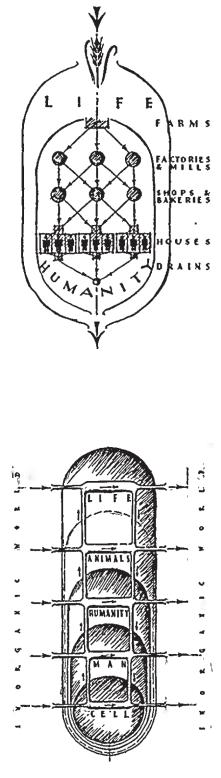
by means of organs grown for the purpose --- thus water, coal, and ores are absorbed in their raw state, and internally 'digested'. But there are, in the non-living environment, other substances essential to Humanity's life --- substances which cannot be taken in as they are, and must be externally 'digested'. As a protoplasmic organism, Humanity lives on carbon derived from the carbon dioxide gas in the air, on the water of the soil (with the nitrates and other substances dissolved in it), and on the solar energy needed to build up out of such materials extremely complex chemical compounds (notably unstable proteids, which will readily break down and release the energy they store). Unaided, however, Humanity cannot do this work which all living things must somehow do or get done: he cannot take these raw materials and see to their synthesis, except by adding to his body external organs which are capable of doing so --- namely, plants. The vegetable world is the bodily attachment whereby Humanity feeds on the planet --- the attachment without which Humanity is a dead thing.

My daily bread is a portion of the planet that comes to me through the farm, the mill, and the bakery, which are preliminary 'stomachs' of mine within Humanity's body. But beyond that body, Humanity's alimentary canal is prolonged in the ear of wheat growing in the field. Only there do I really <u>feed</u>: all the rest is internal economy --- the building up and breaking down and distribution of the meal throughout the body. My real 'mouth', my primary organ of nutrition, is the green leaf, but instead of growing green leaves here on this flesh-and-blood body, I have found it more convenient to grow them as semi-detached organs. They are all the better organs in consequence, even though I am led to imagine that they are no part of me at all.

At the other end of my alimentary canal, the story is repeated, and the centrifugal half of the process tends to recapitulate, in reverse, the centripetal half. Thus my artificial bowel does not deposit crude faecal matter on the soil. At the sewage farm, organic solids are broken down by living creatures -- bacteria of various kinds -- into harmless inorganic substances, before they are ready to be incorporated once more in plant life. Thus at each extremity there exists, between Humanity and his inorganic environment, a layer of living but non-human external organs. Or (to put the matter differently) as Humanity I live on the earth at second hand, as man at third hand, as cells at fourth hand. Beyond the cell's own organs, the organ of flesh and blood; beyond the flesh-and-blood organ, the manufactured organ; beyond the manufactured organ the plant organ (with often the animal organ -- cow, sheep, bullock, and so on -coming between them). And all of them belong in one body. That body I call <u>Life</u>.

2. LIFE'S SCATTERED BODY.

By Life I do not mean a mystical principle, immanent in all living things °; nor do I mean their highest common factor. I am not thinking of any kind of <u>Elan</u>, or Life Force, or Entelechy, or of the mere sum total of spe-



The diagram illustrates the following: (a) At each level there is some <u>direct</u> commerce with the inorganic environment, both on the incoming side and the outgoing. (b) At each level there is also indirect or mediated commerce with the inorganic environment, <u>via</u> the higher levels.

° See, for example, the doctrines of Jean Fernel, the 16th century French physician, as outlined in Sir Charles Sherrington's <u>Man on His Nature</u>. cies. I refer to a single creature, of whose body I am at once an insignificant particle, and the whole.

According to common sense, of course, Life is not one body --- it would be difficult to think of anything less like a physical organism. Life, says common sense, is without form or structure, a stream flowing here and there, bearing with it countless particles whose relationships are ceaselessly changing.

First let me point out that there is no valid reason for setting up the human or the animal body as the standard to which all other types of physical organization must conform, or fail to rank as true wholes. It is not axiomatic that all the bodies which differ from man's differ by way of inferiority. Besides, the results of this inquiry (so far) suggest that we should be prepared for surprises: each new integral level is unique and unpredictable, and its topography (though it may reflect what lies below) is its own. What we find is some resemblance, a family likeness. Even the great body of Life is not altogether unlike the little bodies of which it is built up. For instance, it is probable that Life has developed from a single primitive living thing, ° much as I have developed from a single fertilized cell. And as Life grew up, its parts became more and more complex, more diverse, more numerous, more elaborately adjusted to one another (in other words, innumerable types branched from the common primitive stem) much as my own cells developed from one unspecialized kind into many kinds of specialists. In me (as embryo, child, and man) this increasing differentiation of parts is correlated with the growth of the whole to higher unity and new powers. Similarly, the elaboration of Life's body into more various, more gifted, and more numerous members, has been linked with its advance as a whole, with its total achievement as exploiter and knower of its world.

Common sense points out that, whereas the parts of my body are bound up together in manifold stable relationships, so that no part has any real life or meaning apart from the totality, men and animals, and even plants, enjoy a very large measure of mutual independence. They have a great deal of elbow room. Thus it is a matter of indifference to me which cow, out of all those in the country, will supply my milk tomorrow; and it is equally a matter of indifference to the cow who will feed and milk her, so long as somebody does so. Throughout Life, such interchangeability is the rule. Does it not follow (says common sense) that Life is really an aggregation of individuals which, though interdependent, are still essentially separate? Life lacks even such shape and structure, such internal spatial pattern, as Humanity can show.

Now one of the mistakes which common sense makes here is to suppose that individual creatures are the immediate members or units of Life. Instead, they are organs of organs of Life: between the individual and Life there is an integral level which may not be omitted --- the level of the species. Life is a society of species, \times of which Humanity is at present by far the most dominant member. And each species has at least the shape of its geographical distribution: the body of Life is a patchwork of such overlapping shapes, so finely interwoven, so intricately conjoined, that a change in the manner of life, or in the numbers,

° The evidence for common ancestry (and the temporal unity of Life) is based on the findings of palaeontology, comparative embryology, and genetics, but it cannot be said to apply to the lowest organisms. While there is much to indicate that all vertebrates come of one stock, there is little to show that, say, bacteria did not have a separate origin.

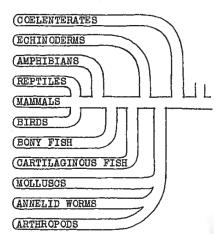


Diagram illustrating the probable relationship of some of the main branches of the evolutionary tree.

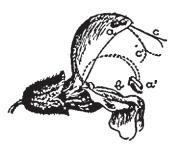
R. H. Francé suggested, in <u>Die Seele der</u> <u>Pflanze</u>, that the great phyla are the masks of a single living creature who masters the air as birds and insects, the water as fish, and the use of light as plants. Better known is Bergson's analogous doctrine (<u>Creative Evolution</u>, p. 123) that the three 'kingdoms', of bacteria, plants, and animals, arise from a division of labour: to each is apportioned a function that once inhered in a primitive and undivided Life.

× It must not be supposed that a species is an absolutely clear-cut natural division. The boundary between species and variety is more or less arbitrarily drawn. A further complication is that there are different kinds of species --- those originating geographically, ecologically, and genetically, have been distinguished. See Julian Huxley, <u>Evolution, The Modern Synthesis</u>, pp. 154 ff. or in the distribution, of the most obscure species is bound sooner or later to affect every other profoundly. Then there are the larger patterns: carnivores are superimposed upon herbivores, herbivores upon plants, plants upon the nitrogenous bacteria of the soil. If anything, Life suffers from an <u>excess</u> of structure. For (because of the necessities of natural selection, food supply, fertilization, shelter, oxygen supply, and so forth) every kind of living creature is united to every other kind, as surely as if the unity were made manifest by bonds of protoplasm. A diagram of Life's physiology would show all these linkages, in their unimaginable intricacy.

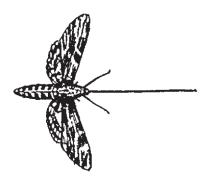
The classic example -- the interdependence of certain insects and flowering plants -- is still the most apt. The entire life of the honey-bee, for instance, as well as a great deal of its anatomy, is founded upon pollen and nectar provided by flowers whose structure is founded upon the needs of their visitors. Severed from one another, neither the bee nor the flower which the bee fertilizes makes sense. It is scarcely an exaggeration to say that the insect is half plant, and the plant half insect. Apart, they are meaningless fragments, requiring each other as the left half of this page requires the right. They have one life and one body between them, to divide which is to practise a sort of vivisection. And what is true of bees and their flowers is true, with many variations, throughout Life. Properly speaking, the structure and the behaviour of a species cannot be understood until the whole body of Life is understood. A perfect intelligence would be able, from an examination of this man's body of mine, to infer Life's body.

Obviously Life is notably loose-jointed. But what for common sense is the gravest defect is, in truth, the condition of vitality itself. The seeming independence and separateness of Life's members are only the cloak for a peculiarly intricate web of relationships, and an intensified togetherness. Here are interchangeability, elasticity of organization, versatility, manifold adaptation, and unending opportunity for experiment without results that are fatal for the whole. Fixed organs, linked by one definite relation-pattern, are an inferior type of organization compared with the same organs when they are capable of being shuffled to produce many equally significant relation-patterns. If living is a kind of interchange between an organism and its world, then Life -- an organism that saturates its body with its world, and its world with its body -- has unparalleled scope for living. The fact is that (besides its own peculiar advantages) Life has to a superlative degree most of those invaluable capacities which are found in Humanity -- the capacity for piecemeal replacement of organs, for invention, for unhampered adaptation, for age-long advance.

Nothing less than Life is alive. After all, then, it is to Life's body that we must look for our standard. The bodies -- species, individual plants and animals, cells -- within Life are not really living creatures at all, but only parts of one, and the life they seem to own as separate creatures is really the life of the whole. But as a rule, when we consider what physical organization is proper to living things, we leave out of account the physique of the only creature on earth that truly lives.



Flower of <u>Salvia pratensis</u>. The stamens (a) mature first, and, when an insect alights on the lip of the flower (b), they descend on to its back and dust it with pollen (position a'). Meantime the immature stigma is held back (c). When the insect goes on to an older flower, the pollen on its back is deposited on the mature stigma, which is here curved downwards (c'). Thus cross-fertilization is secured.



The proboscis of the hawk-moth is long enough to reach the nectar of deep honeyspurs. A Madagascar orchid has a spur 11 inches deep, and there is, associated with this orchid, a species of hawk-moth with an equally long proboscis. (<u>Nature</u>, 1873, p. 121)

Meredith's Melampus (in the poem of that name) realizes Life's unity ---

"The secrets held by the creatures nearer than we

To earth he sought, and the link of their life with ours:

And where alike we are, unlike where, and the veined

Division, veined parallel, of a blood that flows

In them, in us, from the source by man unattained

Save marks he well what the mystical woods disclose."

3. THE INTERNECINE STRUCGLE.

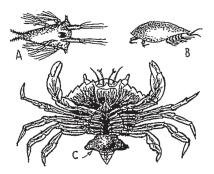
Within Life's body there is, of course, unremitting strife no less than mutual aid. How can living Nature, red in tooth and claw, with her liver flukes and guinea-worms + and ichneumon flies, with her rattle-snakes and tyrannosaurs and water-scorpions, still be one body?

I have already noted that there is, in every individual animal body, severe competition between cells and between tissues. Everything suggests that civil war, tempered in one way or another, is a feature of all organization. Organization means society, and society means struggle. Concrete, dynamic unity is always a more or less precarious balance of power between violent (or potentially violent) opposing forces. In the smaller individuals, the conflict is hidden because I see only the whole; in the larger individuals, the unity is hidden because I see only the part. Thus my first impressions concerning what is, and what is not, a whole, are largely a question of the scale of the object. I am too distant to see a man's disunity, too near to see the unity of life. But that unity is real. The question is whether or not it is organic. ° Insufficient tension, the premature agreement of the parts, too feeble a conflict, make for lack of effective unity at the higher level. On the other hand, too fierce a conflict, not properly balanced, is clearly destructive of unity. Is Life's internal warfare, in the long run, destructive or constructive? Does it, on the whole, make for Life's control over the inorganic environment, and for the emergence, in due time, of intelligence and of concern for values?

Darwin's essential discovery was the connection between the two levels of organization --- between the mutual destruction of the parts and the advance of the whole. The struggle has made, not merely for the emergence of a fantastic variety of types whose lives are interwoven into a whole, but also for the emergence of certain types whose lives seem to us to have some intrinsic value; above all, it has made for the emergence of Humanity (I should say, of Humanity-man, that inseparable pair), with all that Humanity does and is and dreams of. By virtue of this organ, Life has grown up to self-consciousness and a measure of selfcontrol. To pronounce Life a failure would be to reckon as valueless all that we hold dear. It is true, of course, that Life's advance has involved the destruction of countless types of organism, and the degeneration of others. The down-going of many is no less essential to the life of the whole than is the ascent of a few. In Life's body, as in man's, katabolic and anabolic processes balance one another. The descent of the less fortunate is the compensating weight by virtue of which the favoured ones rise to new powers within Life's economy.

Struggle, destruction, failure --- these are not absolutes, but relative to the level on which the discussion is conducted. Just as the enemy of the individual (<u>qua</u> individual) is often the friend of the species, so the enemy of the species is often the friend (that is to say, the valuable organ) of Life. Unless the three levels are carefully distinguished, there is bound to be confusion. Thus, at one level, the deer owes its escape from the carnivore to its own exertions; at the next, to the carnivore itself (that is, to the ancestral enemy responsible, by selection, for the deer's swiftness); at the third, to the whole economy of Life, apart from which there is no life. + The guinea-worm is a parasite on man, which causes abscesses through which its eggs are passed. It is removed by winding it out, very slowly, on a piece of wood. Since the parasites may be six feet long, this process of extraction may take some weeks.

° On natural selection as the negation of organic growth, see L. T. Hobhouse, Mind in Evolution, p. 436. The struggle for existence, says Hobhouse, is incompatible with that organic unity which is seen in the unfolding of the germ: the first is sifting, the second true development, and that is why evolution, unlike individual growth, exhibits no comprehensive plan. What Hobhouse overlooks here is that Life is sufficiently whole to be aware (through Hobhouse) of its lack of wholeness. The second error is to expect of Life the kind of organization that is found at lower levels. The third is to omit Humanity's achievement from Life's: this is like assessing a man apart from his head.



An example of degeneration: <u>Sacculina</u>, in the earlier phases of its life-cycle (A, B), is a free-swimming crustacean, with limbs, heart, and eyes; but the adult, as a parasite (C) of the crab, is little more than a bag attached to the underside of its host, and a mass of 'roots' throughout the host's body. The immature phases A and B recapitulate earlier stages in <u>Sacculina</u>'s ancestral history, before its degeneration. The red tooth and claw are very real, but they are also perspective effects that vanish when we take the long view.

Almost inevitably, we consider Life piecemeal, as though genera and species, having diverged from the common stem, grew up together quasi-independently, moulding one another at every turn, but doing so as self-contained units. It is as if we were to describe a man as a symbiosis of a pair of kidneys, a heart, a brain, and so on. While the lower levels of disunity and warfare cannot be ignored, they owe their existence to the higher level where Life is indivisible, a single creature that has grown up as one body, the whole of which is immanent in the part. To a superecologist, capable of finding out all the links, it would be apparent how and why this paragraph could not have been written without the co-operation of every kind of animal and plant. Or, more accurately, it would be apparent that only Life is capable of any vital activity.

It is significant that James Ward, in his effort to explain instinct, is driven to assume that organisms are part of a single perennial individual, whose past experience reveals itself in behaviour that we call instinctive. (<u>Essays in Philosophy</u>, 'Heredity and Memory', p. 258; <u>Enc. Brit.</u>, 11th Edn, art. 'Psychology'.)

4. THE BIOSPHERE.

Too close a view of Life hides its unity, and also its form. Life is not shapeless, but a hollow sphere -- 'a habitable flowery Earth rind', ° the planet's living stratum or skin, which includes the soil (alive with myriads of organisms), the sea, and the lower levels of the atmosphere. At its thickest, this living skin is not much more than 40,000 feet thick + --- a mere thousandth part of earth's diameter. It may be described as dense where the climate is both warm and damp, becoming more tenuous where the climate is either very dry or very cold. Its depth varies with the depth of the sea or the soil. In detail, it is full of irregularities of form, and lacks clear-cut boundaries; but taken as a whole, on the appropriate scale, it is as well-defined and regular a living thing as could be desired.

Though the science of biology must proceed simultaneously on a number of planes, from that of the cell upwards, none of them is more important for theory and for practice than the highest plane of all -the plane of the biosphere, \times of Life itself -- for we shall not get very far in our understanding and our control of vital phenomena while we ignore the living whole. The biosphere certainly does not lack organization, or significant patterns in great abundance, to repay study. And in fact the importance of ecology -- the science concerned with checks and balances in the community of species -- becomes increasingly evident as we interfere more and more (both deliberately and unintentionally) with nature. The danger of atomizing Life advances as our biological technique advances: the elimination of a single pest, for instance, may have unforeseen effects upon other species, with serious consequences for Humanity. Piecemeal biological control will not do --- a little of it calls for more and more. And so it comes about that Life's anatomy and physiology can no longer be ignored. Slowly, we are becoming used to the larger biological scale, the more distant perspective.

Vegetation maps, and maps showing the distribution and density of a particular species, are familiar; and, in its rough outlines, the varying ° <u>Sartor Resartus</u>, III. 8.

+ Bacteria are found at heights exceeding 20,000 feet, and animals at a sea-depth exceeding 20,000 feet: no doubt the inhabited region is actually somewhat more extensive than exploration has yet revealed.

× The term <u>biosphere</u>, first proposed by Walther, has been adopted by Russian geo-chemists. See, e.g., W. Vernadsky, <u>La</u> <u>Biosphère</u>, (Paris, 1929).

Not only biologists and sociologists (e.g., Le Play, Patrick Geddes, and Victor Branford), but also historians, find the ecological approach to be necessary. Mr Christopher Dawson, for example, writes, "To every type of agriculture, to every group of cultivated plants, there corresponds a special human culture. The olive, the gift of Athene, was the nurse of the Hellenic culture, as the date palm was the Tree of Life to the people of Babylonia. The wine and olive of the Mediterranean, the rice and mulberry of China, the coco-nut and taro of the Pacific Islands, the maize and tobacco of Central America, all have their corresponding forms of social organization ... " Progress and Religion, p. 57.

economy of Life, from the tropics to the arctic, is common knowledge. What is less well known is Life's organization in depth, or stratification. In respect of pressure, temperature, and salinity, the ocean is stratified; consequently the range in depth of most marine organisms is very limited, and each species lives at the level to which it is adapted. On land, too, there are biological layers. Whether in the jungle, or the temperate forest, or the grasslands, the dominant plants are those which spread their light-trapping leaves, umbrella-fashion, over the rest; and each inferior layer is adapted to existence in a dimmer light than that of the layer above it.

And of course there is Humanity, knitting the whole biosphere together with a network which is (roughly speaking) to Life what his nervous system is to a man. The truth is that, in the previous chapter, I treated the part as if it were the whole. My portrait of Humanity was, in some measure, a portrait of Life. Certainly Life is not less alive, or less intelligent, or less gifted in any way, than the most advanced of species.

5. THE OBSERVER LISTENS TO LIFE.

What does the remote observer make of this spherical organism? Not very much, perhaps --- until he begins to <u>listen</u> to it, with the help of his radio equipment. ° What does he hear?

He hears the creature singing. He hears it making every kind of music, and talking volubly, as if to itself in a reverie. Suppose that (by using a television set) the observer learns to understand the words. Then, indeed, any remaining doubts about the creature's intelligence would be dispelled. He would learn that the biosphere's interest in and knowledge of its environment is of a very high order; even more impressive would be the biosphere's interest in and knowledge of itself, and its efforts at self-control. Finally -- what is perhaps most important of all -- he would discover, perhaps, traces of wonder and awe. The creature is not unaware of the mystery of life.

Common sense has some objections to make at this point. First, Life does not speak with one voice, but with a Babel of conflicting voices. Second, an individual must be judged by what he is and does, no less than by what he says, and Life is obviously full of futilities --- blundering and wasteful on a colossal scale. * Third, it is not Life, or even Humanity, who speaks into the microphone. Am I not here neglecting my own oftrepeated warning, and confusing levels? What, precisely, is it that man does, that Humanity does, and that Life does, and by what criterion may their works be distinguished?

I shall take the third question first, because to answer it is to answer the others. The rule is simple: subject and object belong to the same hierarchical level. Alice was right --- what makes the world go round is everybody minding his own business: the business, that is to say, of his own plane. There is no social climbing and there is no condescension. The scheme of things is such that a man is concerned with other men in Theory and practice are never far apart. At one and the same time, it becomes an urgent practical necessity that we shall realize the unity of species, and it becomes theoretically evident that Life really is a whole. Thus Bergson, inquiring whether science, by dividing the organism, gets any nearer to life, remarks, "Does it not, on the contrary, find that what is really life in the living seems to recede with every step by which it (science) pushes further the detail of the parts combined?" (Creative Evolution, p. 171) And H. Wildon Carr, "Every living form, animal or vegetable, is the expression of an activity which is not theoretically or abstractly or collectively one activity but essentially and indivisibly one." (A Theory of Monads, p. 125)

° J. E. Boodin (<u>Cosmic Evolution</u>, p. 37) believes that, unknown to us, the earth sends out waves to other living heavenly bodies, which select and respond to them. This seems to me to be improbable. How easy it is to invent theories and neglect the facts (in this instance radio and radar) because they are so very commonplace. If Life does address the universe, its voice is our own. It is that of which Mr Vernon Bartlett writes (in the first number of The Voice of the World, Feb., 1947): "We believe that the voice of the world is made up of the voices of millions of simple, decent folk.... We shall select broadcasts which will enable that voice to be heard more clearly above the uproar of nationalism, greed and selfishness."

* See J. B. S. Haldane, Possible Worlds, p. 29, for a brief statement of the case against the brief existence of an intelligent agency directing the course of evolution. See Julian Huxley, Evolution: The Modern Synthesis, p. 576, for the view that evolution is "just as much a product of blind forces as is the falling of a stone to earth or the ebb and flow of the tides." (As an example of Life's 'wastefulness', take Luidia, a British starfish, which, according to Sir J. Arthur Thomson, produces 200 million eggs a year.) But in an earlier book (Essays of a Biologist, p. 242) Huxley supposed "that something of the same general nature as mind in ourselves is inherent in all life, something standing in the same relation to living matter in general as our minds do to the particular living matter of our brains."

Humanity, Humanity is concerned with other species in Life *, and Life is concerned with certain large-scale aspects of the inorganic environment (aspects which will be considered in more detail in the next chapter). Now man is not only man, but is capable of taking for his object a unit belonging to any of these three levels; he is equally at home on all three planes, for they are planes of his own personality. + Sometimes he speaks for the individual man, sometimes for the species, sometimes for Life --- as indeed he is entitled to do. As geographer, or geologist, or meteorologist, he functions chiefly at Life's level; as zoologist or botanist, at Humanity's level; as a student of the virtues and failings of his acquaintances, at man's level. Thus the field-naturalist watching a bird is not so much one individual organism observing another, as one species observing another. Humanity, Homo sapiens, contemplates Wren, Troglodytes troglodytes. And, arising out of this interest, at each stage, in other units, is interest in oneself at that stage. Indeed, man can only see himself through other men, Humanity through other species, Life through other 'earth-spheres'. By projection and reflection in society, by identifying himself with his companions and looking back upon himself, man becomes self-conscious on every plane.

It is through the animals that man finds himself, but his immense debt to them is not, at the present stage of his development, very apparent. To get a juster idea of it we should turn to his earlier history, to Palaeolithic man and his paintings. There is a significant contrast between the splendid animals of the caves and the infrequently and timidly portrayed men, humbly stooping (as some interpreters see them) in the presence of creatures felt to be of superior power, and masked to resemble them as much as possible. It seems that the embodied ideal, the sacred object of many rites, wore, not the human form divine, but the animal, and that the religion of men was bound up at all points with "the herds upon which their spiritual and physical existence depended". An authority ° writes: "The qualities which impelled them under such conditions to elaborate the rites in which.... so many of the arts had their origin, in which social coherence was founded, which contained the germs of nearly every religious conception to be developed in later civilizations.... gave them a vision of achievement which the animals alone fulfilled. Thus they appeared worthy to be shown in company with the animal images, only in a disguise which imitated them." Later, when the herds are domesticated, thereby losing their numinous otherness, the Earth-mother takes their place in the religious life of man; and, later still, when she herself has been partially tamed and incorporated by means of agriculture, the Sun-god and the divine stars become dominant. As our projected divinity ascends the hierarchical ladder, we forget the rungs by which it has climbed, and what we owe to them.

It is clear, then, that common sense's criticism of Life is misplaced, and should be directed against the individual organism and the species rather than the whole. \times The 'mistakes' of evolution (such as the overelaborate horns and tusks which have been 'tried out' time after time), the 'waste' (such as the myriads of eggs which a fish must produce to ensure the survival of a single adult offspring), the 'failures' (such as the extinction of so many species and the degeneration of others) do

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* In a letter to Schiller, Goethe wrote (May 5th, 1789): "Only all men together know nature."

+ Nevertheless the leap from one plane to another may require an effort. Civilized man is used to psychical expansion and contraction, according to the status of the object on which he is working, but primitive man has to ensure the 'transference of libido' by ceremonies. Hence the spring rites, directing his attention and energy away from the sex-object woman, to her analogue the earth, are a necessary preliminary to his work as cultivator. (See Jung, Psychology of the Unconscious, p.167, Contributions to Analytical Psychology, pp. 47 ff.) Just as in tribal initiation ceremonies man identifies himself with the community, taking on its work and objects, so in spring rites he identifies himself with a larger community, taking on its work and objects --- the cultivation of the soil. Thus, however imperfectly, the individual is conducted from one plane to another.

"Primitive man, in Africa, for instance... does not dream of regarding himself as the lord of creation. His zoological classification does not culminate in <u>homo sapiens</u>, but in the elephant. Next comes the lion, then the python or the crocodile, then man and the lesser beings." Jung, <u>Modern</u> <u>Man in Search of a Soul</u>, p. 165.

° Gertrude Rachel Levy, <u>The Gate of</u> Horn, pp. 22-3, 42, 70 ff. The totemism of recent and contemporary primitives illuminates much in the life of Palaeolithic man which would otherwise be obscure. Of the masked dances of certain tribes, Miss Levy says they "were a deliberate means of approach to the animal nature and therefore to the divine. 'They are to us what prayers are to you', explained an old Bushman. Headdress, tails, skins, posture, were outward aids to an inward assimilation; united action heightened their sense of power to the level of effective energy, for they believed that the food-producing totem needed their help in procreation as they must ask his own for destruction." (pp. 42-3) A vestige of this animal-human rapport may be found in our modern attitude to birds. "It is not," writes Charles Morgan, "an emotional exaggeration, but simply true, to say that birds have upon man an influence of purification and redemption." W. H. Hudson and many others have remarked the same thing.

× To judge Life's achievement by considering organisms seriatim is something like comparing a man's specialized cells with the original ovum, and assessing their advance or retrogression in each case, in order to discover whether, on balance, he has made any progress. not necessarily involve comparable mistakes or wastefulness or failure at the level of Life itself. × Certainly Life's success -- in the knowledge and control of the inorganic environment, and in the achievement of self-awareness -- does depend upon the elaboration of the appropriate internal organization, and notably upon the evolution of Humanity; but this organization must be taken as a whole. The success of Humanity is not something apart from the failure of the dinosaurs: so intertwined are the historical life-patterns of species that there is a real sense in which the success of one is the success of all. Whether Life's total progress could have been brought about more economically, at less cost to the part, I do not know; neither am I sure that the question has any real meaning. What is certain is that (seen in the proper perspective, from a sufficient distance) Life has literally done wonders, that this has been largely due to Life's remarkable plasticity, and that this plasticity means that Life is as careless of the single type as the single type is careless of the single creature.

In any case, who is it that takes Life to task? Neither an individual organism nor an individual species is in a position to observe the whole of which it is part. It is Life itself that has doubts about Life. --- Life is waking to self-consciousness and self-control, and the very existence of common-sense doubts is sufficient to show that the doubts are not wholly justified, and must not be taken too seriously. Here is a creature sufficiently whole to be concerned about its lack of unity, sufficiently rational to be alive to its irrationality, sufficiently philosophical and sufficiently existent to doubt its own existence. Moreover, Life is not merely conscious of short-comings, but is now making genuine efforts to conserve the resources of the planet, to control its own growth, and to cure its own diseases. Linked with these efforts are similar efforts at the level of species: the slow processes of natural selection give place, here and there, to the swift processes of deliberate and planned selection. Sperms and seeds, as a rule scattered with careless profusion, are now occasionally conserved. Thus, by means of 'artificial' insemination, the champion bull now serves a dozen cows, without risk of infection, where before he served one. + Thus every seed of the rare mutation among plants may be carefully garnered and planted. Thus the mutation itself may have been deliberately encouraged by subjecting the plant's chromosomes to X-ray treatment. It is not unlikely that chromosomes will one day be handled as freely as if they were pieces on a chess-board. \times

Nor can it be maintained that Humanity alone is responsible for these tentative reforms within Life. For, as Chapter III made clear, self-consciousness is never self-contained: it is essentially social and infectious. To know and to control himself, Humanity must identify himself with other species, must really go out of himself to become them. And this is no theoretical expansion, no private or psychological necessity which leaves these other species as they were: they genuinely have the awareness which he has in them --- awareness, that is to say, of Humanity first and foremost, and then of other species. The awareness is essentially practical --- not mutual projection and reflection for its own sake or to maintain a social <u>status quo</u>, but rather for the sake of action, growth, and adventure. It is as true to say that the rose, and the potato, and the

× This problem (it might be called the problem of biological relativity) finds notable expression in Tennyson's <u>In Memoriam</u> (54 ff.) There is the faith

"That not a worm is cloven in vain; That not a moth with vain desire Is shrivell'd in a fruitless fire, Or but subserves another's gain." On the other hand, it must be said of Nature,

"So careful of the type she seems, So careless of the single life;

'So careful of the type?' but no. From scarped cliff and quarried stone She cries, 'A thousand types are gone: I care for nothing, all shall go.' Yet when writers contrast the extravagant methods of Life with the economical methods of man, they forget how much of his life is spent in dreams and fantasy, how much of his activity is biologically a waste of time, how subject to natural selection are his inventions, how many seeds of ideas he must scatter for one to come to fruition. In short, I suspect that prodigal expenditure, rather than any kind of tightfistedness, is characteristic of mind. "But what use is it?" is not a question typical of the higher grades of mentality.

Shaw's Don Juan speaks of "the working within me of Life's incessant aspiration to higher organization, wider, deeper, intenser self-consciousness, and clearer self-understanding". <u>Man and Superman</u>, III.

+In Russia, carrier pigeons have been used to transport the semen to distant farms --a striking example of planned symbiosis. × Already a plant has been bred with turnip, cabbage, and radish chromosomes in its cells.

Most of our confusion of thought about 'the wonders of instinct' arises from our concentration upon the individual organism. How (we ask) can a creature with so little brain contrive so well, having no previous experience? But the relevant 'brain' is that of the species, and, ultimately, that of Life, which includes my brain as I write this. There is abundant evidence for 'telepathy' amongst animals, and it is reasonable to suppose, with Carington, that elaborate instinctive behaviour is due "to the individual creature concerned (e.g., spider) being linked up into a larger system (or 'common subconscious', if you prefer it) in which all the web-spinning experience of the species is stored up." (Telepathy, p. 160) But the 'common subconscious' of all species, including that of Humanity, is one in Life. Not only am I unable to think as Life without thinking as and for spiders, but (it seems) all my experience must in the end affect theirs, through the "common reservoir'.

sheep, use Humanity to further their own evolutionary ends, as to say that they are his creatures.

6. <u>THE UNITY OF LIFE</u>.

The contribution of Humanity to Life is so obvious that it is apt to blind us to the contribution of other species. We forget that Humanity is, like them, a limited and relative being, ° that his limitations are not necessarily theirs, and that each brings to the whole some unique, perhaps indispensable, contribution.

To rise from the level of the species to the level of Life, it is necessary to improve one's own faculties, but chiefly it is necessary to take on the faculties of others. Let me give a few instances of this kind of biological extension. The well-trained 'seeing-eye dog' leads his master safely through the town. The Japanese employ the senses of the catfish to predict earthquakes --- the fish is observed to behave oddly some hours before the earthquake occurs. White mice are used in submarines to detect fumes. Frogs will react to a proportion of strychnine too small for the chemist to detect. It is possible, as Mr Gerald Heard has suggested, * that every kind of animal is a potentially valuable 'sense organ' a window out on to the world that we shall one day learn how to use. Photographs have already been taken through the eyes of mammals and insects. We know of, though we do not yet use (as we use the hound's sense of smell) the ant's sensitivity to ultraviolet rays, the radar-like sense of bats and fish, which enables them to avoid obstacles in the dark, and the ability of several animals to hear notes of very high pitch.

But technique and ingenuity are not enough --- "The intellect", says Bergson, "is characterized by a natural inability to comprehend life." + The leap of sympathetic imagination is needed. As with the manufactured extension of the body, so with the biological extension: it is not yours, not thoroughly incorporated, till you can 'feel yourself into it'. Efforts of this kind are not wanting. Alfred Binet, \times Karl Jarmer, ° Von Uexkull, and many others, have, with varying success, sought to enter the world of the animal. Fabre, * Maeterlinck, † Lord Dunsany, • and Julian Huxley \oplus have taken the insect's view. And (most enterprising of all) Fechner \otimes does his best to place himself within the soul of the plant: without the plant-soul, he says, there would be a great gap in the order of things, for it is, in its own humble way, higher than the human, attaining a little pinnacle of its own. ϕ In her poem 'To a Daisy', though Alice Meynell disclaims knowledge of the daisy's experience, at least she is keenly alive to the fact of that experience, and to the fact that it is very different from human experience.

> "And I, how can I praise thee well and wide From where I dwell --- upon the hither side? Thou little veil for so great mystery When shall I penetrate all things and thee, And then look back?"

And Professor J. B. S. Haldane has given us a brilliant, if not wholly serious, picture of the universe of a barnacle. Θ Page 186 At the 1949 meeting of the British Association, Professor A. C. Hardy made the tentative suggestion that something like telepathy, linking the individuals of a race with one another and with a subconscious racial memory, may, through organic selection, modify the course of evolution.

° For more detailed statements, see Julian Huxley's essay, 'Man as a Relative Being', in <u>Science in the Changing World</u>, (Ed. Mary Adams) pp 119 ff., and H. Munro Fox, <u>The</u> <u>Personality of Animals</u>, pp. 7, 8, 29.

* <u>Science in the Making</u>. See pp. 82, 113, 168, 176, 177. I am indebted to this book for several of the examples I give here.

Besides being a potential window, each organism is also an essential part of the view through the window. "Every object rightly seen unlocks a faculty of the soul", says Emerson. Of "the fearful extent and multitude of objects", not one can be spared from the scene. ('Nature', 1836, IV.)

+ <u>Creative Evolution</u>, p. 174. A little further on, he says, "The instinctive knowledge which one species possesses of another on a certain particular point has its root in the very unity of life, which is.... a 'whole sympathetic to itself."

× <u>Psychic Life of Micro-Organisms</u>.

° Das Seelenleben der Fische.

* The Life and Love of the Insect, and

many other works.

† <u>The Life of the White Ant</u>, and <u>The Life</u> of the Bee.

• The Flight of the Queen.

⊕ Essays of a Biologist.

⊗ Nanna, (1848). See also R. H. France, <u>Die Seele der Pflanze</u>. Of the many excellent children's books which tell a story more or less from the animal's viewpoint, I may mention <u>Cranes Flying South</u>, by N. Karazin (trans. M. Pokrovsky)_and <u>Tarka the Otter</u>, by Henry Williamson. Certainly Chuang Chou stated a profound educational principle when he said that the intelligent "do not view things as apprehended by themselves, subjectively; but transfer themselves into the position of the thing viewed." (Giles, <u>Musings of a</u> <u>Chinese Mystic</u>, p. 46.)

 ϕ Cf. Schopenhauer, <u>The World as Will</u> <u>and Idea</u>, i. p. 204.

 Possible Worlds, p. 276. The fact that the barnacle in question is a philosophical one does not invalidate, but rather goes to support, my thesis that it is by the pooling of experience, by the integration of perspectives, that organisms advance in their appreciation of the universe. Nobody (and least of all Professor Haldane) supposes that the barnacle philosophizes by itself. These are much more than interesting exercises of the imagination. For I do not know my own mind until I enter into the mind of all living things, and so attain the level of Life. Whether I am aware of what is happening or not, I must, in my ascent, take all creatures with me: only through them, only <u>as</u> them all -- and this includes the most insignificant and loathsome -- can I come to myself on the higher plane. In other words, the mind which is in me, the mind which I am, includes the mind of the plant and the fish, of the insect and the mammal. These are not pious sentiments, without any empirical foundation. On the contrary, there is abundant evidence that a common mind, (or 'collective unconscious', or 'racial unconscious') does exist, and is the substratum out of which all individual minds, human and infrahuman, arise. "Theoretically it should be possible to shell out of the collective unconscious not only the psychology of the worm, but even that of the individual cell." \otimes

The higher the climb the bigger the climber --- progress by oneself, and as oneself, is not progress at all. This rule applies to other species no less than to Humanity: it is through him that they realize themselves. The rare species in the bird-sanctuary prolongs itself to include, as a vital organ, Humanity himself, using his ingenuity and foresight as means of survival. \ddagger The rose ascends to take over, in Humanity, her own further evolution. In him she comes into her own, grows conscious of her beauty and skilled in its perpetuation. \times Always such relationships are reciprocal. If Humanity puts himself in the bee's place, so does the bee achieve self-consciousness and self-control in him. There is a real sense in which the modern ecologist, photographing from the air the vegetation of a region, with a view to modifying it, is the eyes and the brain of the community he is studying. Neither Life nor any part of Life is without such organs, but they are not other than those of the biologist.

No nature is foreign to my nature. If I claim Life for my own, I must embrace all of it --- the scorpion and the tapeworm, the vampire bat and the octopus, no less than the violet and the nightingale. Rejecting any creature as common or unclean, I am divided against myself. It is not by accident that herbs cure my flesh, but because, in George Herbert's phrase, they "find their acquaintance there". The age-old belief that there is "an occult relation between man and the vegetable", * so far from being a mere superstition, is borne out by evolutionary research and theory, by the case-histories of modern psychology, by the intuition of poets and painters and mystics, and by an accumulating mass of medical facts. To give only two instances --- certain secretions of human glands will cause daffodils to bloom all the year round, and a substitute for oestrin (a secretion of the human ovary) can be extracted from plants. Wagner Jauregg has demonstrated that the mosquito that infects with malaria may arrest, and even cure, general paralysis of the insane. A hormone from the pituitary gland of a horse, injected into an ewe, will give her two breeding seasons instead of one. ° But here, as in so much else, it is unnecessary to look further than the despised commonplace. Eating itself -- the necessity that creatures shall be for ever changing into one another -- is the most eloquent of all the testimonies to Life's oneness. \oplus

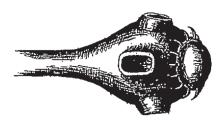
Once this unity is grasped, everything is seen in a new light. It is part of the meaning of oats and horses, of fire and sycamores, that they © C. G Jung, <u>Contributions to Analytical</u> <u>Psychology</u>, p. 110.

Jung (<u>The Integration of the Personality</u>, p. 147) links the animal symbolism of primitive rites with the human psychic disposition whose ancestral source is animal: the symbolism is a kind of 'recollection'.

"That way?' said the cow, nodding. 'London, of course. All my milk goes to London. I don't take it to London myself, naturally. My staff do all that for me." Edward Shanks, <u>Elizabeth Goes Home</u>, p. 11. Even our wild-flowers could claim that the railways were built for them; several species have vastly extended their habitats by rail, their seeds getting a free lift on the wind of each passing train.

× "Who am I," asks Kathleen Raine in one of her poems; "who am I, who ...sees for the rose?"

Nature in the organism, according to Aristotle, wills an end of which the organism knows nothing. I would prefer to say that the will and the end are the organism's own, but are 'super-conscious': they belong at a level which is inaccessible to the individual as individual. No man or other animal can, as such, realize the aims of the species or of Life; but no man or other animal can exist and function at the level of the individual alone.



The head of a tapeworm, magnified.

* Emerson, 'Nature' (1836). In <u>Nanna</u>, Fechner described the plant, as essentially in search of maximum surface contact with the world, and the animal as in search of the maximum protection for its own inner world: the one is expansive, the other contractile and intensive. I think our delight in flowers and trees arises from the fact that they are our polar opposites, compensating for our one-sided attitude to the universe.

° The discovery was due to Professors Parkes and Hammond.

⊕ The West furnishes the scientific theory of the oneness of Life, while the East (notably in Buddhism and Jainism) furnishes the religious conviction. The needed synthesis is seen in certain individuals, such as Albert Schweitzer. (See, e.g., his book, <u>The Decay and Restoration of Civilization</u>.) But our science divides more than it unifies, and few of us realize, as James should combine in a Stradivarius: the violin with its music brings out their nature, as the flower brings out the nature of the root. Truly speaking, the flavour of a Camembert cheese or a bottle of champagne is the fulfilment, and by no means the accident, of the bacteria that are responsible for it: they are continuous with the taster. The lime waited for Grinling Gibbons to show what it really is, and Portland stone was only half itself till Wren took it in hand. It is part of the <u>natural</u> history of the sea-snail <u>Murex brundaris</u> that it supplied the Imperial purple.

But there is the other, more difficult side. As men fear and hate men, as nations fear and hate nations, so do species fear and hate species: nor are these different levels of fearing and hating as independent as we imagine them to be. When spiders or snakes terrify me, and I try to kill them, I am at war with myself. That this divided condition is not inevitable, and may be overcome, is shown by a St Francis and an Axel Munthe. The understanding, at its best, between master and dog, ϕ or between a really green-fingered gardener and his flowers, is an indication of what might be --- or rather of what <u>is</u>, of the unity that we suppress. Snakes, hyenas, and even a Komodo dragon, have been tamed and trained.

Indeed there is no known limit to the power of affectionate sympathy. One of the most important functions of Humanity may well be, as C. S. Lewis has suggested, + "to restore peace in the animal world", to temper the fierceness, cure the diseases, relieve the pain, and transform the ugliness of Life-in-the-raw. To Humanity (or rather to Humanity self-transcended, and become Life) the lesser creatures look for their salvation from themselves and from each other. Mr Lewis believes that "man was made to be the priest and even, in one sense, the Christ, of the animals --- the mediator through whom they apprehend so much of the Divine splendour as their irrational nature allows." × This is, I am sure, profoundly true, for it is only as I take the animals with me, and am taken by them, that I can come to myself. The fowls of the air, the beasts of the earth, and the fish of the sea, draw us to the Kingdom, and the Kingdom cannot be attained without them. Thus there is more in the domestication of animals and plants than we suspect. The well-trained dog is more natural, more itself, than the wild. "Its nature", says Mr Gerald Heard $^\circ$ of the Pomeranian and similar breeds, "having become integrated with its master's, it is free of all he has. It goes as it will, for its will has found a fulness of life with him, beside which wildness was captivity." Domestication is for such a creature "the immense fulfilment of its life".

By projection and reflection, primitive man bestows human characteristics upon the creatures around him. He looks on animals neither as inferiors nor as of a different order from himself: thus his tales are full of talking animals who are just as clever as himself. We imagine that we know better than he does, but in fact we need to come round, not indeed to his crude primitive anthropomorphism, but to a view which includes the substance of it. For it is we who have proved him right. It is our science which, while seeming to sweep away the intuitions of the savage and the child, only confirms them, and, in the end, makes them truer than ever. * For example, our self-consciousness as a species is not other than the ability of non-human species to observe us, and this ability is not other than the life we live in them. Inevitably we raise them to our ϕ W. Macneile Dixon suggests that "there are many men who feel that the affectionate relations between a dog and his master go further to establish the unity of living creatures than all the scientific doctrines." <u>The Human Situation</u>, p.115.

+ The Problem of Pain, p. 124.

Sédir, the founder of <u>Les Amitiés Spiritu-</u><u>elles</u>, goes further than C. S. Lewis, and believes that not only all living creatures, but inanimate things as well, look to man and somehow model themselves according to him. See the article by George Harrison in <u>The Hibbert Journal</u>, July, 1943, p.316. Schopenhauer (<u>The World as Will and Idea</u>, i. pp. 491-2) says that Nature has man for priest and saviour.

× <u>Op. cit.</u>, p. 66. Compare the words Hsun Ch'ing, the great Confucian thinker of the third century B.C. --- "Heaven can bring things to life but cannot distinguish them, Earth can sustain man but cannot order him, and beneath the canopy of heaven all species of creatures and living men depend on the Sage Man that they may find their proper stations (in life)." E. R. Hughes, <u>Chinese Philosophy in Classical Times</u>, p. 253.

° <u>The Code of Christ</u>, p. 59. Sherlock Holmes says (but it does not take a Holmes to see) that "A dog reflects the family life. Whoever saw a frisky dog in a gloomy family, or a sad dog in a happy one?" "The Adventure of the Creeping Man'.

To use the terminology of Martin Buber's <u>I and Thou</u>, the young child inhabits a living Thou-world but the man sinks into a dead It-world, out of which he must painfully climb to the Thou-world again. When we <u>use</u> men and animals and plants and inanimate objects, we enter into the it-relation with them, and they are for us mere things, mere exteriors. But, says Buber, "if only we love the real world,... really in its horror, if only we venture to surround it with the arms of our spirit, our hands will meet hands that grip them."

* Thus we have an adequate <u>theory</u>, and the primitive has an adequate <u>realization</u>, of man's descent from animals. Though fantastic in detail, totemism does go far towards putting into practice, into living and socially effective terms, what we know, in a detached way, to be true. There is a sense in which the primitive, convinced that he is descended from the totem-reptile or mammal, out-Darwins Darwin. own status. Not superstition, but science itself, ensures that evolution's dead ends, the living fossils, shall regain from us some of the abundance of life which they lost to us long ago. And this rediscovery of unity by virtue of self-consciousness, this projection and reflection in a society of species, is the more real because it is not merely a present transaction in space: its basis is the temporal continuity of organisms, and the continuity of experience which this implies. Every organism, every cell, is a view out upon the world, and just as its body (i.e., the view in) is a branch of the ancestral body, so is its experience (i.e., the view out) a branch of the ancestral experience. Truly speaking, Life is a single Experience, no more divided than a tree is divided when it sends out boughs and twigs. When the savage or the child attributes to the crocodile his own thoughts and emotions, he witnesses to the unifying past. Restore the time-dimension to the picture, and it is clear that the crocodile is an extension of the man, and that the man is an extension of the crocodile, and that they are one in Life, even as my hand and my foot are one in me, the man.

It is not upon Humanity, but upon Life, that all species converge. Starting, presumably, from a speck of protoplasm, Life grew by ramification, each branch developing some special aspect, bringing out some special characteristic that was implicit in the primitive and undifferentiated whole. + And the same Life that thus diverges, to create a wealth of variety otherwise impossible, also converges to realize that wealth. These are no metaphors. Life really is a self-conscious suprahuman being. Alfred Russel Wallace (who arrived at Darwinism independently of Darwin) came to the conclusion "that a superior intelligence has guided the development of man in a definite direction, and for a special purpose, just as man guides the development of many animal and vegetable forms." × "Angels and archangels....", he says, "have been so long banished from our belief as to have become actually unthinkable as actual existences, and nothing in modern philosophy takes their place. Yet the grand law of 'continuity', the last outcome of modern science..... cannot surely fail to be true beyond the narrow sphere of our vision, and leave such an infinite chasm between man and the great Mind of the Universe." True words, as far as they go: but they do not go far enough. What their author failed to see was that the 'angel' of Humanity and the 'archangel' of Life are no mysterious, disembodied, wholly transcendent spirits, but none other than Wallace himself, at the higher levels of his own psycho-physical functioning. For Wallace's 'soul', -- "the soul, which has peace in the animals and safety only in the angels" ° -- not only embraces these realms: it unites them.

For Plotinus, the world is an organism whose members feel for one another: thus we experience a 'faint movement of sym pathy' at the sight of any living thing. See <u>Enneads</u>, IV. iv. 32, and IV. v. 2

+ This is a well-known Bergsonian doctrine. See, e.g., <u>Creative Evolution</u>, p. 123, and <u>The Two Sources of Morality and</u> <u>Religion</u>, pp. 94 ff. I cannot agree with Bergson, however, when he describes the human species as that "which accounts for the existence of all the others". (<u>The Two</u> <u>Sources</u>, p. 221) This is too much like biological imperialism. It is not only as men and as nations, but also as a species, that we must overcome our egoism.

× Natural Selection and Tropical Nature, (1891) pp. 204 ff. Wallace's biological angels bear a family likeness to Bergson's Elan, and to the entelechies and psychoids of Driesch. (See the latter's book, The Science and Philosophy of the Organism, also Henry Drummond's Natural Law in the Spiritual World, pp. 290 ff.) Certainly Aristotle's notion, that a species might be the body or organism of a single directing soul, is far from dead. But the roots go still deeper --- while some primitive peoples look on the individual animal or plant as all-important, others believe that the class or species is controlled by a single power. See J. Estlin Carpenter, Comparative Religion, p.116.

° Hull, <u>Selected Letters of Rainer Maria</u> <u>Rilke</u>, p. 210.

CHAPTER IX

THE DISTANT VIEW --- EARTH.

Till we conceive her living we go distraught, At best but circle-windsails of a mill, Seeing she lives, and of her joy of life Creatively has given us blood and breath...

Meredith, 'Sense and Spirit'.

It is probably on us alone that it is incumbent to augment the consciousness of the earth.

Maeterlinck, The Treasure of the Humble, 'The Star'.

The face full of rest Of the earth, of the mother, my heart with her heart in accord, As I lie 'mid the cool green tresses that mantle her breast ...

A.E., 'Reconciliation'.

I know now why the earth is gross, tantalizing, wicked, it is for my sake.

Walt Whitman, 'By Blue Ontario's Shore', 18.

Let us not disown mother Earth; rather let us rejoice to call her 'mother'. Earth's nature is our nature. We owe to earth the entire gamut of our mind's wonders, whether of joy or pain. Life's story has been an unfolding of germinal powers of the planet bringing emergence of mind. Let us give thanks where thanks are due.

Sir Charles Sherrington, Man on His Nature, V.

To her, for her singular benefits, we have given the reverent and worshipful name of Mother ... She it is that takes us when we are coming into the world, nourishes us when we are newborn; and when we are come abroad ever sustains and bears us up. At the last when we are rejected and forlorn of the world, she embraces us. Then, like a kind mother, she covers us over in her bosom.

Pliny, Natural History (trans. Holland), I. 5.

And from her womb children of divers kind. We sucking on her natural bosom find, Many for many virtues excellent, None but for some, and yet all different. Oh, mickle is the powerful grace that lies In herbs, plants, stones, and their true qualities; For nought so vile that on the earth doth live, But to the earth some special good doth give.

Romeo and Juliet, II. 3.

And the sun does not care if I live in holiness, To him, my mortal dress Is sacred, part of the earth, a lump of the world With my splendours, ores, impurities, and harvest, Over which shines my heart, that ripening sun.

Edith Sitwell, Street Songs, 'An Old Woman', I

And I adoun gan loken tho, And beheld feldes and plaines, And now hilles, and now mountaines, Now valeys, and now forestes, And now, unethes, grete bestes; Now riveres, now citees, Now tounés, and now grete trees, Now shippes sailings in the see. But thus sone in a whyle he Was flowen fro the grounde so hye, That al the world, as to myn ye, No more semed than a prikke.

Chaucer, 'The House of Fame', II.

In the Nine Provinces there is not room enough: I want to soar high among the clouds, And, far beyond the Eight Limits of the compass, Cast my gaze across the unmeasured void. I will wear as my gown the red mist of sunrise, And as my skirt the white fringes of the clouds: My canopy --- the dim lustre of Space ...

Ts'ao Chih, 'A Vision', (Arthur Waley, 170 Chinese Poems)

1. THE EARTH AS SUBJECT AND OBJECT.

What am I? That is the question I must always come back to (seeing that it is the reason for this whole inquiry) however far I have to stray in pursuit of an answer. And the answer (let me repeat) must twofold. I am what I am in my own experience, and what I am in others' experience; I am the insider's story, and the outsiders' story. What, so far, do these two categories of observers make of me?

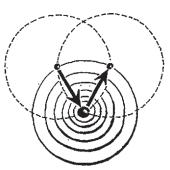
First, my own view, the view outwards. In the previous chapter, the conclusion was that I sometimes rise to the level of Life --- when I contemplate the inanimate world, and strive perhaps to press some of it into the service of Life, I am (however imperfectly and briefly) identifying myself with all the living. The query that now arises is whether my capacity for this kind of extension comes to an end here. Plainly it does not. As far back as Chapter I, I found reason to believe that I grow with what I observe, and that when Mars or Venus (say) is my object, Earth is the subject, the observer. It takes a heavenly body to know a heavenly body --- the vessel's displacement is planetary. For the moment, I put all things terrestrial behind me, not because they matter no longer, but because I have become them all. I feel them back of me, supporting me. I have grown to include them: they are myself, and I am a receptacle, a planet-subject. This great globe, seemingly so massive and obdurately inert, melts in an instant as if by some all-powerful magic, once I glance heavenwards. That this planet is accommodation for other planets, is a fact which I am always experiencing, yet never taking seriously.

There is, after all, plenty of sense in Rilke's insistence that we have to make the Earth invisible in us °, and in A.E's lines:

"And down through the cool of the mountain The children sank at the call, And stood in a blazing fountain And never a mountain at all." ×

For common sense this first-hand evidence about the real nature of the planet is far from convincing. I am a prejudiced observer. Let me then take the outsider's view, the view in towards the Centre. My observer is engaged in looking for my boundaries --- for the place where I come to an end and my environment begins. He has already discovered that I do not stop at man, or at Humanity. Do I then stop at Life? Again, very obviously, I do not. The other Earth-layers can no more be amputated from the biosphere than the other species from Humanity, or other men from man. To multiply instances of Life's dependence upon air, water, and the planetary crust, would be superfluous --- it is abundantly clear that Life is nothing without those extensions, or extra-corporeal organs, which comprise the rest of the planet. In other words, I cannot be myself unless I am Humanity, Life, and Earth --- such is the triple outer body I need to live the kind of life that is proper to me. Truly speaking, nothing short of the Earth is capable of vital functioning as we know it. Not the individual animal, not the species, not even the biosphere, is a living whole, a self-contained living unit: the life they have is Earth's.

In case this evidence -- the evidence of the detailed outside view, added to the inside view -- is still insufficient, let me take the general or



Many poets add to the weight of the empirical evidence, but none more than Walt Whitman ---

"What widens within you, Walt Whitman? What waves and soils exuding? What climes? What persons and cities are here?

Within me latitude widens, longitude lengthens,

Asia, Africa, Europe, are to the east ---America is provided for in the west

Within me zones, seas, cataracts, forests, volcanoes, groups, Malaysia, Polynesia, and the great West Indian islands." 'Salut au Monde'. And Meredith ---"Yet at a thought of life apart from her, Solidity and vision lose their state, For Earth, that gives the milk, the spirit gives."

Meredith, 'Earth's Secret'

P.G.F. Le Play, in Les Ouvriers Européens, distinguished six primary nature-occupations, each having a geographical basis --- (1) hunters and food-gatherers, (2) pastoral peoples, (3) fishermen, (4)agriculturalists, (5) foresters, (6) miners. Branford and Geddes, in The Coming Polity, make similar distinctions; a river valley, for instance, exhibits a cross-section of natural occupations, from the shepherd and miner in the hills to the fisherman at the river's mouth. Buckle went so far as to make environmental (and, in particular, climatic) influences the chief factors in human history. For a more recent treatment of this theme, see Ellsworth Huntington, Civilization and Climate, also his contribution to The Evolution of the Earth and its Inhabitants (Ed. Lull). It must not be forgotten, on the other hand, that Humanity is a major geological agent and climate-maker.

° Duino_Elegies, IX, 68-71; also his famous letter to his polish translator, Witold von Hulewicz, November 13th, 1925.

 $[\]times$ 'The Dream of the Children', Collected Poems, pp. 108-9.

more distant, outside view. For the mobile observer, who believes that the truth about me is to be found everywhere, and not merely at close range, there is a place where I am no longer man or Humanity or Life, but Earth. If he is attending to what I am saying, he attributes my speech neither to my vocal chords, nor to the whole man, nor to the species, nor to the biosphere, but to the planet. Here, at this range, the lesser aspects of me do not, and cannot, exist: here there is only a little luminous spinning ball, talkative, musical \times (this orb, if no other, "in his motion like an angel sings"), intensely curious about the universe and itself, young at two or three thousand million years, with a future of incalculable promise. Here Blake's lines \emptyset come true ---

> "All Human Forms identified, even Tree, Metal, Earth and Stone: all Human Forms identified, living, going forth and returning wearied Into the Planetary lives..."

2. EARTH'S SPHERES

What is the physique of this spherical creature? What sort of organs has it, and how do they function?

Common sense fails to detect any structure that deserves to be called a planetary <u>organ</u>. The reasons for this failure are familiar enough: ---firstly, we expect too great a similarity between the phenomena of one hierarchical level and those of another; secondly, we are at a disadvantage in that we have made our home inside the thing we are investigating, instead of in the place where it is evidently a whole; thirdly, Earth's body is (misleadingly, but altogether appropriately) coarse-grained compared with smaller bodies; fourthly, the tempo of its vital rhythms is (as indeed we might have expected) slow; fifthly, we happen to live at a time when the age-old belief in the Earth Mother is -- temporarily, as I believe -- either absent or repressed. ° In brief, our difficulties are such as an intelligent molecule might encounter, if it were setting out to write a treatise on the human body in which it found itself lodged.

But neglect of the living whole goes with concentration upon the part, and in point of detail scientists know far more about the planetary goddess than her worshippers ever knew. Four main layers are generally distinguished: ---

(1) The atmosphere, including the troposphere and the stratosphere.

(2) The crust, consisting of (a) the upper layer of sedimentary rocks, which may be as much as some thousands of yards thick, and in other places altogether absent, and (b) the granitic layer, which goes down some miles, but is believed not to occur under the Pacific Ocean.

(3) The basaltic mantle, consisting of denser rock, and judged to be some 2,000 miles thick.

(4) The heavy core, or barysphere, probably of liquid iron and nickel.

In addition, there may be distinguished the hydrosphere -- a region roughly corresponding to the biosphere of the previous chapter -- which includes (a) the lower layers of the atmosphere, where there is an ap-Page 192

× Mahler's <u>Das Lied von der Erde</u> is exactly what it purports to be. The belief that the universe is musical is surprisingly widespread and persistent. The Pythagoreans taught that the universe sings. (Hippolytus, Refut., I. 2) Chuang Chou says, "You have listened to the music which man makes, but you have not listened to the music of the earth; or you may have listened to the music of the earth, but you have not listened to the music of Heaven." (Chuang Tzu Book, II) We have exchanged the music of the spheres for radio noises originating in the Milky Way or in sunspots, but the popular Christian idea of heaven is nothing without angel choirs and orchestras. These beliefs are, I suggest, well-founded, in that our music is manylevelled, and partly suprahuman.

ø <u>Jerusalem</u>, 99.

° But there are many individual exceptions. A.E. assures us that "The lover of Earth obtains his reward, and little by little the veil is lifted of an inexhaustible beauty and majesty ... We have so passed away from vital contact with divine powers that they have become for most names for the veriest abstractions, and those who read do not know that the Mighty Mother is that Earth on which they tread and whose holy substance they call common clay." The Candle of Vision, pp. 171-2. But we are still liable, (like the king in the eastern story, who built his palace on a mountain that turned out to be a wart on the head of a sleeping monster) to be rudely shaken out of our illusion.

preciable quantity of water vapour; (b) rivers, subsoil water, and underground streams; (c) oceans and seas; (d) the sedimentary rocks, in the depositing of which Life has generally played some part. That is to say, the biosphere-hydrosphere overlaps the lower levels of the atmosphere and the higher levels of the crust. †

3. THE ATMOSPHERE

We are in the habit of thinking of these planetary layers (with the doubtful exception of the biosphere) as structureless or else inert. What are the facts?

Consider, first, the atmosphere. It turns out to be complex beyond all expectation. The troposphere, or lower region of turbulence, with its variable cloud forms and cloud levels, its shifting centres of high and low pressure (and air movements from the one to the other), its prevailing winds, is extremely intricate and by no means without system and order. Less well known, but hardly less important for Life, are the higher and calmer layers of the stratosphere. At a height of 20 or 30 miles there is the ozonosphere --- a belt containing sufficient ozone to absorb much of the sun's ultra-violet radiation: if more were absorbed, rickets and certain other diseases would probably increase; if less, tissues would be damaged. Thus the biosphere is dependent upon the ozonosphere, and the planet has here, in this invisible outer shell, an organ that is necessary to, and part of, the life of the whole. Above the ozonosphere is the ionosphere, which is a series of layers -- the Heaviside layer (at about 65 miles above ground level), the Appleton layer (at about 150 miles), and others still higher -- containing ionized atoms and free electrons. These strata of high electrical conductivity are ceilings that reflect radio waves back to the ground: the lower ceilings echoing back the longer waves, the higher ceilings the shorter waves. If it were not for these reflectors our radio sets would not pick up signals from a distant station. The ionosphere interrupts their journey into outer space, and sends them round the planet.

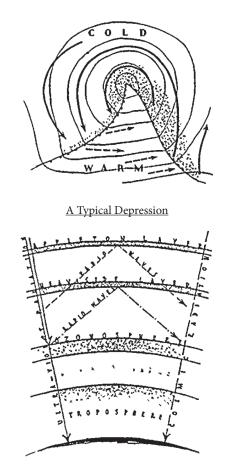
Other vital functions of the atmosphere are (1) to give more or less free passage to sunlight, while refusing a return journey to the long heat waves which are reflected from the ground -- in other words, to make of the planet a globular greenhouse; (2) to burn up the meteors that are always raining down upon us with a speed far exceeding a rifle bullet's (most meteors are disintegrated before they get within twenty miles of the ground); (3) to reduce the intensity of cosmic radiation; and (4) to provide a reservoir of the gases required by Life. +

This summary account is enough to suggest the complexity of Earth's outer zone, and its vital connection with the biosphere beneath. The atmosphere is a substantial and many-tiered structure over our heads --- a roof which, like other well-built roofs, lets in the light, keeps in the heat, keeps out the (cosmic) weather, allows us breathing space, and provides a sounding-board so that we can hear one another speak.

† Cf. the Aristotelian doctrine of the four elements:

FIRE is hot and dry AIR is hot and moist WATER is cold and moist EARTH is cold and dry

Note that the region of water 'overlaps' that of air (in respect of its moistness) and that of earth (in respect of its coldness), much as the biosphere-hydrosphere overlaps the atmosphere and the crust. For Aristotle, it was because the qualities of an element are thus shared by its neighbours, that transmutation of elements can occur.



A diagram – schematic only – of the atmosphere

+ As an example of interaction between atmosphere, biosphere, and lithosphere, plants take carbon-dioxide from the air, retaining the carbon and releasing most of the oxygen; the oxygen in the air tends to increase, but this tendency is offset by the oxidizing of rocks, which takes oxygen from the air.

4. THE BIOSPHERE-HYDROSPHERE.

Next in order is that moist region where the planetary life is, on dissection, found to be concentrated. Life and water go together. In a remarkable number of ways, vital phenomena are linked to water's unique properties, as Henderson × has shown in detail. The protoplasm of the cell is largely water. Life was probably born in a wet scum or ooze; certainly it grew up in the water. And, in effect, no part of Life has ever left that element. What Traherne knew by intuition, science knows by observation --- "The Sea itself floweth in your veins." The fluid constituent of my blood is not as salt as the sea is now, but (and this is far more significant) it is in all probability of the same chemical composition as the sea in which my marine ancestors lived. ° Along with them, I still live in the waters of that primeval ocean: I have turned myself into a walking aquarium. Like them, I cannot survive unless the sea bathes my cells, and I have elaborated a superb irrigation system (consisting of heart, and arteries, and veins, and miles of capillaries), to ensure that it shall continue to do so. Or, to put the matter another way, I enclose the sea; launch upon it a grand fleet of oxygen ships (red corpuscles) and men-of-war (leucocytes); boost its currents with a pump (the heart); maintain its temperature uniform to a degree, from pole to equator, and from winter to summer, by means of furnaces and cooling-radiators; adjust its composition from moment to moment by dosing it with just the chemicals that the occasion demands (e.g., with adrenalin); pour into it carefully prepared substances (e.g., salvarsan) that are poisonous only to my enemy; + and scale down the whole to the most convenient dimensions. What this portable sea loses in size, it certainly makes up for in serviceableness.

But it is not enough that the waters circulate within me: they must flow around me as well, on a planetary scale --- "Water is the life-blood of Earth, as it were, flowing through its muscles and veins. Thus, I say, is water richly endowed." • In fact, the biosphere-hydrosphere is one great circulatory system. The ascent of water vapour from the ocean; the formation of clouds that drift over the land; their further rising, and cooling, and descent as rain; the flow of water over the surface and underground, as well as through streams and rivers, back to the sea --this is the very bloodstream of Life, in which all her members share. Though I have left the ocean, water currents still surround me. The fact that they are now 'diluted' with air above and with rock below (so far from being a drawback) is an incalculable advantage, since it bestows upon me nearly all the blessings of an aquatic mode of life, with few of its penalties. Indeed I live an improved marine life. I make the best of all three worlds -- water, earth, and air, -- without really leaving the first of them. As an amphibian and a reptile, I did not desert the water for the dry land, for the water had preceded me, and my desertion was only apparent.

Besides the lower air, the ocean, and the soil, the planet's stratified crust must be claimed for the biosphere-hydrosphere. * For, directly and indirectly, Life has modified every stratum that has been laid down for hundreds of millions of years: the rocks are largely the work of the living.

× The Fitness of the Environment.

"Oh, the Neptune within our blood," exclaims Rilke, in his Third Elegy, "oh, his terrible trident!"

° See the essay, 'Man as a Sea Beast' in J. B. S. Haldane's <u>Possible Worlds</u>, pp. 57 ff.

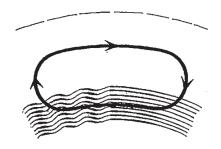
"Water," says Sir Charles Sherrington, "is the very menstruum and habitat of each and every cell. Water, within and without ..." <u>Man on his Nature</u>, IV.

"The water is the eldest daughter of the creation, the element upon which the Spirit of God did first move, the element which God commanded to bring forth living creatures abundantly; and without which, those that inhabit the land, even all creatures that have breath in their nostrils, must suddenly return to putrefaction." Izaak Walton, <u>The Compleat Angler</u>.

+ Erlich argued that, as certain seaweeds concentrate the iodine present in extreme dilution in the sea, so invading germs in the blood might take in and concentrate poisons so dilute that they do not hurt the patient. He produced 606, or salvarsan, which contains arsenic in such a form that it concentrates in the germ and kills it.

Bechhold calls the organism "essentially an aqueous solution," and Henderson points out that the animal's real food, which is taken in through the wall of the intestine, is fluid: nothing enters the protoplasm except in solution in water. <u>The Fitness of the Environment</u>, p. 77.

• <u>Kuan Tzu Book</u>, 39: a work of the Chou-Han period.



* Walther's biosphere includes the biostrata. See Gregory, <u>The Making of the</u> <u>Earth</u>, p. 207.

Moreover the water-cycle (sea, clouds, rain, sea) which maintains Life is, at the same time, constantly wearing down the higher land surfaces and depositing their material on the alluvial plains and seabeds to form new strata. † One and the same vital process maintains and renews, by constant change, the aerial and aqueous and earthy parts of the biosphere. Nor are her lower layers lost to life. Limestone beds and clay, the coal measures and mineral oil, were (as it turns out) put by for future use, much as eggs are preserved and fruit is bottled in season, against the time of scarcity. Taken piecemeal, these ancient deposits are as dead as the fat which the animal stores in its tissues for future use; in the living whole, they share the vitality which they do so much to increase. The planet is more, and not less, alive for being steatopygous. She lives at every time-level of herself. Her existence is cumulative; her present embraces her past. Her epochs of seeming stagnation and futility come into their own in the fullness of time. The coal that is now warming me, the iron of the grate, the clay of the fire-back, the marble of the surround, the umbers, and siennas, and ochres of the picture above the fireplace -- all of them products of 'blind' and 'meaningless' and extremely protracted geological processes -- are now gathered up into significant pattern. The awareness, the intention, is no less authentic for coming after the fact. + Waking to self-consciousness and enhanced life, Earth begins to rescue herself from her old pointlessness. She is what she now is because she realizes, in theory and in practice, her history: the sedimentary rocks with their fossils provide at once a physical basis for memory (annual rings, as it were, of our ancestral tree), and a source of physical energy. *

And the rocks, no less than air and sea, are caught up in the cycle of the biosphere's 'metabolism'. (Heraclitus ° had the right idea --- "He called change the upward and the downward path, and held that the world comes into being in virtue of this. When fire is condensed it becomes moist, and when compressed it turns to water; water being congealed turns to earth, and this he calls the downward path. And, again, the earth is in turn liquefied, and from it water arises, and from that everything else; for he refers almost everything to the evaporation from the sea. This is the path upwards.") The circulatory process is both 'anabolic' or constructive, and 'katabolic' or destructive: for example, the same flow of water back to the sea (aided by frost and wind and other agencies), wears down the highlands and builds up the seabed. In this way the biospherehydrosphere maintains and remakes its own constitution unceasingly, altering, besides the contours of land and sea, the rainfall and humidity, and the composition of the soil, and (by constant modification of survival values) the course of vital evolution. The history of Life, with the emergence of the higher types of mental functioning, is only a series of excerpts from a more comprehensive history. What we call civilization is a planetary condition, and the ripening of Life is an aspect of Earth's own ripening.

5. THE FUNCTION OF THE INTERIOR LAYERS

If the mountains are all the while being worn down and taken seawards, how is it that all the land has not long ago been reduced to sea level, and

† The total thickness of the strata of secondary rocks has been reckoned at many miles, at the least. But the same material has, of course, been used again and again, and in any one place only a small proportion of the total thickness can be found. See Barrell, in <u>The Evolution of the Earth and its Inhabitants</u> (Ed. Lull), p. 60, and Holmes, <u>The Age of the Earth</u>, p. 8.

Swift's project -- "for extracting sunbeams out of cucumbers, which were to be put into vials hermetically sealed, and let out to warm the air in raw inclement summers"-- so far from being the ridiculous thing he thought it was, is (in principle) a typical piece of vital economy. (Voyage to Laputa, V)

+ On the ability of the present to animate the past (and on the arguments against such a view), I shall have much to say in Part V.

* When Earth's history as a self-conscious organism is taken <u>as a whole</u>, the doctrine of the alchemists (e.g. of Basil Valentine), that all minerals derive their powers from the spirit of a living Earth, is not altogether fanciful.

° The account is that of Diogenes Laertius, in his <u>Lives of the Philosophers</u>. See Burnet, <u>Early Greek Philosophy</u>, p. 147.



Long section of a river



Cross sections of the same river

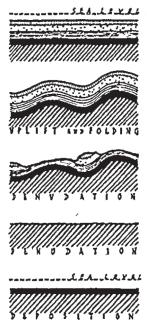
the process of destroying and remaking strata brought to a standstill? As the sands run out if the hourglass is not reversed from time to time, so the 'metabolic' flow of rock slows down and ceases altogether unless there is some restoring or reversing agency capable of setting it going again, by pushing up the land, or lowering the ocean floor, or both. Now there is indeed such an agency, and it involves the remaining layers of the planet. As to the precise nature of the events in the Earth's interior, which cause major periodical movements of the crust, there is no certainty. The famous theory of Joly + supposes that radio-active elements in the substratum, by the ejection of particles, raise the temperature of the surrounding rock. Much of the heat so produced is lost through the oceans, but the continents insulate it till the basalt on which they rest is liquefied. The consequences (too involved to describe here in detail) include the expansion of the globe, the isostatic adjustment of the levels of the light crust as it floats upon the now fluid substratum, and a series of volcanic eruptions. Heat is now being lost faster than it is being accumulated, the globe shrinks as it cools, and the continents are uplifted. The cycle of heating and cooling is ready to start again.

According to other authorities, the periodical folding and uplifting of the crust is probably due, not to alternate heating and cooling of the globe (with alternate swelling and shrinking), but to its steady cooling and shrinking. The adjustment of the crust to a smaller core involves the sinking of the ocean floor and a squeezing and crumpling of the continents, particularly along their edges: hence the Andes, the Rockies, and the Himalayas. Such adjustments (which, by restoring a profile to the face of the planet, renew the process of denudation and deposition) are less gradual than revolutionary: the tendency is for an age of little change to be followed by an age of violent geological activity. * Some find evidence for about four such cataclysms in the course of Earth's history, occurring at more or less regular intervals of the order of 200 million years. ×

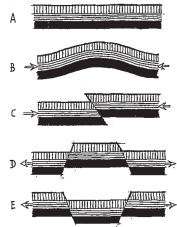
The main pattern, at all events, is clear enough. Whether by alternate expansion and contraction or by contraction alone, the body of the Earth rhythmically restores the life of the surface. The planet has a pulse, upon which the faster and shallower pulses of Life and of Humanity's civilizations ultimately depend --- the pulse, that is to say, of the living whole. There is plenty to show that, as Matthew Arnold puts it, we all

"share the fruitful stir Down in our mother earth's miraculous womb!"

The relatively long and stagnant epochs of swampy low-lying land and shallow waters see the elaboration of forms (such as the luxuriant vegetation of the coal measures) adapted to such conditions; and the relatively brief and progressive epochs of elevated land set new and rigorous standards for organisms to attain, if they are not to perish. Times of geological change are times of quickening. It may well have been the drying up of the rivers during the Silurian and the Devonian age which forced the vertebrates to leave the water for the land. Certainly periods of increasing aridity and glaciation favoured the survival of creatures which could maintain a constant internal temperature. Much later on, it was perhaps the aridity of the Miocene and the Pliocene ages which, by reducing the forests, forced our own anthropoid ancestors from the trees Page 196



+ J. Joly, <u>Radioactivity and Geology</u> (particularly Chapter VIII), and <u>The Surface</u> <u>History of the Earth</u>, H. Jeffreys and others have criticized Joly's theory.



When the planet shrinks, the crust is compressed, and folds (B) and faults (C) develop. Block mountains (D) and rift valleys (E) are formed when the crust is in tension.

* See e.g., H. Jeffreys, <u>The Earth: Its</u> <u>Origin, History, and Physical Constitu-</u> <u>tion;</u> Charles Schuchert's contribution 'The Earth's Changing Surface', in <u>The Evolution</u> <u>of the Earth and its Inhabitants</u>, pp. 70 ff.; and J. W. Gregory, <u>Geology of Today</u>, pp. 144 ff.

It has also been suggested that the crumpling of the crust arises from (a) change in the planet's shape due to a slowing-down of her speed of rotation, or to a periodical planetary wobble, (b) continental drift (Argand), and (c) convection currents in the substratum. (Holmes)

 \times See A. Holmes, <u>The Age of the Earth</u>, pp. 46 ff. Holmes finds, in addition to the periodicity of 200 million years, a subsidiary rhythm whose period is about 30 million years.

to the ground, thus setting the future course of human evolution (and incidentally making possible my present consciousness of the process that thus unites the Earth's interior and the writing of this sentence). In short, it is impossible to do justice to Life as a historical phenomenon without passing from the plane of Life to the plane of the living planet.

Thanks, then, to the action of the interior, the planet arrives at self-consciousness, and is able to

"see the revolution of the times Make mountains level, and the continent (Weary of solid firmness) melt itself Into the sea! and, other times, to see The beachy girdle of the ocean Too wide for Neptune's hips ..." ×

Of the other factors linking the interior and the crust, I need only mention three. First, there is the sorting, as if in a furnace, of Earth's original material. Differentiation into layers of decreasing density, from the ironnickel barysphere to the granitic scum, was the first step towards the planet's maturity. Later, the cooling surface carried on in its own fashion the work of the hot interior, grinding as if in a mill the primary rocks, sifting their constituents, and depositing them in well-marked seams. The joint result is Earth's organization, out of the primeval undifferentiated mass, into a stratified body capable of life. And now, to add to her vitality, the planet can draw on stores of minerals of all kinds, sufficiently concentrated to be of real use. + Second, the interior, having prepared for life, does not cease to support it: for example, the atmosphere's carbon-dioxide, which is essential to the living, is supplemented by carbondioxide from volcanoes and mineral springs. (Schuchert considers that if volcanism ceased life would become impossible) ° Third, there is the effect of gravity, by virtue of which the barysphere exercises a subtle but rigorous control over the biosphere's development. The range of sizes which are practicable for organisms of the various types, the proportions which their muscular and skeletal equipment bear to the rest of the body, and the modes of travel that they have adopted, are adjusted to the barysphere's pull. \otimes A less massive planet would wake to a very different sort of life, and experience a very different history.

6. THE COMMUNITY OF EARTH-SPHERES.

With the exception of the biosphere, the planetary spheres are, according to common sense, utterly lifeless in themselves, however alive they may be in the whole. Is it not a curious creature which has, tied to its solitary living organ, such cumbersome dead ones? Who shall deliver me (the planet might well complain) from the body of this death?

First, let me say once more that life is no recondite essence pervading some bodies and not others: it is a transaction <u>between</u> bodies rather than a state of affairs <u>within</u> each of them. * Self-contained life is a contradiction in terms. Earth's life can no more be parcelled out amongst her spheres than the credit for the performance of a steam engine can be apportioned to boiler, piston, and governor. Amputate my greater organ the planetary core, or the stratosphere, and I die; this life I live, these thoughts I think, this sentence I write, belong as truly to the outer zones

The large waves represent major revolutions in Earth's history; the smaller ones, minor revolutions. (Based on Holmes' diagram)

× <u>II Henry IV</u>, III. 1.



The approximate density of some of the planet's principal layers. Aristotle's teaching that each 'element' has its proper region, and that heavy bodies naturally move inwards, becoming massed near the Earth's centre, is on the whole true. + It has often been remarked that civilization does not thrive in regions of primary or igneous rock --- i.e., in imperfectly stratified regions.

 $^{\circ}$ The Evolution of the Earth and its Inhabitants, p. 52. A great deal of the CO₂ that was locked up in coal and mineral oil has now been made available to Life again by man. Cf. R. L. Sherlock, <u>Man's Influence</u> on the Earth, pp. 210 ff.

Scf. Julian Huxley's contribution to <u>Sci-ence in the Changing World</u>, (Ed. Adams), pp. 116 ff.

* The development of the planet tends to be centrifugal, involving each geosphere in turn. Beginning with the molecules of the crust, it goes on to primitive cells in the water, advanced animals on the land, and men in the air. There is also a reverse movement: many organisms sort out and deposit minerals; animals return to the sea permanently, and men less permanently, in mass annual migrations; scientists probe the planet's interior by means of gravimeters, magnetometers, and artificial earthquakes. All such centripetal and centrifugal movements are functions of a single living thing; but we take them piecemeal, just as an incompetent physician treats diseased parts and their symptoms instead of the whole man. What we need is something like Milton's vision of an organic Earth. ---

"Of elements,

The grosser feeds the purer; Earth the Sea; Earth and the Sea feed Air; the Air, those Fires Ethereal..."

Paradise Lost, V.

of my total body as to the inner ones.

Moreover common sense is wrong as to the facts. By an astonishing act of wilful blindness, or (at best) an error of abstraction, innumerable signs of life are ignored. As the ship is not itself without the bridge and the captain, so the sea is not itself without the ship --- that most significant specimen of marine life. An objective estimate of the ocean cannot ignore the liner and the submarine, the gyro-compass and the Admiralty chart, the Challenger and her sounding-gear; for these are not less relevant to the ocean's nature than the nervous system is relevant to the man, or the flower to the plant. The radio-sonde or the observation-balloon (a sense-organ if ever there was one) high in the stratosphere, is no intruder there, but in its element, as every detail of its structure proclaims. The radar beam, keeping track of a pinhead of dust scores of miles above the ground, ° is a fact which no serious student of these upper regions can afford to ignore. Indeed, to say that the programmes of the radio waves reflected from the ionosphere do not come to us from there, or that Sir Edward Appleton is unconnected with the layer that bears his name, or that seismographs (and even Jules Verne) × are irrelevant to the planet's interior, is evidently absurd. Yet it is just this absurdity that we are always committing, whenever we refuse to consider an object till every well-developed feature has been cut away. What we contemplate is not the real object at all, but the product of our intellectual butchery.

Nor can transactions between the Earth-spheres be described as purely physical. At this level also there is true sociality. Is not the blue sky (with its unending cloud-processions, sunsets and sunrises, auroras and rainbows and lightnings) of immense interest to Life, and an inexhaustible source of inspiration? Do we not "count the clouds of the South-west with a lover's blood"? + Do we not find solace in the company of the sea; never resting from its "priest-like task" and discover in 'thoughtless' nature everywhere "thoughts that do often lie too deep for tears"? • Great rivers and waterfalls, distant mountains seen from the plains, the plains seen from the mountains, deserts, snowfields --- do not these make Life what she really <u>is</u>, as experience? Certainly Life is no hermit, curled up and dreaming in a planetary cell, but by nature and habit social.

And it is not true to say (as common sense does say) that all the sociableness is on one side. It takes two to make a geosphere --- two or more. The Greek myth, dividing the dominions of Cronus (himself the son of Uranus and Ge, of Heaven and Earth) amongst his sons Hades, Poseidon, and Zeus, recognizes the world as a true society of elemental and concentric spheres; while we, who implement that same society by means of our inventions, have forgotten its existence. To be companionable is to have companionship, "for none of us liveth to himself," whether as a man or as Life. As Chapter III argued at length, awareness is the most infectious condition in the world: a little of this virus goes a very long way, transforming the vastest bulk without suffering any diminution. Inevitably Life, merely by being herself, creates her own company. This is not an esoteric doctrine, but one of the many truths that we are too clever to notice. Let me give a commonplace example. Every map is a stratosphere-eye view (or troposphere-eye view, or some other eye's view) and would mean nothing to us if that organ were absolutely nonAdaptation is two-sided, but (in spite of Henderson) we go on ignoring the fitness of the environment. The ocean is adapted to the ship, the air to the 'plane, the earth to the mine. Fechner points out the perfect adaptation of the pond to the water-lily, and of the mountain to the alpine plant. The fact is that the pond and the flower, the ocean and the vessel, are, apart from each other, 'not all there'.

° Dr A. C. B. Lowell described some of the achievements of radar-astronomy to the British Association conference, Aug. 29, 1947, and, in particular, the tracking in daylight of meteor showers: it was found that what is for us a shooting star may be less than a millimetre across.

× The fascination for the child of romances like Jules Verne's Journey to the Centre of the Earth, as well as of fossils, crystals, and minerals generally, suggests that what Jung calls "the ohthonic portion of the mind" is here involved. See Jung, <u>Contributions to</u> <u>Analytical Psychology</u>, p. 118, also Joanna Field, <u>Experiment in Leisure</u>.

+ Meredith, <u>The Egoist</u>, XXVI. Cf. <u>Richard</u> <u>Feverel</u>, XLII.

• It is noteworthy that Wordsworth of all poets the most in love with Earth's larger aspects, is well aware that the mind in them is not other than the mind in man, and that they are, in part, his own creation; nevertheless (or rather, because of this) they are the true companions of his soul's life. He enjoys the presence of a being "Whose dwelling is the light of setting suns,

And the round ocean and the living air, And the blue sky, and in the mind of man:"

And he is the lover of all that we behold From this green earth; of all the mighty world

Of eye, and ear, --- both what they half create,

And what perceive..." ('Tintern Abbey')

The Vedic gods, the kami and shin of the Far East, as well as the divinities of Greece and Rome, include in their hierarchies gods of air and earth and sea. More recently, there are the elementals of Paracelsus --- gnomes (earth), nymphs (water), sylphs (air), and salamanders (fire) --- derived from the elements which the Greeks regarded not only as alive, but as divine. (The word for element (Stoicheion) came to mean daemon). St Paul derides these elements, calling them weak and beggarly, but he admits other members of the cosmic hierarchy --- Archontes, Principalities, and Powers. See: Gal. IV. 3, 9; Col. II. 8, 20. The sage, according to Huai Nan Hung Lieh, "is able to fly to and fro between the firmament above and the waters below in perfect harmony with the Tao."

existent. Life, and Humanity within Life, are self-conscious; they look at themselves; they put themselves in a position to look at themselves; they retire to the place where they <u>are</u> themselves in others. 'Such' (they say in effect) 'we are to that observer and to that observer', and they speak with full authority: nobody doubts that England is precisely the shape the map reveals. The travelling observers whose help I invoke in this book, are neither superfluous nor fictional, but indispensable and real concomitants of self-conscious life. + We progress by learning to look at ourselves objectively, and this we can only do by animating, and being animated by, our environment.

But the question at issue is now the quality rather than the fact of these large-scale social relationships. Their quality is suprahuman. "I will lift up mine eyes unto the hills, from whence cometh my help" --the Psalmist finds a new level. Who, having once found consolation and delight in the presence of elemental nature, needs argument to prove that here is a more exalted, sublimer region? So far from life on this plane being merely physical, or barely psychical, it is in fact a much higher order of psycho-physical functioning than normally we enjoy. And (as in so much social intercourse) the appeal is in the contrast. It is the massive inertness, the impersonality, the permanence, and indeed the 'lifenessness', of the rest of the Earth which is for Life so tremendous: in her companions are found qualities utterly unlike her own --- hence the value of the companionship. Of course, in the process of enjoying this contrast, Life destroys it; 'objective' and 'subjective' attributes circulate, and Life enlivens, willy-nilly, everything she touches. But the contrast is continually renewed. This is where science and common sense come in to do their lethal but necessary work, destroying the life for the sake of its never-ceasing resurrection. For life that is only living is dead. *

When I use the term <u>suprahuman</u>, I do not mean to imply that exalted types of moral behaviour, and fine aesthetic standards, are invariably present at the higher levels. Indeed, as I shall argue later on, there is a most important sense in which the world gets worse as well as better, and the capacity for evil increases with the capacity for good, as we rise in the hierarchical scale. Here it is enough to note that the social life of the planetary spheres is far from being ideally peaceful. Life and Earth are no exceptions to the rule that sociality includes strife, and that the unity of the whole is (up to a certain point) served by the disunity of the parts. In fact, there are special reasons why Life should now be at variance with her neighbours --- in the past century Life has made certain remarkable advances in self-consciousness, and these have necessarily involved the increasing animation (in part hostile) of other geospheres, notably the atmosphere: self-consciousness means opposition, and is not to be had for nothing. Fifty years ago, such an assertion would have been easy to dismiss as one more instance of how a theory, pushed too far, can lead to the wildest extravagances; but today that particular criticism loses much of its point, seeing that one of the main preoccupations of our age is how to protect ourselves from the geosphere we have animated.. It is no mere coincidence that the age of Darwin and Weismann and Bergson should also be the age of Glaisher and the brothers Wright and Bleriot. Life becoming self-conscious is Life becoming air-minded. Air forces

+ The Temptation furnishes an example of this kind of 'observational realism' --- the Devil (a very efficient travelling observer) takes Jesus up into a high mountain and shows him all the world in a moment of time. When we look at maps we are much less conscious of where we are. On the other hand, we have our air-surveys. Again, it is the mark of the present age that it realizes physically what earlier ages realized psychically; the task of the immediate future is to combine these two -- the past insight and the present performance. What we have yet to realize is the full implication of the fact that "We cannot find out what the world looks like from a place where there is nobody, because if we go to look there will be somebody there." (Bertrand Russell, Outline of Philosophy, p. 164). We are not there in any mysterious and ghostly fashion, but as our concrete social equals, whether men, species, or geospheres. Chaucer (in The House of Fame), though fully recognizing that the wider view of Earth implies ascent, cannot decide this point as to who and what ascends. The eagle takes him to such a height that the world "No more semed than a prikke," and he beholds all "the eyrish bestes". Thus

"a thought may flee so hye, With fetheres of Philosophye, to passen everich element," but the thinker adds ---"I woot wel I am here; But wher in body or in gost I noot, y-wis; but god, thou wost!" In his poem 'Clouds', Rupert Brooke has a description of the dead riding the calm mid-heaven, and watching events below. There is a real sense in which the living (at any rate) do just this. Cf. Olaf Stapledon, <u>Death into Life</u>, pp. 27 ff.

* Among recent writers, John Cowper Powys (<u>In Defence of Sensuality, A Phi-</u> <u>losophy of Solitude, etc.</u>) insists upon the importance of contemplating inanimate nature.

Fear of 'air power' is no new thing. According to Strabo, certain Celts told Alexander the Great that they were afraid of nothing, except that the sky would fall upon their heads. The early Christians certainly stood in awe of "the prince of the power of the air (Eph. II. 2), and St Athanasius wrote: "The air is the sphere of the devil, the enemy of our race... But the Lord came to overthrow the devil and to purify the air and to make 'a way' for us up to heaven ... He cleansed the air from all the evil influences of the enemy." The Incarnation of the Word of God, IV. 25. It is the selfsame 'air power' which bedevilled our ancestors and bedevils us, only for us it wears a more physical aspect. Cf. Aldous and air power, air attack and air defence --- the new vocabulary tells its own story, the story of a biosphere at once attracted and repelled by its encircling companion, loving yet hating it, and mortally afraid of what it can do. Only too evident are processes of projection and reflection that link them: on the one hand, artificial rain, sowing and pest-control by air, radio, air travel, air surveys; on the other, long-range shells, bombing planes, flying bombs, poison gas, and still more fearful aerial weapons in the making. The prince of the power of the air is no longer a merely fabulous monster. It is true, of course, that we only have ourselves to blame, and there is no necessity for manufacturers of armaments to supply both geospheres so impartially, or rather with the balance in favour of the enemy. But war has a way of being like that. It only takes one to make a quarrel. A man out for a fight will not fail to create really formidable enemies, and around a frightened man or geosphere every kind of peril --- all of them genuine --- will spring to malevolent life. That the air, which is the very breath of Life, should thus become Life's chief adversary may seem strange, but at every level it is ourselves (that part of ourselves which we are due to recognize, but dare not or will not) which we arm against ourselves. Our disease, no doubt, is 'psychological'; but so, ultimately, are they all. And the prognosis is none the less grave for calling the complaint (what, in fact, it is) an imaginary one. Imagination creates. \oplus A.E's prophecy ° concerning "the empire of the air" and its "aerial cruisers" is not far from fulfilment: "Their crews were apart from earth-dwelling races, made distinct by the ecstasy of the high air they breathed, by a culture and poetry of their own fully intelligible only to the air-dwellers. Lifted up by pride and united by a spirit which seemed almost a new manifestation of cosmic consciousness ..." Having sown the wind, we reap the whirlwind. Mr C. S. Lewis × wonders whether all the things which have appeared as mythology on earth have not perhaps appeared in other worlds as realities. I say that very many of them have, thanks to science, already come to alarming actuality in this world. Prospero's magic, which "twixt the green sea and the azur'd vault set roaring war" + was no idle boast; only its operation was delayed till our time. Goethe's airy beings; inhabiting the "high ancestral spaces", * and all the atmospheric demons of Marcellus Palingenius † have for us come true.

Life's current difficulties arise out of social relationships; nor is this to be wondered at, seeing that her nature is social through and through. The biosphere's physical constitution is such that the whole of it interpenetrates neighbouring geospheres, living in them no less than alongside them --- here indeed the mutual immanence of individuals-in-society finds vividly appropriate expression. What is Life without air and water and soil, not as so much passive environment, but as partners in a ceaseless and multiform projective-reflective process? Consider, for example, how the biosphere flourishes by means of such continual action upon the lithosphere as the cultivation of the soil (just as, at another social level, one man cultivates another, and profits thereby), by mining, by building, by applying all manner of stimuli to evoke the wished-for response. But here again all does not go smoothly, and social relationships deteriorate. The misused and overworked soil refuses to support Life as it did: in fact, it is a question whether the threat from below is not even more serious than the threat from above. • Not only the atmos-

Huxley, Ape and Essence, p. 81, on "...the Prince of the Powers of the Air --- Spitfire and Stuka, Beelzebub and Azazel ... " Dismissing Walpurgis-night as superstition, we celebrate it all the year round. It may be objected that, if the atmosphere is our enemy, it is odd that our politicians and newspapers (usually so good at discovering menaces) should overlook the fact. To which I reply that (1) war between States is no less real for being part of a larger war; (2) the fear of air attack is probably greater than the fear of attack by other nations as such, on land and sea, for the atmosphere wages a new kind of war --- more impersonal, indiscriminate, and lethal than the invasion which follows it; (3) if we do not yet realize that it is the atmosphere which wins wars nowadays, at least it is clear that none of the belligerent States really wins --- the 'winner' is the one that loses least; (4) there is a conviction, more widespread than at other times, that war is fratricide and Humanity is one, but this unity implies or demands a new 'enemy' at a higher integral level; (5) the future may well bring out further the growing distinction between (international) air power and (international) land power. An international air-force dominating the world, (as forecast in H. G. Wells' The Shape of Things to Come) and completing the victory of the atmosphere, is not wildly improbable. \oplus "Those viewless beings Whose mansion is the smallest particle Of the impassive atmosphere Think, feel, and live like man." --- Shelley's lines are not less true because the facts they describe are a product of the imagination. ('Queen Mab', II). Cf. Epinomis, 984-5, where the writer, having described the star-gods, places "next below these, the divine spirits, and air-born race, holding the third and middle situation, cause of interpretation, which we must surely honour with prayers for the sake of an auspicious journey across... The heaven being filled full of live creatures, they interpret all men and all things both to one another and to the most exalted gods." ° The Interpreters, p. 29. Cf. Wind, Sand and Stars, Night Flight, and Flight to Arras, by the French aviator Antoine de St Exupéry. × Perelandra, p. 49. + The Tempest, V. 1. * Faust, Part I. Sc. 2.

* Namely, Typhurgus the mist -bringer, Aplestus the insatiable, Philokreus the lover of flesh, and Miastor the insatiable.
• Sir John Boyd Orr, Aldous Huxley, and many others have urged that the chances of lasting peace would be greatly increased if nations were to co-operate in meeting this and similar common threats. This is sound psychology --- to end a quarrel, find another, in which the contestants are on the same side. phere, but the lithosphere as well, has declared war upon the biosphere --- to the insatiable demand for toil, and occasional earthquake shocks and, volcanic eruptions, are added the ultimatum that, if Life does not change her ways, large parts of her will die from soil wastage.

Men are still at war with men, families with families, States with States, Humanity with other species; * but while the struggle continues, (sometimes in ameliorated form) at all these levels, it is on the still higher plane of the geospheres that the main engagement is now being fought, and to which our attention is now directed. In the not-distant future, perhaps, H. G. Wells' prophecy will be fulfilled, interplanetary war or threat of war will supervene, and we shall discover that 'our real enemy after all' is some menacing celestial body. Our old bogies and bugbears -- the infuriating man next door, our detestable political opponents, the nation whose brutal aggressiveness is, in our case, firmness, the current ideological monster (whether brown or red, black or blue), the microbe or germ responsible for our ills, the air menace itself -- these or their equivalents are not likely to vanish altogether; but everything suggests that they are capable of subordinating themselves to some newfound devil of still higher integral status, such as the planet Mars. + Confronted by such a common enemy, hostile geospheres might well agree to differ, and Earth become more alive to her unity. This much is certain: to live is to make enemies, and individuality as we know it means differentiation from an environment that is (at least potentially) hostile. Publius Syrus had good reason to say, "Most wretched is the lot of him who has no enemy." When, at the various hierarchical stages, we animate and are animated by our companions, one of the first results is animus, animosity. The signs and symptoms are familiar enough. Growing up is notorious for its awkward age (which is often also a tragic age) when exacerbated self-consciousness goes with fear and dislike of those that make self-consciousness possible; the adolescent's conflicts are at once internal and projected; as a matter of course, his self-hatred and self-love are socially enacted. Young people (and, so it would seem, young nations and young biospheres) have to lose their infant trustful friendliness before regaining it more consciously as adults. I suggest that, on the plane of Life, we are now at that difficult stage when intense sociality accompanies intense unsociability. We can neither live together nor apart, and are buying our self-awareness dearly.

What is the remedy? Here I am concerned with what I am, not with measures for reform --- such proposals as I have to make belong at the end of the book. But already one factor in the cure for geospheric warfare (in so far as a cure is at all possible) is plainly indicated. A planet becoming increasingly aware of itself as a living whole is a planet whose interior strife is being tempered. ° And it is incumbent, not upon some transcendent and inaccessible Earth-mind to arrive at this desirable state of self-knowledge on my behalf, but upon me. It is for me to prove that savage conflict between Earth and her neighbours is not necessary to her full self-consciousness; that the remedy for aerial warfare is not worse than the disease; that the planet's integration does not require that she shall surround herself with implacable enemies, but with no more than the minimum of opposition. This is only a part of the cure, and it is a

* And, of course, the struggles that are going on at the different levels are interdependent: indeed, as Hesiod recognizes, they are in practice one --- "When men follow justice the whole city blooms, the earth bears rich harvests, the children and flocks increase, but to the unjust all nature is hostile." <u>Works and Days</u>.

+ At the end of H. G. Wells' novel, The War of the Worlds, after the Martian invasion has been repelled, the Earth is left in a state of some anxiety --- "We have learned now that we cannot regard this planet as being fenced in and a secure abidingplace for Man; we can never anticipate the unseen good or evil that may come upon us suddenly out of space." On the other hand, the invasion "has done much to promote the conception of the commonweal of mankind." "The ordinary man," says Gilbert Murray (Five Stages of Greek Religion, II) "finds it impossible to love his next-door neighbours except by siding with them against the next-door-but-one?

A recent <u>News Chronicle</u> leader began: "The grim turn of the economic screw? The mystery of Moscow's intentions? What on earth is there to write about except these worn themes? The simple answer is --- <u>there is the earth</u>." (October 5th, 1949).

° It is significant that Gerrard Winstanley (whose pamphlets inspired the Digger Movement of the 17th century) conceived Earth as the basis of human unity and brotherly love. His aim is that "the Poor People's heart" shall be comforted by making "the Earth a Common Treasury, that they may live together united by brotherly love into one spirit, and having a comfortable livelihood in the Community of one Earth their Mother." (See <u>The Digger</u> <u>Movement in the Days of the Commonwealth</u>, Ed. L. H. Berens.) question how far it can be applied. But of this I am sure: no realization in us of Earth's living oneness is wasted, or fails to further that unity. To the extent that we bring to consciousness, not only our common human selfhood and our common vital self hood, but (beyond and including both these) our common telluric selfhood, \times to that extent do we serve the cause of peace on Earth.

But I anticipate. My present task is to deal with further objections to the doctrine that the planet is an intelligent living creature, and to ascertain what kind of life it leads. At least the foregoing remarks are sufficient to show that this self-imposed task is no mere academic exercise, far removed from practical living, but is instead a matter of urgency that concerns every man.

7. THE LIFE ON EARTH AND THE LIFE OF EARTH.

Earth, then, is a living whole, not a number of layers of which only one is alive, while the others minister to its life. But common sense remains unconvinced. In that case, let our mobile observer be called in to give an outsider's opinion.

P. The planet (he says) makes no secret of its life. Everywhere this protean creature may be seen drawing itself up into a head, thrusting out a limb, opening an eyelid, parting lips to speak. Everywhere it is growing elaborately patterned flesh, richly coloured and active and furnished with innumerable organs of sense. It looks at you; it shakes your hand; it speaks to you, and sings "planetary music." ° And, lest there should be any remaining doubt, lest you should think that the lips that you kiss are detached from the main body, this globular creature says to you ---

"I the mouth that is kissed And the breath in the kiss." +

C. You do not understand. When you have been here a little longer you will learn that flowers grow from seeds in the soil, and are not the planet coming to life. The field does not grow, but what is sown in the field. As for the heads and hands and eyes and mouths, they belong to the life <u>on</u> Earth, not to the life <u>of</u> Earth. ϕ

P. I find your method a curious one. Θ You watch this globe for signs of life. It extends a limb. You see that the limb is alive. And at once you mentally amputate it, explaining that only the limb is alive, while the body which put it forth is dead. The 'limb' maybe a cell, or a hand, or Shakespeare, or a bulldozer, or Humanity, or Life --- big or little, mobile or fixed, they all receive the same treatment from you. "We do not record flowers,' said the geographer." \otimes Let the protuberance once show a sign of life, and you say: 'this is not Earth, but something else.' And why? Why, because the planet is a corpse, and has no business to be alive! Can't you see that the reason that your Earth is dead is that you have been at such pains to murder it? "Earth was not Earth until her sons appeared," says Meredith; * you say, "Earth is not Earth until her sons disappear." But in fact the sons are unborn: they are the mother's

× But intellectual assent is not enough: also needed is the ardour of a Richard Jefferies. "The rich blue of the unattainable flower of the sky drew my soul towards it and there it rested, for pure colour is rest of heart." "The great sun burning with light; the strong earth, dear earth; the warm sky; the pure air; the thought of ocean; the inexpressible beauty of all filled me with a rapture, an ecstasy, an inflatus." --- <u>The Story of My Heart</u> is full of such passages.

"With beat of systole and of diastole One grand great life throbs through earth's giant heart,

And mighty waves of single Being roll From nerveless germ to man, for we are part

Of every rook and bird and beast and hill..."

Oscar Wilde, 'Panthea'

Reedbeck's daughter (in Fry's <u>Venus Ob-</u> <u>served</u>) really is "A rose, from the world's rock."

"Earth," it is written in the <u>Kuan Tzu Book</u>, "is the origin of all things on the earth, the tender root of all life." And, 2,000 years later --- "Why,' laments Dr Edkins of his Chinese hearers, 'they have often been asked, should you speak of these things which are dead matter, fashioned from nothing by the hand of God, as living beings? 'And why not?' they have replied. "The sky pours down rain and sunshine, the earth produces corn and grass, we see them in perpetual movement, and we therefore say they are living." J. Estlin Carpenter, <u>Comparative Religion</u>, p. 96.

° In his <u>Defence of Poetry</u>, Shelley calls poetry "this planetary music."

+ Swinburne, 'Hertha'.

"Is not the secret purpose of this sly earth, in urging a pair of lovers, just to make everything leap with ecstasy in them?"

Rilke, <u>Duino Elegies</u>, IX.

φ Thus H. G. Wells: "The planet became a possible habitat for this strange intruder, life." A Short History of the World, LXXI.
2.

 Θ It is, of course, the method of St Paul (Rom. VII. 17) and of Hamlet (V. 2) denying he has wronged Laertes. Indeed it has its uses, but employed unconsciously or unscrupulously, it is prolific of error.

 \otimes <u>The Little Prince</u>, a child's story by Antoine de Saint-Exupéry.

* In the poem, 'Appreciation'.

organs. "The Earth," says the great Fechner, † "is that entire whole of which one's body is but a member; it is that permanent whole of which one's body is but a brief part; it is to one's body what a tree is to a single twig, or a permanent body to a small and perishable organ." The ox-eye daisy is no more <u>planted</u> in the Earth than the ox eye is <u>planted</u> in the ox, sending down nerve-roots into the animal's brain. Your way of growing hair is not Earth's way of growing flowers and grass and trees, but that is no reason for pretending that the planet is old and bald, and wears a green wig.

C. An organ that has broken loose from its body is an odd kind of organ.

P. It has not broken loose. It is not even external, but is embedded deep in the planetary body. Man is not (as Wordsworth \oplus supposed) Earth's inmate or foster-child, any more than your liver is your lodger. And these Earth-organs are firmly rooted --- when they have roots in the Earth-body they are called plants; when the Earth-body has roots in them they are called animals. The fact that the latter can travel up to hundreds of miles an hour in the Earth-body, without uprooting themselves, makes them more efficient organs, not less efficient. Or, if all this is untrue, if only protoplasm is alive in a lifeless environment, then let us have the courage of our convictions, and say that a man is a myth, since he consists of certain lumps of calcium phosphate to which cells are clinging: if Earth is a cheese crawling with mites, or rather an infested skeleton, so, in its turn, is every infesting animal. Fechner calls men fleas, hopping about on an ox which they are convinced is dead, because it does not hop like a flea; they are leaves who regard the oak as the inert arena for their sport; they are the dot of the i dreaming it stands above what it lies within. Men walk about the planet imagining they are cosmic paratroops, but at least they might admit that the vegetation is autochthonous. At least they might listen to the poets and men of vision ° --- "Nothing grows in a spot where there is neither sentient, fibrous, or rational life. The feathers grow upon birds and change every year..... The grass grows in the fields, the leaves upon the trees, and every year these are renewed in great part. So then we may say that the earth has a spirit of growth; that its flesh is the soil, its bones are the successive strata of the rocks which form the mountains, its muscles are the tufa stone, its blood the springs of its waters..." × Leonardo's details may be fantastic, but he is big enough to see the living whole.

C. To see the Earth as a man might see it before the invention of agriculture is not a matter for self-congratulation: when man becomes a sower he has no longer any excuse for imagining that it is the Earth which comes to life in the spring, and dies, or falls asleep, in the winter.

P. The Earth who was, in a pre-agricultural age, "a mother of the spontaneous growth of the soil, of wild beasts and trees and all the life of the mountain" * remained, as the mother of fruits and corn, the central figure in the later religions of the Aegean; and though the Sun (who, as calendar-maker, became increasingly important for the agricultural community) also demanded reverence, he never supplanted the great mother who every year is wedded and made fruitful. Nor is she entirely

† <u>Zend-Avesta</u>, i, 179.

⊕ Wordsworth, in <u>The Prelude</u>, describes the procedure of world dissection as "that false secondary power By which we multiply distinctions, then Deem that our puny boundaries are things That we perceive, and not that we have made."



The bronchial tubes and air passages in man. These are, in effect, Earth-roots in him.

"A bird is rooted in the earth as surely as a tree is." D. H. Lawrence, <u>Fantasia of the</u> <u>Unconscious</u>, XIII. But the notion is a very ancient one: Plato (<u>Phaedo</u>, 109) points out that we do not inhabit Earth's surface, but live inside, like fish in the sea.

° lt is not, however, the business of the poet to maintain the distinctions between the levels of integration, so much as to help us to transcend them; and for this reason the spirit rather than the letter of his utterances is important for this inquiry. Thus when Swinburne's Earth goddess describes part of herself as "Soft hair of the grass, or fair limbs of the tree," we make our own allowances for the fact that her body is of a very different order from the human.

Joy ran, as blood within a living frame..." <u>Prometheus Unbound</u>, I.

* Gilbert Murray, <u>Five Stages of Greek</u> <u>Religion</u>, I. Cf. Dieterich, <u>Muttererde</u>, and Jane E. Harrison, <u>Prolegomena to</u> <u>the Study of Greek Religion</u>, VI; <u>Themis</u>, VI. In later times the Earth Maiden and Mother vanishes only to reappear in new guises, such as "the Divine Wisdom, Sophia, the Divine Truth, Aletheia, the Holy Breath or Spirit, the Pneuma." (Gilbert Murray, <u>Op. cit.</u>, IV)

^{× &}lt;u>Leonardo Da Vinci's Note-books</u>, trans. McCurdy, pp 130, 131. Cf. Shelley's living Earth ---

[&]quot;She within whose stony veins, To the last fibre of the loftiest tree Whose thin leaves trembled in the frozen air,

supplanted even now. It is no mere linguistic museum-piece that men should still speak of 'the fruits of the Earth' and of the desert which blossoms as the rose. Though dimly, it is still recognized that, while her children are growing in her, "She in her children is growing." + And, after all, her seeds are her own, not something imported from Mars or Venus. † Are they not rather particles of a single gigantic Seed, which is Earth herself --- a seed that has grown up into a wonderful spherical Plant, of which man is the flower? Literally he is autochthonous --- sprung from the land itself --- emerging, like the lion and the ounce in Milton, out of the soil:

"The grassy clods now calved; now half appeared The tawny lion, pawing to get free His hinder parts..." \oplus

Profoundly true is Plato's Phoenecian myth, $^{\circ}$ according to which the rulers and soldiers and common people, with all their possessions, were prepared in the Earth, "and when they had been made quite ready, this earth, their mother, sent them up to the surface." Profoundly true also is the myth of Antaeus and Hercules --- when men deny the living Earth they deny their own life, and are in danger of suffering the fate of Antaeus when Hercules detached him from his Mother. × No doubt the denial is far from absolute, and knowledge of the common Earth-life is repressed (in the interests of an exaggerated individualism) and not absent altogether. This level of functioning is liable to emerge into fuller consciousness in curious and partial ways, as in the experience of the dowser. \oplus

C. It is doing man no service to submerge his life in some suprahuman monster's, even when the monster is of his own invention. At best, the <u>Erdgeist</u> is a poetic metaphor; at worst, mystification, superstition, <u>Schwärmerei</u>, bunkum. St Augustine's comments on the Earth-goddess of Varro were (or ought to have been) her obituary notice; "We see one earth, filled with creatures: yet, being a mass of elemental bodies and the world's lowest part, why call they it a goddess? Because it is fruitful? Why then are not men gods that make it so with labour, not with worship? No, the part of the world's soul (say they) 'contained in her, maketh her divine.' Good: as though that soul were not more apparent in man...." •

P. Observe how Augustine amputates men from Earth, and their share of the world's soul from hers --- as if they were not her chief organ, * as if the Saint's derogatory remarks were not hers, but proceeded from the other end of the universe!

C. Perhaps, after all, our disagreement is no more than a misunderstanding, a mere logomachy. If (i) I choose to define the planet as an inanimate globe inhabited by living creatures, and if (ii) you choose to define it as the globe and the creatures lumped together, then naturally we talk at cross-purposes. Of course it follows from definition (ii) that the planet includes its life, and in that sense is alive. I grant, moreover, that the concept of the planet as a comprehensive whole is valid (just as the concept of Asia as a whole, or of the world's poetry as a whole, or of a coral reef as a whole, is valid): such concepts regulate our thinking, and correspond, in some sense, with facts. If now you will grant, in your turn, that according to my definition (i) the planet is dead --- why then, + Meredith, 'Spirit of Earth in Autumn'.

† Arrhenius, in <u>Worlds in the Making</u>, does however seriously suggest that life came to this planet from outside sources --- very simple and very hardy organisms arrived here on meteorites or dust particles, from somewhere in the interstellar spaces.

⊕ Paradise Lost, VII. Cf. Lucretius, <u>De</u> <u>Rerum Natura</u>, V (769-921). For the early Greeks a human mother was a ploughed field, and even now copulation is vulgarly called ploughing, as by Joyce's Mrs Bloom.

° <u>Republic</u>, III. 414.

× A.E. describes a first-hand experience --- "To touch Earth was to feel the influx of power as with one who had touched the mantle of the Lord." <u>The Candle of Vision</u>, p. 113. Like our radios, we need earthing. On the other hand there is the myth of Pirithous and Theseus in the underworld, who found themselves unable to rise from the rock on which they sat. To become fixed at the Earth-level of consciousness is no more desirable than failure to attain that level.

⊕ If the water-diviner owes his power to an ability to achieve 'Earth-consciousness', then presumably we are all potential water-diviners. And one authority at least, Le Vicomte Henry de France (<u>The Modern</u> <u>Dowser</u>, trans. A. H. Bell, p. 20) believes that anyone can train himself to be a dowser. For an opposing view, see Theodore Besterman, <u>Water Divining</u>, p. 168. Cf. A.E., <u>The Interpreters</u>, pp. 148 – 9.

• The City of God, VII. 23.

* An organ which she describes as: "One birth of my bosom; One beam of mine eye; One topmost blossom That scales the sky; Man, equal and one with me, man that is made of me, man that is I." Swinburne, 'Hertha'. Cf. Frank Townshend, Earth, pp. 110, 123 "Can you awaken in yourself the desire to consciously fulfil earth's purpose, letting your own motives die? Can you open your heart to the knowledge of what earth's purpose is? I am part of the earth, And I know it. And everything that I do, I do for the

And everything that I do, I do for the earth,

Even as I now write.

And whatever the earth does to me, or to my work,

Is the same to me; or I and the earth are one."

our differences are settled.

P. It is the mental act implied in your definition which does all the damage, which murders Earth, and creates the immense gulf between us. The difference between (say) Meredith's planet and yours is the difference between a man at his living best and a corpse alive with maggots: both (provided we suitably define our terms) are 'alive' and 'whole'. It is the difference between the person I love and the organs I anatomize, between the thing and the word, between the letter that killeth and the spirit that giveth life. Let us agree upon a formula, you say, and settle our differences. As though a form of words, however magical, could restore to Earth the life which your method of analysis exists to kill. What is needed is the integral vision of the poet, of the observer who does not, when I reach Earth-size, hasten to make out my death-certificate, because he has a rule that nothing larger than a whale can possibly live.

C. What is the truth for the poet as poet may be an example of the pathetic fallacy for him as a thinker.

P. Certainly it may. But it is his opinion as poet, as an expert and specialist witness, that is of real value to this inquiry. + Its peculiar evidential value lies in the fact that the information it gives about the world is obtained in its own way, in relative independence of science and philosophy. And when philosophical and scientific considerations at last begin to point to conclusions upon which the poets have for long insisted --- to the living Earth in particular --- then indeed we should take notice.

8. THE LIFE OF EARTH AS A WHOLE.

C. Then consider the planet as a whole. Life is a series of subtle and unceasing exchanges between an adaptable organism and an inconstant environment --- exchanges whereby the organism's identity is preserved. Now the Earth is innocent of exchanges of such a quality; and neither feeds, ° nor grows, nor reproduces her kind, nor ejects waste matter, nor adjusts her shape to circumstances. Therefore I say she is not alive.

P. All these things the planet does. She feeds on sunlight: it is her staff of life. She feeds on meteors --- millions of them a day --- and there is a theory that she has grown up from small beginnings on such a diet. \times She has reproduced her kind: did she not bear the moon, and is she not already dreaming of spaceships and artificial planetoids that may, in some remote future, set out from her to find a younger sun? * As for waste, Earth has probably lost to the universe quantities of the lighter gasses of her atmosphere, and continues to do so. † And what of the radar fingers that she puts forth to gauge the distance of sun and moon: are they not more useful limbs for being swift, intangible, telescopic?

C. Can it seriously be maintained that this spinning ball gives the impression of being alive? Why, even the ancient Chinese philosopher has to admit its poverty of organs. "Mouths want to eat and eyes want to see: within an appetite, without the manifestation of it," says Wang Ch'ung; Fechner found that, amongst all the objections brought forward against his living Earth, the point upon which all are agreed is that the <u>thing</u> is useless, because it is enough to find the <u>word</u> for it: "the egg-shell instead of the egg." The word insulates against the reality; it may come to mean the exact opposite of the reality. See Lowrie, <u>The Religion of a Scientist</u>, p. 154.

+ Yeats believed that the real pioneers of thought were the poets --- a thesis which Denis Saurat develops in <u>The Gods of</u> <u>the People</u>. Jung writes, "Therein lies the social importance of art; it is constantly at work educating the spirit of the age, since it brings to birth those forms in which the age is most lacking... The artist reaches out to that primordial image in the unconscious which is best fitted to compensate the insufficiency and one-sidedness of the spirit of the age." <u>Contributions to Analytical Psychology</u>, p. 248.

° Many of the ancient Greeks believed that the heavenly bodies needed food. See Chrysippus, fr. 658-661,von Arnim, <u>Stoicorum Veterum Fragmenta</u>.

× According to the famous Planetesimal Hypothesis of Chamberlin and Moulton, the planet began as a small 'knot' of matter, and grew to its present size by collecting large and small fragments --- i.e., by the accretion of planetesimals.

* See, e.g., J. D. Bernal, <u>The World the</u> <u>Flesh and the Devil</u>.

† According to H. Spencer Jones, the planet is now losing hydrogen and helium atoms, but less rapidly than during the earlier stages of her history. See, e.g., his <u>Life</u> <u>in Other Worlds</u>, pp. 87 ff. but "with the soil Earth becomes a body, and soil, speaking basically, has no mouth and eyes... Earth has no mouth and eyes." \oplus

P. Since the days of Wang Ch'ung, the planet has grown (besides the millions of little eyes which, whenever they look at the sun or the planets, are her own) a number of splendid observatory-eyes. And what should a creature that is <u>all</u> mouth want with a feeding-slit after the human pattern? In any case, what do you expect of a living planet, of a creature of such dimensions living its life in such an environment? A sphere furnished with hands and feet and penis, as in some primitive representations of the sun? A bird, trailing a useless pair of eagle's wings; or one of Raphael's angels? If Earth could show a head of golden hair, and pink cheeks, and a row of gleaming white teeth, you would feel compelled to admit her life; yet such fantastically inappropriate organs would in fact do more to prove her dead than living. ϕ Is she less alive for having organs that befit one in her position? Or, if they are not befitting, let us suggest improvements. Is it not plain, once we stop to consider the matter, that if planets, or other beings of that order, are to live at all, this is the way for them to live? Is not Earth, in her form and organization and behaviour, as beautifully adapted to her world as any of her creatures to theirs?

But comparison with other grades of organisms is really beside the point. Earth is alive after her own fashion, not after the fashion of an overgrown mammal. † And the specific nature of planetary life as such is a task for future science. (A beginning has been made by L. T. Henderson, in his famous account of the way in which terrestrial conditions, and the properties of terrestrial matter, favour the emergence of life, and favour it so thoroughly that mere coincidence is out of the question. * Thus the presence of large quantities of water and carbon-dioxide on the planet's surface, the peculiar properties of water (it's specific heat, freezing point, latent heat, expansion before freezing, solvent power, and surface tension), the peculiar properties of carbon-dioxide (particularly its solubility in water), the characteristics of the ocean (such as the number and variety of its chemical constituents, the quantity of its dissolved material, its mobility, constancy of temperature and of composition), the many unique properties of carbon, hydrogen, and oxygen --- all these are favourable to life; they converge upon and indicate life; they set the stage for life and maintain life when it arrives. But while such 'fitness of the environment' amply repays study, it is a matter for surprise only because our analytical method makes it so. To say that the remainder of my body is remarkably adapted to the hand that writes these words, or the remainder of my life to this present activity, is more true than helpful. Multiplying parts is multiplying mystery, and every division we make in the universe leaves a new crop of insoluble problems on our hands. Having once broken the whole, any amount of insistence upon the reciprocal fitness of the fragments will not put them together again, or explain why the jagged edges dovetail so neatly. + Instead of arbitrarily confining Earth's life to one small part of her in space and in time, and then pointing with astonishment to the life-promoting properties of all the rest, let us acknowledge the living whole, in which no part is dead.)

⊕ E. R. Hughes, <u>Chinese Philosophy in</u> <u>Classical Times</u>, pp. 328, 329.

"Nature," says Aristotle, "does nothing at haphazard, nor can she be supposed to look after living beings but to overlook objects so precious as the stars; yet in their case she seems of set purpose, as it were, to have taken away every means whereby they might have propelled themselves, and to have made them as far removed as possible from the creatures which have organs for motion." <u>De Caelo</u>, II.

φ The sarcasm of Bancroft (<u>Two Books of</u> <u>Epigrams</u>, 1639) is fully justified: ---

"Those that make Earth a living monster, whose

Breath moves the Ocean, when it ebbs and flowes;

Whose wartts are rugged hills, whose wrinkles vales,

Whose ribbs are rocks, and bowels minerals.

What will they have so vast a creature eat, With Sea's too salt, and Aire's too windy meat?"

† Fechner, rarely gifted as he was with awareness of the living Earth, weakened his case by mixing poetic but fantastic analogies, between the planet and lesser organisms, with his arguments. For example, having made it clear that human brains and nerves and sense organs <u>are</u> Earth's and that it would be foolish to look for others, he later compares the planet's rounded, transparent and shining seas with the eyes of a man. <u>Zend-Avesta</u>, i. pp. 225 ff.

* <u>The Fitness of the Environment</u>. See pp. 250 ff.

Amiel's advice is worth taking ---- 'We must study, respect, and question what we want to know, instead of massacring it. We must assimilate ourselves to things and surrender ourselves to them; we must open our minds with docility to their influence, and steep ourselves in their spirit and their distinctive form, before we offer violence to them by dissecting them." Journal, 7th April, 1866.

⁺ Cf. Bergson (<u>Creative Evolution</u>, p. 238): "But vital phenomena... open up to us, when we analyse them, the perspective of an analysis passing away to infinity: whence it may be inferred that the manifold causes and elements are here only views of the mind, attempting an ever closer and closer imitation of the operation of nature, while the operation imitated is an indivisible act."

9. THE SOCIAL LIFE OF EARTH.

C. Let it be assumed that Earth lives as a whole. Life, however, is of many grades. And a high-grade life, intelligent and self-conscious, develops only in society. Now what social intercourse does this planet enjoy? Obviously none. It follows that her life is, at best, of an inferior order.

P. On the contrary, Earth is a gregarious being, intensely concerned with her fellow-citizens in "the unquiet republic of the maze of planets." \times She is all the time watching them, ° with great observatory-eyes grown for no other purpose than this, and sending out swift feelers to touch them --- what are the astronomer's radar beams, but a kind of planetary antennae? She is never tired of studying their features and habits, of inquiring into their past and foretelling their future.

C. I observe Mars --I am even mildly interested in Mars -- but I can hardly say that I enjoy the company of this reddish dot in the sky. Perhaps Earth finds more in the planets than I do.

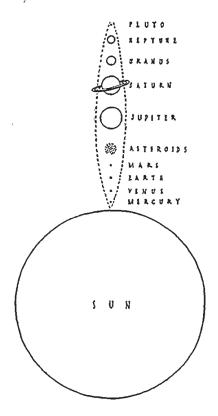
P. Certainly Earth does not see the Mars that the man in the street sees --- a point of light no smaller and no nearer than a star. What she sees is a body of the same order of size as herself, and very much nearer than the nearest of the stars. In other words, Earth (by virtue of her special planetary organs) sees Mars as one man sees another man: she no more supposes that a distant planet is a dot, than a man supposes that his distant friend is a manikin. And so Earth lives among her own kind. A man is geocentric, but Earth is Earth because she is no longer geocentric. She is a social being.

C. But there is no evidence of a real social life, one that provides an environment in which a person may grow up.

P. Astronomy is the mother of the sciences. That is to say, Earth's intellectual growth has been very largely due to her social activities: more than anything else, the presence of companions has wakened her to fuller life. • Without them (and so without accurate means for measuring time, without the seafarer's first guides, without visible evidence of the greatness of the universe, without the most potent of intellectual stimuli) would not the planet still be sunk in her primitive stupor? The long task of understanding her neighbours and finding her true place amongst them has proved in the highest degree educative. Besides the notions which I am here recording, the electric light and the pen and the paper which enable me to do so, are in this sense not the product of the planet in isolation, but arise (however indirectly) from interplanetary society. Nor are the direct benefits of this society confined to the remote past: the planet Mercury has provided confirmation of Einstein's law, and the eclipses of Jupiter's moons show that light travels with a finite speed. * In many respects Earth's science (her study of the other members of the solar system +) leads, while Life's science (the study of terrestrial phenomena, particularly of the geospheres) follows. Helium was discovered first in the sun, then on Earth. "Very many of our theories radiate from it (the Sun), and find in it as in a great physical laboratory their first and most striking application. Thus an adequate theory of motion began

× Prometheus Unbound, IV.

° And listening also: short-wave receivers pick up radiation emitted by sun-spots. The noise increases and decreases with sun-spot activity. Indeed the invention of radio astronomy may yet compare in importance with that of telescope astronomy: already the universe revealed by radio is very different from the visible universe.



The members of the solar system, showing their relative sizes and their order; the distances, of course, are not to scale.

• Professor R. A. Sampson points out that astronomy far outstripped the other sciences in early times because its material was remote, isolated, and not confused (as are terrestrial objects) by many irrelevant factors. Moreover the needs of astronomy gave rise to complex geometry, and directed the development of mathematics in general. See the article on astronomy in The Outline of Modern Knowledge. p. 114; also the chapter, 'What Use is Astronomy?', in J. B. S. Haldane's Possible Worlds. * There is also Signor Landini's proposal to use the moon as a reflector for radio waves, in television transmission. + When Schopenhauer (On the Will in Nature) speaks of celestial bodies playing in the heavens, and exchanging amorous glances, he is not far from stating the truth. For the devotion and enthusiasm of the astronomer are, like his calculations, telluric rather than human.

with the Sun, in Newton's interpretation of the curvilinear motion of the planets about it..... The dark lines that cross the solar spectrum supplied the origin for all the applications of the spectrum to chemistry." \times

C. However valuable this social life may have proved, it remains hopelessly one-sided. The other members of the solar society are mere lay figures.

P. What is certain is that Earth herself, until very recently, was firmly persuaded of their life and their powerful influences, regarding them with mingled reverence and terror; nor has she even now entirely changed her mind ---popular astrologers have a vast following among the less educated in Europe and America, ° while in the East there are millions of responsible and not unintelligent persons who would not think of making an important decision without reference to the planets. True, you may say; but has not this social life at the planetary level now served its purpose, seeing that Earth is at last discovering that it was her own invention? My answer is, firstly, that science may yet prove Earth right, and reveal beyond doubt the life of Mars and perhaps of Venus: meantime, to take it for granted that she alone lives is quite unjustified. Secondly, it would make little difference if, after all, science were to demonstrate that nowhere in the solar system does life exist, except on Earth. For no being --- whether a man or a planet or a god --- can live the life of self-consciousness alone and to himself. A living Earth aware of herself is a planet surrounded by her peers. A self-conscious individual does not need society, so much as constitute it.

C. It must be so; therefore, evidence or no evidence, it is so!

P. The only defect in the evidence is that it is so abundant and so commonplace that it passes quite unnoticed. The fact of this discussion is itself a guarantee that Earth is not alone, for <u>no-one on Earth can think</u> <u>of her</u>: to register the planet is to be where she is, where she comes to planetary status in her companions. In herself, here, she is nothing; in others, there, she is everything. Her self-awareness is their awareness of her, and it is we who, even in this reference to her, are bringing the planets to consciousness. In this sense the astronomer, searching for signs of life in the planets, is himself the sign. *

10. THE EARTH'S BEHAVIOUR.

C. There would be more point in Earth's animation of the solar system, in order to know herself, if there were in the end something worth knowing, some matter for self-congratulation, an inspiring view of planetary behaviour. But Earth's motions are as monotonous as her shape is uninteresting. Is it, in fact, probable that a creature, whose evolutions are no more varied than those of a child's top, should amount to much as a mind? Intelligence is as intelligence does. Obviously she doesn't know what she is doing or where she is going. To put the best possible construction on her behaviour, she moves in a dream. × R. A. Sampson, <u>The Sun</u>, pp. 4 ff. Cf. L. J. Henderson, <u>The Fitness of the Environ-</u> <u>ment</u>, p. 16.

° See Robert Eisler, <u>The Royal Art of</u> <u>Astrology</u>, for the case against astrology, and for much fascinating information on the subject. Rupert Gleadow's <u>Astrology</u> <u>in Everyday Life</u> -- a much slighter work -- defends astrology.

⊗ The hypothesis that Earth is stimulated to develop by a variety of influences, coming in from other parts of the universe more advanced than herself, is put forward in J. E. Boodin's Cosmic Evolution. (Boodin's living Earth, and cosmic religion, are the more significant in that, while they much resemble the doctrines of Fechner, they seemingly owe nothing to him.) The Earth in turn stimulates other heavenly bodies to living responses, and it is through such social interchange that they live at all. In The Breath of Life, John Burroughs has a similar notion, and suggests that the ripening of this planet is due to its long steeping in the sea of sidereal influences. This is, of course, very different from the astrological view, of (for instance) Kepler, who wrote: "But very constant experience (as far as it can be expected in nature) of the stirring up of sublunary things by the conjunction and aspects of the planets, instructed and compelled my unwilling belief."

* "I do not believe for one second that the moon is a dead world spelched off from our globe... The moon is, as it were, the pole of our particular terrestrial <u>volition</u>, in the universe... The moon is an immense magnetic centre. It is quite wrong to say she is a dead snowy world with craters and so on." Superficially, these words are just silly; but what D. H. Lawrence felt about the moon is, in its general intention, by no means lacking in intellectual respectability. See <u>Fantasia of the Unconscious</u>, pp. 136, 139. P. But Earth does know very precisely what she is doing and where she is going. She knows where she was this time yesterday and a century ago, and where she is going to be this time tomorrow and a century hence. What other creature of our experience can claim to be half so well-informed about its own actions? Further, she knows almost as much about the habits of her companions as about her own.

C. Even if I grant your point that the astronomer, as astronomer, is Earth become conscious of her own behaviour, there is still the question of freedom. Earth may know what she is doing, but does she will it? A top miraculously aware of its spinning yet powerless to shift by a hair's breadth from its appointed course, a top whose self-consciousness was a mere epiphenomenon and wholly without effect, would be no better off than an ordinary top. Or rather, foreseeing disaster and unable to act, it would be worse off.

P. To show that Earth is without skill, you point to her supreme skill! Surely she has a genius for self-navigation. She lives in a hell where the alternatives are death by scorching, death by freezing, and both at once. And not only does she avoid the first fate and the second by steering -- with the skill of a perfect helmsman -- a middle course, and the third by rotating like a joint on a spit, but she actually turns the triple threat to her life into the very source and support of her life. Saving her skin is making her skin. By her manoeuvres, as perilous as those of a tight-rope walker, she turns a potential hell into something like an actual heaven, in which you share. And, in return for this remarkable performance, whereby (against all odds) she saves you continually from instant annihilation, you turn her own life against her by denying both her and it. Shaw's Don Juan knows better than this; he recognizes that his "brain is the organ by which Nature strives to understand itself." "What is the use of knowing?" sneers the Devil. And Don Juan replies, "Why, to be able to choose the line of greatest advantage instead of yielding in the direction of least resistance. Does a ship sail to its destination no better than a log drifts nowhither? The philosopher is Nature's pilot." ° And (I would add) the astronomer is Earth's.

C. Science investigates and describes Earth's course, but scarcely sets or intends it. In fact, neither the astronomer nor anyone else feels any sense of responsibility about the behaviour of the planet.

P. The truth is that men have from the earliest times and in many lands felt the gravest responsibility for Earth's conduct, and for the conduct of the sun also? \times Thus the Mexican kings took an oath that they would make the sun shine, the Earth flourish, the clouds give rain, and the rivers flow. That nature's processes are, in one way or another, dependent upon man, is a conviction which he has only recently begun seriously to question. Men still pray; and much of the point of prayer is surely this --- that man should assimilate his will to a higher, or (in other words) should discover new levels of his own will, saving large areas of himself from their seeming automatism. + Wherefore Traherne exhorts us to "continue to uphold the frame of Heaven and Earth in the Soul towards God...... So that though you can build and demolish such worlds as often as you please; yet it infinitely concerneth you faithfully to

Three stages must be distinguished: (1) the view of (say) Plotinus that Earth herself is conscious in her own right (Enneads, IV. iv. 26) and of Bruno that she is one of the "celestial animals, more intellectual than we" (Cena, Dial. III); (2) the present common-sense view that only men as men are (at any rate in this part of the universe) fully conscious; (3) the view which is due to supplant (1) and (2) by combining them, making one consciousness do instead of two. Applying Occam's Razor, ("It is vain to do with more what can be done with fewer"), this third view identifies consciousness on Earth with consciousness by Earth, whenever the object of consciousness is of planetary rank. In other words, what Bosanquet calls "the self-revelation of the universe through particular beings" is of many grades (including the planetary), none of them external to the self. (See Contemporary British Philosophy, Ed. Muirhead, 1st Series, p. 70.)

In his extremely stimulating novel Perelandra, Mr C. S. Lewis makes use of the ancient concept of the planetary archon, or controlling spirit. The archon of Mars "has kept a planet in its orbit for several billions of years", and the archon of Venus has spun its atmosphere and woven its roof of cloud; our own archon has fallen, but I take it he still steers our benighted planet. For me there is much truth in all this; only I say that our archon is not a mysterious and inaccessible spirit, but a psychophysical level of our own personality, realized in one of its aspects by the astronomer and in another by the poet. Here, at any rate, A.E's words are true: "The apprehension of law is but the growth in ourselves of a profounder self-consciousness." The Interpreters, p. 131.

° Man and Superman, III.

× See, for instance, Frazer's <u>Golden Bough</u> (Abridged Edn, 1924) pp. 78 ff., 104, etc. "The priest of Aricia," Fraser concludes after his immense researches, "was one of those sacred kings or human divinities on whose life the welfare of the community and even the course of nature in general are believed to be intimately dependent." (p. 592)

+ The dances of the sect of Spinning Dervishes are said to be in imitation of the movements of the heavenly bodies. (See D. S. Margoliouth, <u>Mohammedanism</u>, p. 211.) In a sense, the Spinning Dervish is one who is not content to leave the astronomical aspect of his own being to take care of itself. continue them, and wisely to repair them...... To uphold them always is very difficult, a work of unspeakable diligence, and an argument of infinite love." *

C. There is an important difference between willingly submitting to the acts of Providence, or to the acts of Earth, and actually willing those acts. Even if my anxiety to align my will with another's knows no bounds, his will and mine remain separate.

P. You speak of will as though it were something in itself apart from its object, and moreover as though that something were a physical commodity that can be parcelled out amongst us. For myself, I believe that the active side of my object, the purposes which it serves in me, the will it evokes in me, are as little mine as its redness is mine; when, therefore, this same object is present, with the same active aspect or will, in another subject, his will and mine with respect to that object are not two wills but one, just as his redness and mine with respect to that object are the same redness. \oplus More briefly, in so far as will exists, it qualifies the object of experience and not the subject, myself in others and not myself in myself. Our wills are no more private than our objects, of which they are an aspect.

C. When I <u>will</u>, I have the experience of something original occurring in me, some act that is relatively independent of its object.

P. What is this act of will, as something in itself? ‡ Attend to your tongue wagging, or your legs walking, or your hand writing, and try to detect this faculty called will. Observe what it is like to get out of bed on a cold morning: you register a familiar sequence of events, most of them unpleasant, which are presented at first rather dimly, perhaps, then more vividly. But there is no peculiar 'power', no magical efficacy, attached to any of these presentations. Will in this context is no more, I suggest, than a certain quality or intensity of attention. "The essential achievement of the will," says William James, "when it is most 'voluntary', is to attend to a difficult object and hold it fast before the mind. The so-doing is the <u>fiat</u>... Effort of attention is thus the essential phenomenon of will." × The one thing needful is that there shall be no inhibiting object, no alternative that claims a share of the attention. As long as I am preoccupied with this present state of warmth and rest, I shall never get out of bed; but when the train of experience which I call 'getting out of bed' has no such rival, there I am, shivering outside! Now in the case of Earth's behaviour there certainly is the necessary attention, and also an almost complete absence of inhibiting alternatives. Earth's willing, like man's, "terminates with the prevalence of the idea... and is absolutely completed when the stable state of the idea is there." ×

C. The hypothesis that Earth's movements are deliberate is an unnecessary one, seeing that the facts are all accounted for by physical science.

P. In the first place, science's description of events in general; and of motion in particular, is (however brilliant) no explanation: they remain utterly mysterious. In the second place, if we wish to probe the mystery that underlies motion, should we not begin with our own first-hand experience, and argue from the known to the unknown? * Is it not a rea-

* <u>Centuries of Meditations</u>, II. 91. "If the Sun and Moon should doubt, They'd immediately go out," says Blake ('Auguries of Innocence'). But it is for <u>us</u> to put their minds at rest, so to speak.

In general, ancient and primitive man has a sense of cosmic responsibility. For example, in Egypt and Babylonia appropriate rituals accompany the rhythm of natural events; and "such rituals are not merely symbolical; they are part and parcel of the cosmic events; they are man's share in these events." "For the life of man and the function of the state are for mythopoeic thought imbedded in nature, and the natural processes are affected by the acts of man no less than man's life depends on his harmonious integration with nature. The experiencing of this unity with the utmost intensity was the greatest good ancient oriental religion could bestow." H. & H. A. Frankfort, Before Philosophy, I. ⊕ The Appendix to Chapter III argues that the activities with which the subject of experience is usually credited really belong to the object-in-the-subject.

‡ "Will" is one of those perfectly commonplace little words whose meaning seems quite clear --- till we ask ourselves what it is. "That my will moves my arm," says Kant in Dreams of a Spirit Seer, "is not more intelligible to me than if somebody said to me that he could stop the moon in its orbit." And, amongst contemporary philosophers, Croce has insisted that no distinction can be drawn between the volition and the act; there is no such thing as will that does not manifest itself in action; and (what is very much to the point here) there is no such thing as action that is not willed. See H. Wildon Carr, The Philosophy of Benedetto Croce, p. 104. × Textbook of Psychology, p. 450; Principles of Psychology, ii. pp. 558 ff. --- "Let it (the idea) once so dominate, let no other ideas succeed in displacing it, and whatever motor effects belong to it by nature will inevitably occur... --- the impelling idea is simply the one which possesses the attention."

"<u>Voi che intendendo il terso ciel movete</u>" ---- "Ye who, by understanding, move the third heaven" --- in these words Dante addresses the angelic orders of the Thrones (<u>Convivio</u>, I. 1), and of the Principalities (Paradiso, VIII). Note that there is here no distinction between attending to and willing. (Intendere = to understand, hear, mean, intend, attend to, indicate, purpose.)

* Herbert Spencer inverts this procedure, making our sense of effort a mere symbol of the real "objective force," which exists "beyond consciousness" and is quite unlike the symbol. For otherwise, he says, we are forced to endow inanimate objects sonable hypothesis that all movement whatsoever is of the same general nature as all the movements (such as those of the hand that writes this) of which I can speak with any authority? Science itself is founded on faith in the uniformity of nature --- the faith whereby I say that what goes on here is similar to what goes on elsewhere, that my world is not private and peculiar but a fair sample of the greater world. Speculation is unavoidable, but the least speculative course is to suppose that there is only one kind of movement (namely, the two-sided kind, having an outer or physical, and an inner or psychical, aspect) and not two kinds, of which the second lacks all trace of an inner or psychical aspect. Surely it is the dogmatic materialist, rather than the panpsychist with his inductive methods, who speculates unnecessarily. + And surely it is upon the materialist that the burden of proof lies, seeing that he ventures far beyond the safe ground of his own two-sided world to a mysterious and indeed 'mystical' one-sided world --- a world miraculously purged of inwardness, a world dead at heart, hollow, all show and no substance. A world, I am inclined to add, that is a sham and an absurdity.

C. Quite the contrary: it is the materialist who refuses to go beyond the evidence. The only view out (or consciousness) of which I can be sure is my own; but I can be sure of countless views in (or bodies) comprising my view out. Out of this given material, science weaves her patterns.

P. No materialist (whatever he may say) can for long treat his fellow men as mere things devoid of feeling and of experience in general; nor, as Fechner points out, does he in fact regard the nightingale singing in the tree and the lion roaring in the desert as mere acoustical machines. But having gone thus far, it is arbitrary to stop where he does, dividing the world into (1) one 'conscious' thing (i.e. himself) of which he has direct knowledge; (2) many 'conscious' things (i.e. other men and some animals) of whose inner aspect he has no direct knowledge; and (3) still more numerous 'unconscious' things (i.e. the remainder of the universe) concerning whose lack of any inner aspect he has no evidence at all. The panpsychist, on the other hand, economizes his hypotheses, and omits the third category. \times

C. The third category arises because the behaviour of certain things -- and this planet is one of them -- indicates that the view out, or 'consciousness' is lacking. The beneficent results of the planet's motion are here beside the point. The creature must be judged by its performance, which has every appearance of being automatic.

P. The ancients did not think so poorly of regularity. Circular motion was to them a sign of the highest intelligence, and an erratic path a mark of inferiority. "Now to prove that the stars, with all this journeying, have intelligence, men should have found sufficient evidence in the fact that the stars do the same thing always, because they have for an unimaginable length of time been doing things determined on from of old, and they do not, by changing their intent this way and that, and doing one thing at one time and another at another, come to wander and change their orbits." * There is more than pious sentiment in this opinion. It is true that, as we ascend the hierarchy up to the human level of organization, there is a tendency for the individual's motions to become with consciousness --- which is obviously absurd! See <u>First Principles</u>, 18, 60, 62. An epistemology of this kind, which starts with the unknown reality outside consciousness, and goes on to describe the known content of consciousness as a relatively unreal nest of symbols or clues, would, if it were consistently followed, end in utter scepticism and indeed in solipsism.

+ It was Fechner's declared intention thus to proceed outwards from the relatively known to the relatively unknown. In <u>Die</u> <u>Drie Motive</u> he writes, "The essential thing is to start from the greatest possible area of empirical observations in the sphere of earthly existence, in order that, by generalizing, broadening and exalting the points of view which are offered here, we may attain a conception of what holds good beyond this in the other, the wider and higher sphere of existence." His method is in some respects reminiscent of the <u>analogia entis</u> of Thomism.

× And, in the last resort, he may omit the second category also, inasmuch as his own many-levelled consciousness includes the consciousness of every other individual. Our task, in fact, is to advance from the common-sense realism of (1), (2), and (3), to the spiritual pluralism of (1) and (2); and from the latter to the spiritual monism of (1). All three stages are necessary to the existence of the hierarchy, but the goal is direct knowledge: the strongest evidence for the living Earth is that man knows himself as the living Earth, in precisely the same way that be knows himself as a living man. If he could realize the whole of himself, he would, in so doing, realize every other self.

* <u>Epinomis</u>, 982. Cf. Plato, <u>Laws</u>, 820 ff. Aristotle, following the doctrines of the Pythagoreans and of Plato, also believed that the circular motion of heavenly bodies indicated divine intelligence. increasingly complex and irregular. Above that point, however, there is a tendency to revert to more regular and rhythmical ways of life. ° Is not the substitution of ordered for erratic conduct a vital part of education? How much first-rate creative work is done without the background of an unvarying routine? What is character but good habits? Have not the unchanging round of monastic life, and the monotonous celebration of the offices of religion, been regarded by many of the best and wisest as uniquely favourable to spiritual growth? Upon what does the numinous quality of ritual chiefly depend, if not upon its sameness from year to year and from century to century? The soul of man, as Plato • knew so well, cries out for the permanence, the repetition, the eternal order, which he finds in the heavens. It is no accident that has, everywhere and at all times, linked the inferior part of man with the chances and changes of ordinary life, and the better part of him with celestial changelessness. In every way, then, his behaviour at Earth-level (that is, in his capacity as a heavenly body) is just what we should expect.

To practical common sense, repetition is not so attractive, but at least it is plain that regular habits, when your life hangs on them, are no evidence of stupidity: it is too much to expect Earth to wander suicidally, just to show that she is not the victim of her own habits. Erratic or irregular motions remain indispensable to her life, and she has them in abundance; but they are contained. Earth is what she is because of the immense variety of behaviour-patterns that go to build her, but she is no more obliged to imitate any of them than a man is obliged to mark time to his heart-beats. And in any case her behaviour as a unit, repetitious though it is, does not lack subtlety. Her orbit is not circular but elliptical --- and not even elliptical, since the moon causes her to swing from side to side of her path. The tilt of her axis of rotation, to which we owe the seasons, is a further complication. There is the rotation, once in every 26,000 years or so, of the tilt of the axis itself --- hence the precession of the equinoxes. We may also take into account the journey of the sun through sidereal space, by virtue of which the Earth, accompanying the sun, draws a coiled line about its path. It must be remembered that, until we make due allowances for our position, we are prejudiced and incompetent observers. An observant flea on its host's sleeve would naturally suppose that sleeve to be the one fixture in a curiously mobile universe. Similarly, to a watcher on one of Jupiter's moons, or on the planet of another star altogether, Earth's behaviour would have all the intricacy of a ballet-dancer's --- and remember that the observer is always right. To her equals and companions, Earth is a planet, a wanderer. When, seeing her through their eyes, and on a sufficiently small time-scale, we appreciate her motions as a whole (as we appreciate a piece of music), do they not have some of the beautiful difference-in-unity or complex rhythm of a true work of art?

° Culminating (it may be supposed) in the perfect stillness of "the Father of lights, with whom can be no variation, neither shadow that is cast by turning." James, I. 17. (R.V.)

• Every one of us, he says, "is in love with the eternal." And in a famous passage he describes the heavenly vision of beauty thus: "It is an everlasting loveliness which neither comes nor goes, which neither flowers nor fades; for such beauty is the same on every hand, the same then as now, here as there, this way as that way, the same to every worshipper as it is to every other." <u>Symposium</u>, 208 –211. Cf. II <u>Cor</u>. V. 1; <u>Heb</u>. XIII. 8.

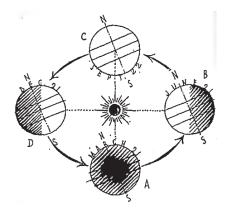
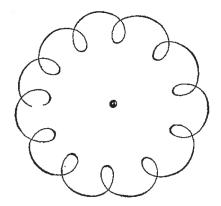


Diagram to show how the seasons depend upon the tilt of the planet's axis. The orbit is here seen in perspective, with A nearest the observer and C furthest from him.

The pull of the moon adds a wobble (or nutation) to the slower wobble associated with the precession of the equinoxes.



The motion of Jupiter with respect to the Earth --- a typical example of behaviour in the society of planets.

11. EARTH AND THE LAWS OF MOTION

P. Is this Earth-dance due to a run of luck lasting many hundreds of millions of years, and involving an inconceivable number of happy ac-Page 212

cidents?

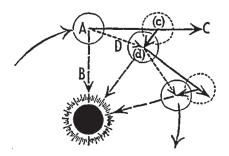
C. Not at all. Why does the Earth go round the sun? Natural laws, in particular the laws of motion and of gravity, or their up-to-date formulations in terms of space-time, geodesics, and so on, leave no alternative. Earth behaves as she does because she cannot violate the order of nature. It is true, of course, that modern physics prefers other terms, and speaks of Earth taking the 'shortest' or 'easiest' route, having regard to the characteristics of the space she is in. But while the classical laws of motion have been modified and re-interpreted, there is no question of the abolition of the concept of physical law -- something of the kind is indispensable -- and certainly there is no question of Earth, or any other heavenly body, being credited with the power of spontaneous motion. °

P. Note, first of all, the contradiction concealed in your terms. Law without freedom or spontaneity, law without the possibility of breaking it, law where obedience is a foregone conclusion --- what kind of law is this? Surely the word becomes meaningless when so used. To say that Earth obeys certain laws is to imply that she is not forced to do so, and could in fact do otherwise. Again, your question (why does the Earth go round the sun?) answers itself, for it is an admission that she has reasons for her behaviour. The question is a very proper one to ask, --- man is not man unless he asks the reason for things, and if the reason <u>for</u> things is not the reason <u>in</u> things, it is only half itself.

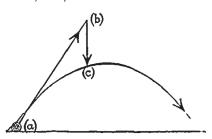
C. These are verbal quibbles. The only convincing evidence would be a demonstration, in scientific fashion, that Earth actually contemplates the possibility of going off at a tangent: and manifestly such a demonstration is impossible.

P. It is both possible and easy. And there are two reasons why it deserves the attention of a scientific age --- first, it is mathematical; second, it is furnished by science itself. × How does the scientist account for and express mathematically the curved path of the planet? By attributing to her two rival and alternating tendencies --- the tendency for her to fall into the sun; and the tendency for her to go off at a tangent, to proceed on her own way regardless of the sun. For purposes of calculation, at least, it is assumed that Earth does actually give way first to one tendency and then to the other, changing her mind (so to say) at such frequent intervals that the result is, instead of a path like a ratchet-wheel (for ever jerking from the centripetal to the centrifugal path and back again), the smooth and ever-renewed compromise of a curve. Now I go one step further than the mathematician, who assimilates only the beginning and the end of his calculation to the physical object, and I say that the whole of his calculation (with its 'artificial' or 'conventional' methods and exigencies) is equally relevant to the physical object, --- in this sense I have more confidence even than the mathematician in mathematics. And this confidence is not arbitrary, for the mathematical scientist is not external to his object, but is that object coming to self-consciousness. It is not as a man that he calculates the orbit of the Earth, but as Earth herself: the assumption that Earth takes first this path, and then that, is not his so much as hers. It is she who entertains the possibility of rushing towards the sun on the one hand, and of flying off at a tangent on the other. It

° For Eddington, however, there is a sense in which the Earth "goes anyhow it likes," and can play truant to any extent --- but our instruments are incapable of registering its vagaries. "The fact that a predictable path through space and time is laid down for the earth is not a genuine restriction on its conduct, but is imposed by the formal scheme in which we draw up our account of its conduct." <u>The Nature of the Physical World</u>. VII.



 \times To put the matter as non-technically as possible, the resultant D of the two forces B (gravity) and C (Earth's inertia) is the same as if they acted by turns. If force B is suspended for a time, the Earth moves to (c); if force C is now suspended for an equal time, the Earth moves to (d). (Actually this is not quite true, but it approaches the truth as the time chosen is reduced.) The same parallelogram law is used to plot the trajectory of a shell ---



If gravity is ignored, the shell gets to (b) after time <u>t</u>. Suppose now it had been dropped from (b), instead of having been fired from (a) --- in that case it would, in the same time <u>t</u>, have fallen to (c). And (c) is its actual position after time <u>t</u>.

The principle is of the greatest technical importance, and (as Bertrand Russell points out in <u>Physics and Experience</u>) it is "the basis of the mathematical methods employed in traditional physics." Nor can the quantum theory (in which it is abandoned) be said to have done it serious damage. is she who reckons first the consequences of the one action, and then the consequences of the other, before arriving at a compromise. And the intermediate steps of her calculation reveal the crucial fact that her awareness of her behaviour involves awareness of her freedom to behave otherwise. This is an exemplification of the law that consciousness and freedom are inseparable. *

C. When Earth discovers the laws that govern her behaviour, they do not forthwith cease to govern. They remain inviolable in fact, however great the freedom they may allow in theory.

P. The belief that certain laws of motion <u>control</u> the Earth and the other heavenly bodies is no more scientific than the belief that gods or angels do so, ϕ and certainly it is much less poetic. All it does is to replace a superior mythology by an inferior, under cover of pseudo-scientific language. (And in fact modern science, wherever it is at all self-critical, is careful to explain that its 'laws' are no more than convenient shorthand descriptions of events, and carry no hint of compulsion.) At least it is possible to form some notion of what a star-directing god or angel might be; but an abstract 'law of motion', capable somehow of riding or driving an insensate Earth round and round the ring of the solar circus --- this is surely the abyss of meaningless superstition, which science has every reason to repudiate. The truth is that science is not concerned with the inside story, with what it is that makes the Earth go round, with inner causes: whether the Earth is free or unfree, a suprahuman intelligence or a clod, is none of science's business. × Science neither knows nor can know anything to contradict the words of Paulsen + --- "It is not the earth's power of attraction nor the law of gravitation which keeps the moon in its course around the earth, but its own sweet will, so to speak. If it should ever leave its orbit and fly off at a tangent, the earth and the law of gravitation would not hinder it. The moon solely obeys its own nature or inclination..... This is universally true: the laws of nature do not compel things to act in a certain way; these laws are the expression of the spontaneous activity of the things." •

C. Then there is a fundamental difference between the man-made laws in society, and the natural laws in the world beyond, inasmuch as the first are instruments of government, whereas the second are nothing of the kind.

P. The distinction is a very important one for science, but it is not by any means fundamental for philosophy. In reality, the two kinds of law are two varieties of the same thing: exactly the same kind of 'artificial' law that holds in society is extended to cover the whole of nature. Thus the exclusion of this law from the scientific world-picture is only the preliminary to its inclusion in the philosophical world-picture. For example, while science frees Earth from the reign of the old compulsive natural law, philosophy shows (as I have just shown) that Earth now voluntarily subjects herself to law, since she is, through science, fully aware of her behaviour, of the order it exemplifies, and of the possibility of erring from that order. Law there still is, but it is transformed from something vague and external to something precise and internal, and it is science itself which thus leads the planet from the old dispensation to * The astronomer rightly concludes concerning the stars, says Plato, 'that if they were soulless, and consequently devoid of reason, they could never have employed with such precision calculations so marvellous." Laws, 967.

φ There are four stages in our thought about Earth: (1) <u>animism</u> --- she is alive apart from us; (2) <u>animatism</u> --- she is an inanimate thing possessed by a spirit (or a company of spirits called laws of motion); (3) <u>mechanism</u> --- she is a machine; (4) <u>neo-animism</u> --- she is alive, and most alive in us.

Shelley's Earth sometimes has marks of the second stage ---

"Thou, Earth, calm empire of a happy soul, Sphere of divinest shapes and harmonies, Beautiful orb! gathering as thou dost roll The love which paves thy path along the skies."

Prometheus Unbound, IV.

× Charles S. Peirce says, "Uniformities are precisely the sort of facts that need to be accounted for..... Law is par excellence the thing that wants a reason." What Peirce should have added was that the law itself is the reason, acting in the individual that conforms to the law.

+ Introduction to Philosophy, p. 216.

• Nevertheless this activity (particularly in the case of heavenly bodies) lends itself to mathematical description and prediction. Surprise is sometimes expressed at the fact that mathematics, which is the a priori construction of this insignificant fragment of the universe called man, should apply so neatly to all the rest. Such surprise proceeds from the fallacy that man is a fixed quantity that neither expands nor contracts with his object. Calculations respecting a planet are planetary: Earth is a mathematician. The mind, Kant tells us, is nature's law-giver. But whose mind? Nature's. Thus Emerson well says of nature and man: "Its laws are the laws of his own mind. Nature then becomes to him the measure of his attainments. So much of nature as he is ignorant of, so much of his own mind does he not yet possess. And, in fine, the ancient precept, 'Know thyself', and the modern precept, 'Study nature', become at last one maxim." 'The American Scholar'

the new, ° from the law of bondage to the law of freedom. Consciously conforming, she is free. × This freedom lies no more in lawlessness than in blind obedience, but in the deliberate acceptance of limitation: it is, as Schelling says, "necessity become conscious." Whatever Wordsworth's reasons were for declaring that it is Duty the Lawgiver, and not force, that preserves the stars from wrong, † the work of science (which includes the waking of stars to self-consciousness and freedom +) bears him out. Thanks to science, Earth is subject to the laws of motion in the same sense that the citizen is subject to the laws of the State; and, after all, her behaviour pays respect to law at least as much as law pays respect to her behaviour. The laws of physics, then, are more than antecedent fact codified: they have real efficacy, not indeed as disguised animating spirits, but as aspects of the self-consciousness of law-abiding beings. The paradox is that, so long as the scientist humbles himself before the facts of nature instead of coercing them, he is nature's law-giver. \otimes If he stoops to conquer, he continues to conquer only by continuing to stoop. In short, just as I am free and my own legislator at the human level only in so far as I know, and endorse, and willingly obey, the laws of the State, so I am free and my own legislator at the planetary level only in so far as I know, and endorse, and willingly obey, the laws that govern my behaviour as Earth.

C. Austin • from the side of jurisprudence, Karl Pearson from the side of science, and the semanticists from the side of language, are all at pains to point out "the immense distinction between the use of the term <u>law</u> in science and its use in jurisprudence. There can be no doubt, says Karl Pearson, ‡ "that the use of the same name for two totally different conceptions has led to a great deal of confusion."

P. I would go still further, and insist that the premature identification of the two kinds of law, besides leading to confusion, is the very death of science. For the underlying unity of the laws of the physical world with the laws of human government can only be put into effect by continuing to insist upon their difference. Thus Karl Pearson, and the other enemies of that unity, are in the long run its best friends. But the philosopher cannot rest at the level of these differences: he must find the deeper unity which they have strengthened and enriched. He must point out, for instance, that in this as in so many other respects our language is ahead of our thinking, and the seeming ambiguity of the word law is aptness itself. After all, to the stranger, or to any observer capable of objectivity, all effective human laws and regulations (down to the most recent and 'artificial') are as real and as natural as Newton's laws of motion; and it is subjective bias unworthy of science which makes any fundamental distinction between them. What is this doctrine -- that the ordering of affairs amongst men is "totally different" from the ordering of affairs amongst all other grades of being -- but a piece of human arrogance? The more sober alternative to this doctrine, namely the view that natural laws are the communal customs at the level concerned, \oplus is one which has been held by a number of recent thinkers, including Ravaisson-Mollien, ø Renouvier, \ddagger Ward, Θ Lossky, \ast and Whitehead. \times It has, moreover, been given new impetus by the success in physics of statistical laws (of Schrödinger and others) which do not imply uniformity of behaviour as

° Cf. Heb. VIII. 10 ff; Jer. XXXI. 33.

× Cf. the doctrine of Spinoza, that false freedom arises out of our ignorance of the causes that determine our action, while true freedom arises out of our knowledge and acceptance of them. See <u>Ethics</u>, III. 2. Schol., V.

† See 'Ode to Duty'.

+ According to Kant, the will is a faculty of conscious conformity to law. We will our action as falling under a rule, and apart from this there is no intelligent will. (Cf. H. J. Paton, <u>Can Reason be Practical</u>?, pp. 10 ff.) Science <u>observes</u> the rules --- in both senses of the word; in particular, Earth, in thus observing the laws of her behaviour, exercises will.

When Atticus, in his criticism of the Aristotelian astronomy, points out that the task of science is not to prescribe laws to nature, but to discover them in nature, he is plainly right as to method. (See A. E. Taylor, <u>Aristotle</u>, pp. 94-5.) Only after the fact, when the discovery has been made, can the scientist afford to see his laws as in any way proceeding from himself.
<u>Lectures on Jurisprudence</u>, 4th Edn, p. 90.

‡ The Grammar of Science, III. 2.Cf. Eddington's discussion, in The Philosophy of Physical Science, of the relation between the two kinds of law. Stanley Cook, in The Rebirth of Christianity (p. 107) has some interesting comments on their false separation. Nor are jurists unaware of the need to bridge the gulf between natural and artificial law; thus the great Blackstone writes, "No human laws are of any validity if contrary to the laws of nature; and such of them as are valid derive all their force and all their authority immediately or immediately from this original." Similar views can be found in the writings of Greek philosophers, Roman jurists, and Christian fathers.

For St Thomas, Law is "an ordinance of Reason for the common good," comprising (1) the Eternal Law or divine Reason revealed in the order of the universe; (2) Natural Law, which is that part of the Eternal Law that rational beings may discover; (3) Human Law, which (in so far as it is just) applies the principles of Natural Law to society; (4) Revealed Law, consisting of the Decalogue and the Gospel. In short, while St Thomas draws the necessary distinctions within the concept of Law, he keeps the unity of the concept. \oplus Pascal saw that "Nature is itself only a first custom, as custom is a second nature." Pensées, 93.

ø <u>De l'Habitude</u>.

‡ Le Personnalisme.

Θ The Realm of Ends.

* The World as an Organic Whole.

Richardson, <u>Spiritual Pluralism</u>, p. 77.

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[×] Process and Reality, etc. See also C. H.

between individuals. We no longer have any excuse for supposing that, while the behaviour of men is free and variable, all other behaviour is rigidly determined. "There are no laws," says Ward, "antecedent to the active individuals who compose the world, no laws determining <u>them</u>, unless we call their own nature a law." \oplus

The fact is that, until law becomes explicit and is consciously applied, it is not yet law. When the laws of the human level were, along with the rest, as yet unexamined and merely natural, their existence was potential rather than actual; they were gradually actualized, as man, codifying them and applying them deliberately to himself, began to take his own nature in hand. But this process is not confined to the human plane. What Justinian and Frederick and Napoleon did for Humanity, Darwin and Weismann did for Life, and Newton did for Earth. Ultimately there is one law, manifesting differently at different levels, coming to actuality at different times, exercised more consciously here and less consciously there. "All human laws are fed by the one divine law," says Heraclitus: the Statute Book and the <u>Principia</u> are really two chapters of one volume. °

12. THE REDEMPTION OF EARTH'S PAST.

First, man attributes to Earth a soul of her own. Then, discovering the law of her behaviour, he deprives her of soul. But in fact nothing is lost: he has taken her soul upon himself. His science, while seeming to deny mind to her and to the universe, is actually the clear assertion, the riper manifestation, of that same mind.

At this point, what is perhaps the most serious of all common-sense objections arises. Consider the two or three thousand million years of Earth's existence before she achieved human civilization --- not to mention Newton himself. Everything happened much the same then as now: her motion was as orderly and as well-timed. Self-consciousness and will have made no sensible difference to her conduct, and evidently they are unnecessary to it. Is not this self-consciousness, since it does no work, superfluous, and perhaps a superfluous hypothesis? ϕ

The full answer belongs in Part IV of this book: here I must confine myself to a very brief and partial one. Note, first, that this objection, though so formidable-looking, is really both self-contradictory and selfanswering. Here is an Earth alive to her inertness, conscious of her unconsciousness! This age-long past of hers --- is she unaware of it? Not at all. Countless volumes of history, geology, palaeontology, countless museum specimens, are eloquent of her interest; moreover, as methods of research improve, more and more of her past comes to consciousness. And what, precisely, is this historical consciousness? Is it a copying of the past, or is it direct realization? It is (unless the epistemology of this book is wholly mistaken) direct realization. But in that case it is far too early to say that any of the planet's past is devoid of consciousness. No epoch is so remote, no occurrence so trivial and so transient, that it is irretrievably lost to mind, and it may well be that "there is nothing cov-

⊕ Op. cit., pp.75-6.

"Indeed," argues Professor W. E. Hocking, "the very notion of law in nature is baffling when we try to exclude mind from nature? Even the less naïve version of natural law as nothing more than descriptive summary suggests that when \underline{x} happens it is a signal for y to happen --- and what can a signal be in an inanimate world? Types of Philosophy, pp. 279, 280. "I am inclined to think," writes Dr Inge, "that the very conception of law implies purpose." Science Religion and Reality, p. 379. A law of nature, says Lotze, is no outside power controlling reality, but either a mere by-law of the intelligence, or an expression of the intrinsic activity of a thing. (Outlines of a Philosophy of Religion, pp. 31-2). Of course the classical distinction between the theory that saves appearances, and the theory that conforms to nature, is indispensable; nevertheless in the last resort all theories, seeing that they also are natural and proceed from the nature they treat of, are at every point relevant to it.

° I do not mean to imply that the laws are immutable, or that in becoming more aware of them we do not change them --- in a sense. As Whitehead rightly says, "Progress consists in modifying the laws of nature" (<u>Adventures of Ideas</u>, III. 8), but (in my view) the modification is really a more complete realization of the law.

Robert Bridges, (<u>The Testament of Beauty</u>, I) is doubtless right; but to show that the acephalous planet's motions were wholly mindless, he would have to show that no astronomer <u>anywhere</u> knew them.

The fact that it is our business to cure Earth of her amnesia is strikingly brought out in the myth of the Simonian Gnostics. Earth becomes Helen, who has forgotten who she is, and lives the life of a whore in Tyre. Simon, having discovered her, gradually brings back her memory and redeems her. The theme, incidentally, is used in a recent play by Mr James Bridie. Cf. Bousset, <u>Hauptprobleme der Gnosis</u> (1907), pp. 13 ff., 332 ff; Gilbert Murray, <u>Five Stages of Greek Religion</u>, IV; also, of course, Anatole France's novel, <u>Thais</u>.

 $[\]varphi$ "Wer but our planet's sphere so peel'd, flay'd of the rind

that wraps its lava and rock, the solar satellite

would keep its notions in God's orrery undisturb'd."

ered, that shall not be revealed; neither hid, that shall not be known." ϕ The only real difficulty arises from a mistaken estimate of consciousness, which is conceived after the likeness of a material substance --- how can so little of it go so far in time and space, or such a pin-point leaven such a lump? But consciousness knows nothing of these physical restrictions, and handles light-years as easily as seconds. As for the time-lag between the deed and the awareness of the deed, I shall argue in a later chapter that some such interval is normal, and indeed indispensable: all awareness is retrospective, or prospective, or both.

But to admit that we are thus able, in principle at least, and by dint of enormous effort, to rescue Earth from her ancient automatism, is to misstate the matter. The task is one of self-realization, in no important way different from the task of bringing into the full light of consciousness our human and animal past. There is a psychological necessity (and here again I must leave the argument till later) that we should cease to repress our Earth-history, that we should come to self-consciousness at this level of our being. * Let me give an example. Miss Joanna Field × describes how she went over her childhood memories to find what it was that gave to them a feeling of peculiar significance. A technique of free association led her to Earth, and Earth's fiery and cataclysmic history, which evoked the old sense of deep importance and satisfaction. Again the glowing harvest fields at sunset lead her to contemplate the planet's fires: "I had felt the earth as a living thing --- and for an instant, had felt as though my own body were the earth."

Oddly enough, it is the irrational violence of common sense's opposition to such notions that confirms their psychological importance. Common sense protests too much. It is an article of blind faith that the planet, now as in past ages, is a mud pie flung into space, a stone, a revolving pellet of filth and fire; and nothing the pellet can say or do is capable of shaking this faith. + The Great Mother has (as the Gnostics taught) fallen very low, and become for us coarse and impure, a soiled and soiling thing, the great untouchable. The 'clean job', well insulated from her --- how desirable it is! "The soil is bare now," says a Victorian poet, "nor can foot feel being shod" --- thus we protect ourselves from "the dearest freshness deep down things." Ø We protect our little bodies against our greater body, our brief histories against our age-long history, our partial and private selves against our completer common self, because such is the tendency of our time. It becomes increasingly needful that we should cease to repress the opposite tendency in ourselves, which would compensate for our one-sided and abnormal individualism.

13. <u>THE FACE OF THE EARTH</u>.

C. One glance at the face of the Earth is enough to show why we should hesitate to admit our identity with her. If this creature really is suprahuman, why is her countenance so infrahuman, or (alternatively) so marred and mutilated? • Even amongst the lowliest organisms we do not look in vain for some formal order, some embodiment of reason in significant and memorable shapes, some hint of symmetry: when an

φ Luke XII. 2.

* Of what may be called the "psychological efficacy" of earth-consciousness, there are innumerable instances, but none, perhaps, more striking than the Mesopotamian incantation by which a man sought to become identical with Heaven and Earth: "I am Heaven, you cannot touch me, I am Earth, you cannot bewitch me!" Thorkild Jacobsen comments: "The man is trying to ward off sorcery from his body, and his attention is centred on a single quality of Heaven and Earth, their sacred inviolability. When he has made himself identical with them, this quality will flow into him..." Before Philosophy, p. 145.

× Experiment in Leisure, passim; particularly, p. 175. Cf. Meredith's poem, 'Earth and a Wedded Woman' ---"They have not struck the roots which meet the fires Beneath, and bind us fast with Earth ..."

Miss Edith Sitwell, in a good deal of her poetry, uses similar imagery. So does Miss Kathleen Raine:

"These bones have known the molten rocks outpoured In transmutation of the solar fires" (<u>The Pythoness and Other Poems</u>, p. 18; see also <u>Stone and Flower</u>, and <u>Living in</u>

<u>Time</u>.)

+ Fechner (Zend-Avesta, ii), having described in glowing terms the planet's livingness, concludes, "I wondered how men's notions could be so perverted as to see in the earth only a dry clod, and to seek for angels apart from earth and stars, or above them in the vacant heaven, and never find them. My view, however, is called fantastic. The earth simply is a globe, and whatever else it is may be found in the glass cases of our museums of natural history." (Lowrie, <u>The Religion of a Scientist</u>, p. 153)

ø These words are from the beautiful sonnet 'God's Grandeur' by Gerard Manley Hopkins. I would add that we do not find this "dearest freshness" by denying putrefaction, and insisting on cremation, or embalming, or a lead coffin to protect us from our Mother. The least we owe her is a corpse for her replenishment, and her beneficent worms raw material.

• Walt Whitman, keenly aware though he is of Earth's life, is also aware of the forbidding and meaningless aspect she wears ---"What is this earth to our affections? (unloving earth, without a throb to answer ours,

Cold earth, the place of graves.)" This is from 'Passage to India'; again, in 'The Song of the Open Road' he writes, "The earth is rude, silent, incomprehensible at first..." object lacks these, and is instead as arbitrarily modelled as a cloud or an ink-stain, there is a strong presumption that it is not alive. The nearest approach to sense that the schoolboy (or the adult, for that matter) can extract from Earth's chaotic geography is an improbable Italian foot kicking an impossible Sicilian football. And the ancients, notwithstanding their geographical ignorance, were hardly more successful --- for instance, an lonian treatise of the sixth century B.C. likens the then-known world to a human body whose head was the Peloponnesus, whose belly was Egypt, whose rectum was the Black Sea; and so on, adding absurdity to absurdity. $^{\circ}$ The planet's features are not features at all. Again, language misleads: the <u>face</u> of the Earth is as mythical as her bowels ---- "the bowels of the harmless earth," as Shakespeare calls them. ×

P. First as to the facts. It is untrue to say that the face of the Earth is chaotic, and her features distributed at random. The randomness is revealed, and emphasized, and offset, by a remarkable regularity. Thus, while the human countenance is moderately systematic, the planetary is a blend of extreme system and lack of system. Nor is it a valid objection to say that lines of latitude and longitude are "merely conventional signs," or an entirely artificial veil that Earth has taken to wearing. In her rapid development during the past three or four centuries, this enveloping network has played a great and increasing part; the time has now come when she can scarcely see herself without it, and she is full of selfportraits that show it clearly.

C. It takes more than a veil to turn a map into a face. And all the efforts of geographers (there have been several valiant attempts) to read order into the shapes of land and sea must be reckoned virtual failures. (It has, for instance, been pointed out that whereas continents taper southwards, oceans taper northward, that whereas the Arctic is a circular sea fringed with land, the Antarctic is a circular land fringed with sea; that there is, in fact, a tendency for land and water to be antipodal. The tetrahedral theory tries, with more ingenuity than success, to account for such peculiarities. + As for the Jeans-Sollas hypothesis of the pear-shaped planet and its deformations, and Wegener's famous continental-drift theory, they do still less to tidy up geography.)

P. All this is true enough. But let us now increase the scale of our object; let us approach it. At once we find that the arbitrary and uninteresting (if not actually ugly) lines of land and sea, of mountain range and river, take on an inexhaustible beauty, and all kinds of significance, and historical importance. There is more in Earth's physiognomy than would appear at a distance. It is hardly necessary for me to emphasize how 'geographical' is the human mind, how autochthonous, how much an affair of soil and climate, of rock and of river. Wordsworth without the Lakes is not Wordsworth, and Earth without Wordsworth is not Earth. The endless variety of Earth's scenery -- no orderly pattern could offer half so much -- is inseparable from Humanity's intellectual and spiritual development (to say nothing of man's biological evolution) and so from Earth's. Thus the long history that makes man and mountain one, finds expression in the love that now reunites them. "I confess," says William McDougall, "that the overwhelming effects of landscape seem to require the postulation of a racial memory for their full explanation." \otimes

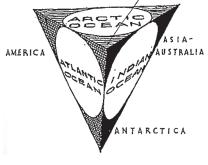
° Cf. Robert Eisler, <u>The Royal Art of</u> <u>Astrology</u>, p. 250. According to Saunier (<u>La Légende des Symboles</u>), there is an esoteric tradition that a continent is a living creature, of which the minerals are its skeleton, the plants its flesh, the animals its nerves, and the men its brain. The continents, in their turn, are the organs of a living Earth.

In the Scandinavian mythology, the world was formed out of the dead body of the giant Ymir: his flesh became earth, his blood the sea, his bones the rocks, his teeth stones, his skull the firmament.

× <u>I Henry IV</u>, I. 3.

"What's the good of Mercator's North Poles and Equators, Tropics, Zones, and Meridian Lines? So the Bellman would cry: and the crew would reply, They are merely conventional signs!" Lewis Carroll, <u>The Hunting of the Snark</u>.

EURAFRIC.A



+ The tetrahadral theory of Lothian Green points out that a shrinking sphere, of which the shell is fairly rigid, tends to collapse into a tetrahedron: the same area of shell then encloses a smaller volume. The shrinking Earth shows this tendency; and the oceans, collecting in the areas nearest the centre of gravity, leave the coigns projecting as continents. This theory, first proposed by' Green in Vestiges of the Molten Globe (1875), has been advocated by a number of authorities, but is now rather out of favour. See, e.g., Gregory, The Making of the Earth, pp. 138 ff. "And how much of the fate of man is not disclosed by the contemplation of the distribution and the structure of the masses of the land, which Edward Süss so aptly designates by his winged word: 'the countenance of the earth'!" Kirchhoff, Man and Earth, p. 6.

Now let us <u>reduce</u> the scale of our object, by retiring to a spot where the round Earth as a whole, half of her shining brightly and the other half in shadow, takes the place of her surface irregularities. Again we have beauty, meaning, shapeliness. Rupert Brooke ° indeed, laments the fact that the human body falls short of the symmetry of the celestial, contrasting the

"mazed fantastic shape, Straggling, irregular, perplexed, embossed,"

of the first with the simple, round, wholeness of the second. The truth is that there exists in man a craving after the bodily form and the behaviour of his telluric self. †

Observe that we have found significant form on a small scale and on a large scale, but lack of it between. How is it that the close view and the distant view are superior to the intermediate view, with its haphazard distribution of countries and continents? Chapter VII suggests an answer. There it was found that the State, or any combination of States short of Humanity, is a mesoform only too liable to usurp the place of the whole, an organ or pseudo-individual only too apt to arrogate to itself the functions of the organisms or individuals which compose it, and the functions of Humanity. In that case, it is not at all surprising that the State, and that assemblage of States which we call a continent, should lack beauty. Like human viscera, they do not rank as wholes, yet are always threatening to do so, and bring ruin upon the true whole. That I should be as unlovely at the political level as at the visceral is, then, in accordance with Spencer's principle ---

> "So every spirit, as it is most pure And hath in it the more of heavenly light, So it the fairer body doth procure" *

14. THE DEATH AND RESURRECTION OF EARTH.

C. A man can love and hate human beings, and live and die for them, but planets -- very understandably -- leave him cold. What is there in these placid globes to stir the heart? Would not a being who preferred their society to the tragic but profoundly rewarding companionship of men be inhuman --- that is to say, a monster?

P. First, let me mention the fact that Earth is less placid than we generally take her to be: there are, to take one instance only, the earthquakes that are apt to shake us out of our unawareness of her. • Secondly (and this is the real point), while it is true that the greater part of our life is, and ought to be, lived at and around the strictly human level, it is equally true that all the tragic-comic events, the emotional stresses, the moral struggles and triumphs, which are manifested there, are the planet's own, not something that has found a home in her. There is a true sense in which every human tear falls from her eyes, in which all our laughter is her laughter, in which all wounds are wounds inflicted on her body. ϕ Shakespeare's Antony addresses the dead Caesar as "thou bleeding piece of earth"; × and when Eve plucked the apple, "Earth," Milton tells us, "felt the wound." + Gifted with the same insight, an American Indian says to

° 'Thoughts on the Shape of the Human Body', <u>Collected Poems</u> (London, 1935), pp. 51, 52. Cf. <u>Epinomjs</u>, 981, on "the divine race of stars, endowed with the fairest body as also with the happiest and best soul." Also <u>Timaeus</u>, 39 E. ff.

† Cf. the myth in the <u>Symposium</u> that human beings were originally globular, but were cut in halves by Zeus; now each spends his time looking for his other half, so that the original roundness may be restored.

* Hymn in Honour of Beauty'.
Cf. <u>Hamlet</u>, I. 3:
"For nature, crescent, does not grow alone In thews and bulk; but, as this temple

waxes.

The inward service of the mind and soul Grows wide withal."

• Jung has an account of how, at the time of a violent earthquake shock, his immediate and instinctive reaction was a certainty that the planet was a gigantic shuddering animal. (Contributions to Analytical Psychology, p. 114) William James, in the San Francisco earthquake, had a similar experience. (Memories and Studies, pp. 209 ff.) Cf. the well-known story of the island that turns out to be the back of a sleeping seamonster. (E.g. Paradise Lost, I. 200ff.) Whitman ('Earth, My Likeness') finds something fierce and liable to burst forth in the planet; and Kepler (loc. cit.) says she is like a bull or an elephant -- slow to anger, but all the more furious when roused.

φ "All wisdom issues from a hole in the earth," writes Kathleen Raine, in her poem
 "The Pythoness'. And indeed these words apply to more than the Delphic Oracle
 --- every human throat is such a hole, from which issue, besides wisdom, groans, shrieks, and cursing.

× Julius Caesar, III. 1.

+ <u>Paradise Lost</u>, IX.

his followers, "'It is a sin to wound or cut, tear up or scratch our common mother by agricultural pursuits.' 'You ask me', said this Indian sage, 'to plough the ground. Shall I take a knife and tear my mother's bosom? You ask me to dig for stone. Shall I dig under her skin for her bones? You ask me to cut grass and hay and sell it and be rich like white men. But how dare I cut off my mother's hair?" ° What he did not realize was that his words were his mother's own. +

C. Though all this life is Earth's, it is hers only as she descends to the plane of her parts, and so ceases to be herself. At her own level the richness has vanished.

P. Each hierarchical level needs all the others in order to be itself. Man is not man unless he is everything else --- unless, in particular, he is Earth. \otimes It is the interfusion of everyday life with elements that belong to the remoter planes of being that make everyday life what it is, and confer upon it all that is valuable. No suprahuman, no human; no suprahumanism, no humanism. Neither the commonplace nor the transcendent is anything without the other. But while they may not be parted, neither may they be confused. Experience at Earth-level has its own unique 'emergent' quality, its own essential contribution to make to the full life. Earth is what we were, what we are, what we shall be. She is a stage of our growth --- a stage which (like all the others) is never wholly transcended and never wholly unattained. In her we become more adult. And indeed these truths are implied whenever we address her as mother: potentially, mother and child are of the same rank, and the child grows up by becoming like the mother. The planet is part of man's maturity. Becoming planetary, he is not less human, but more human. Though it is not as man that he travels round the sun and knows that he does so, his humanity is all the richer on that account. Loyalty to the completer man, not disloyalty to the partial man, prompted John Cowper Powys to write, * "How can we be so narrow-minded in our obstinate anthropological jealousy as to deny any sort of conscious life to the great mother of all the life we know! If the strange calm, that comes to us when we fling our spirit into the elements, brings an indescribable inspiration, felt as much in the city as in the country, why should we think of this inspiration as a cosmic phenomenon, dependent on cosmic consciousness, in place of a planetary phenomenon, dependent on planetary consciousness?"

C. I remain unconvinced. And (to turn your own method of argument against you) the very existence of my doubt is enough to show how justified it is. If, whenever I consider Earth as a whole, I am Earth thinking of herself; and if, whenever this happens, I think of her as an inert ball; why, your own protégé gives the lie to what you say of her!

P. Certainly this is the oddest of all the wonderful ways of Earth. Here is a pair of eyes that she has opened to look at herself, and a pair of lips she has parted to speak of herself --- and to tell me that she is dumb and blind! Here is a creature that uses its wits to prove it has none, like David in the house of Achish. Here is vitality exhausting itself in the effort to show there is no vitality. Your suggestion is that only a creature that is less than human could forget that it is alive; mine is that only a creature that is more than human could remember that it is dead. Lesser beings ° Frazer, Adonis Attis Osiris i. p. 88 ff.

+ "If he aloft for aid Imploring storms, her essence is the spur. His cry to heaven is a cry to her He would evade." Meredith, 'Earth and Man'.

⊗ This is a fact which Dr W. R. Inge overlooks when (in his Philosophy of Plotinus, i. p.211) he considers it not improbable that the heavenly bodies have souls. "Each of our bodies," he writes, "is a world, populated by millions of minute living beings. We are not conscious in them, nor are they conscious of the unitary life of the organism to which they belong. Why should not our planet have a life of its own, thinking thoughts of which we knew nothing?" The mistake here (as I believe) is not the separation of the human plane of consciousness from the telluric, but the assumption that we are confined to the former. It is true that as men we know nothing of Earth's thoughts, or Earth of ours: but Earth is more than Earth, and man more than man. Matthew Arnold's lines, (in 'Religious Isolation'),

"To its own impulse every creature stirs: Live by thy light, and Earth will live by hers."

tell only half the story: Earth's light is one of <u>our</u> wave-lengths.

* <u>A Philosophy of Solitude</u>, pp. 190, -1.To the passage I quote he adds, "So far in the wrong direction have the crowd values moved, that if you told an average modern person that the purpose of your life was a communion between your consciousness and the earth's consciousness, he would think you had simply gone mad."

That human love rests on telluric and cosmic foundations, which it must recognize in order to be fully itself, is suggested by Tennyson's lines to his dead friend, 'What art thou then? I cannot guess; But tho' I seem in star and flower To feel thee some diffusive power, I do not therefore love thee less: My love involves the love before; My love is vaster passion now; Tho' mix'd with God and Nature thou, I seem to love thee more and more.' In Memoriam, CXXX. forget that all-important fact. All of us -- planets, geospheres, species, men, cells -- are stone-dead, but few of us are sufficiently alive to know our condition. This is not a paradox for paradox' sake, but sober truth. In every way Earth's descent into the realm of the inert is the condition of her rising to planetary life. Let me give some illustrations of this descent.°

(i) Earlier in this chapter I stated that Life finds a peculiar and vitalizing delight in contemplating the inanimate aspects of the globe --- the 'dead' are very precious to the 'living', and it is their lack of life that makes their gift to life so valuable. At the level of the globe itself, this preoccupation with the inanimate becomes even more marked. If I may take such poetry as that of Rainer Maria Rilke and Victor Hugo as evidence (and my own more trivial experience strongly supports it), then the life that planets enjoy is profoundly ambivalent, in that it is on the one hand remote, cold, impersonal, serenely detached, and even (in a sense) lifeless, yet on the other hand intensely alive, strung up to a higher pitch of awareness than the normal, less beset with reservations, more intimate. + In the planetary society, as the light of life shines brighter, so the shadow of death darkens: they grow by their increasing contrast, but are still one. Is this mere poetic fantasy? Indeed it is not. Is a man more alive (that is to say, at his best and most generous, serene, free from malice, pettiness, and greed) in the lively daytime company of his fellow-men in the office and city street and club, or in the 'dead' company of the night sky? × Withdrawing himself for a while from men, he draws nearer to them, as he climbs to share the life of the planets --- and goes down to share their death.

(ii) Earth's voluntary dying is unbelievably fruitful. It makes science possible. To despise the common sense that can only perceive a dead planet, and the materialism that kills by dividing the life, is therefore altogether mistaken. Materialism gives immense power: it is a deathmood without which Earth would not be half so alive. Until science resolutely refused to think of heavenly and earthly bodies as living, indivisible wholes, and began thinking of them as collections of dead particles, there was practically no science. * The chemist and the physicist murder to dissect, but the murder is followed by a resurrection in which the corpse, so far from merely reviving, attains to new and unprecedented vitality. For, instance, the chemist, by virtue of his analysis of the living Earth into an assemblage of dead molecules, has enriched her life with hundreds of thousands of new chemical compounds, many of which make valuable contributions to her physiology. It is in her interests that she should be dead to him. Again, the geologist can only investigate a slain Earth. It is to her advantage that he shall overlook her most significant characteristics --- the stratum that sings songs, and blossoms, and makes love, and even geologizes --- and himself, that most revealing of all geological specimens. Such unreason, such blindness to facts, would be unbelievable if there were no powerful underlying reason for it, if materialism were not itself a kind of mystical insight into the heart of reality. Earth must die to live again, and the geologist is one of the priests who preside over the sacrifice. While she was alive and whole and holy, it was impious to meddle with her freely; she was to be revered, not explained away in terms of her particles. Her secularizing and dismemberment

° This descent is, actually, far from complete. The language we use is itself enough to suggest that we are still animists. In a number of languages all nouns have genders; in English, ships and motors, Earth and moon, are feminine, while the sun is occasionally masculine; we curse the weather and swear at the stone that trips us; we say that rain has a purpose, and gas escapes, and rivers run, and lightning strikes; we inquire why the Earth goes round (implying that she has her reasons) and what laws she obey (implying a conscious obedience).

+ Rilke says of the stars: "Angels, angels, penetrating space with their sempiternity of feeling. Our whitest-heatedness would seem congealing

to angels, glowingly pervading space." <u>Later Poems</u>, Trans. Leishman, p. 172). But no extract can do justice to the quality of Rilke's feeling for these 'angels', and its ambivalence.

× Does not the appeal of winter as against summer, of sea as against land, of the desert as against fertile country, and above all of the snow that imposes the sudden unity of the inanimate upon Earth's vital multiplicities, owe its force to our need to return periodically to that condition of common death without which there is no common life?

* St Augustine was a grandfather of the scientific world no less than a Father of the Church, and he serves both when he pours contempt upon the cosmology of Varro (116 - 28 BC). God is the soul of the world (said Varro), and the world is divided into heaven and earth, heaven into air and sky, earth into land and water, --- all four regions being filled with souls. "The space between the highest heaven and the moon he fills with souls ethereal and stars, affirming that they both are and seem celestial gods. Between the moon and the tops of the winds he bestows airy souls, but invisible..." St Augustine, gathering up all this diffused and immanent divinity and concentrating it in one supreme Being and in the soul of man, leaves a secular (and, in the end, a dead) nature, to be handed over in due time to science. (See The City God, VII. 6.)

took more than a millennium. ° It was not enough that early Christianity should sweep away the hosts of gods that inhabited the pagan Earth: they had to be followed centuries later by that vague and derivative life which still clung to her as the symbol of heaven, and as a system of moral lessons and 'signatures'. Only when the last tremor of the Mother's life had been stilled, and the last whiff of the odour of her sanctity had been blown away by the profane spirit of the modern age, was she able to rise, through that same profane spirit, to a new though a less conscious life.

> "She has been slain by the narrow brain But for us who love her she lives again" ×

(iii) Life that is not half death is no life at all. Θ Earth's vitality, no less than all the vitality that flows from her, is metabolic: that is to say, it is the union of an upward process with a downward, of anabolism with katabolism. These opposing tendencies in her have various aspects and manifestations. There is, for instance, the historical alternation of life-mood and death-mood which I have just noted. Again there are the parallel processes whereby the biosphere is continually breaking down to become the neighbouring geospheres, and they are in turn continually building the biosphere. What, in fact, is my life? It is Earth's. But it is not Earth-life per se --- it is my Earth-life for ever disintegrating into the life of my geosphere, my species, my human body, my cells and my molecules (at which point the life vanishes); and it is my Earth-life for ever being recreated from the molecular level, by the same stages in reverse. This is the kind of body, or nest of bodies (each of which is always in the act of turning into the next), that a man must have to be himself. His very life is the demonstration and exemplar of the dying planet. (The many dismemberment myths and cults of the ancient world --- notably those linked with Orpheus, * who was torn to pieces by the Thracian women, and with Osiris, + whose body was cut up by Typhon his brother --- are an earlier expression of the facts. Tezcatlipoca, the chief god of the Aztecs, was (in the guise of a captive youth) divided into fragments and distributed as sacred food. † Christianity teaches the same lesson --- that we must die to live, as the grain of wheat must perish before it becomes fruitful. ⊕

(iv) A further reason why Earth must realize that she is dead is the excellent one that she really is dead --- in herself. There is no need to wait for the arguments of the following chapters to see that, after all, the planet is scarcely more self-supporting or self-contained than Life is or Humanity is. Torn from the body of the universe, Earth is a relic, mere carrion; joined to it, she receives the life of the whole. ϕ If she were to set up on her own as a living creature she would instantly perish. Thus she lives by a practical confession of her lack of life, and a confession of the existence, at a higher level, of a true life-source. Indeed she has every reason to say (as when Shelley's Prometheus reminds her that she is a living spirit): "I dare not speak like life"

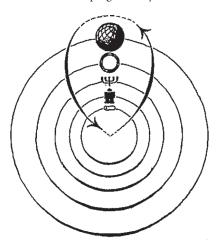
(v) In fact, the law of elsewhereness holds good universally; and life, no matter how exalted its grade, is never here in the self, but always there in others. In claiming an Earth-self, ° I claim nothing for myself, for at every level I am nothing but capacity for my fellows. Earth's life is the bringing of her companions to life --- a work which involves, not merely

° On Christianity's war with the daemons, see T. R. Glover, <u>Jesus in the Experience</u> of <u>Men</u>, pp. 1 ff; H.A.A. Kennedy, <u>St Paul</u> and the <u>Mystery Religions</u>, p. 121, and <u>St</u> <u>Paul and the Last Things</u>, pp. 324 ff. G. K. Chesterton had much to say on this topic: see, e.g., <u>The Everlasting Man</u>.

On the mediaeval inability to conceive of nature or matter except as symbolical of some profounder realm, see Etienne Gilson, <u>La Philosophie au Moyen Age</u>, pp.94 ff, and <u>Etudes de Philosophie Medievale</u>, I; and S. H. Mellone, <u>Western Christian</u> <u>Thought in the Middle Ages</u>, p. 123. Cf. Whitehead, <u>Science and the Modern</u> <u>World</u>, I.

 \times Meredith, 'The Spirit of Earth in Autumn'.

Bosanquet, absolute idealist though he was, wisely insisted that if, in our ordinary life, we were to regard our environment as minded or spiritual, instead of merely physical, we would be doing spirit a great disservice. Mind progresses by self-denial.



* See <u>Orpheus and the Greek Religion</u>,
(1935) by W. K. C. Guthrie.
+ See Frazer's <u>Adonis Attis Osiris</u> and Sayce, <u>The Religions of Egypt and Babylo-</u> <u>nia</u>, pp. 153 ff.
† J. Estlin Carpenter, <u>Comparative Reli-</u> <u>gion</u>, p. 147.

⊕ <u>John</u>, XII. 24.

 ϕ "Be sure that the whole of this land, with all its warmth and wetness and fecundity, with all the dark and the heavy and the multitudinous for which you are too dainty, spoke through her lips when she said that He had regarded the lowliness of His handmaiden." C. S. Lewis, <u>The</u> <u>Pilgrim's Regress</u>, p.184.

[°] "He who dwells in the earth, and within the earth... whose body the earth is, and who rules the earth from within, he is thy Self, the ruler within, the immortal." <u>Brihadaranyaka Upanishad</u>, III. vii. 3. her own death, but her non-existence, in order that she may exist and live again in them. *

15. RECONCILIATION AND CONCLUSION.

Clearly it is not enough to apply the behaviourist's method to the study of Earth, and, discounting what she says about herself, pay attention only to what she does. Her common-sense assertions that she is dead, that the enormous vitality which she has for any unprejudiced observer is an illusion, are not so frivolous or so ridiculous as they seem to be; on the contrary, there is a great deal of truth in them. Common sense is right after all. The long discussion of this chapter draws to an end with the realization that each of the contestants perceives an aspect of the truth which the other cannot spare and cannot share. My analytical or materialist self (C) provides the indispensable counterpart and basis of my synthetical or idealist self (P). × And so throughout this book: I can only rise above common sense by planting my feet firmly upon it.

By this I do not mean that the contrast between the two views should be toned down, or that there can be any genuine compromise between them. The continuation of my own existence, and of the world at large, depends upon the irreconcilable opposition of the death-seeking and the life-seeking tendencies: all unity would be destroyed if the underlying duality were resolved, and the upward and downward processes of Heraclitus came to terms. Nor do I mean that I can afford, in the conduct of my own life, to regard the argument of this chapter as settled once and for all. In the very nature of things, it is an argument which is always being settled, and always being reopened. For the greater part of the time I am obliged to live at the common-sense level where Earth is dead --- only so can I serve her interests. Archbishop Temple used to say that to serve God you must, for hours together, forget Him; and the same rule applies at the much lower level of Earth. To remain all the while on the higher plane would be as self-defeating as to remain all the while on the lower --- the chief difference being that the danger of the first is as remote as that of the second is near at hand.

What is true of individuals is true historically --- moods must alternate: there can be no question of a fixed estimate of what Earth is. The planet's true opinion of herself is not today's opinion or the opinion of any other period, but her total self-estimation taken over the whole of her self-conscious history, with its rhythmically changing moods seen as elements in a single pattern. At the present moment, it would seem that she is nearing the end of a particularly intense death-mood, and is beginning to recollect her living self. (This book is itself one small piece of evidence amongst many that the tide is about to turn --- hence my over-insistence upon the life-mood. At other periods of history, overinsistence upon the death-mood was equally called for.)

Of the many reasons why this new estimate of Earth deserves recognition, the first is that it is true --- whether the recognition will help * The creativeness of the death-mood, which I celebrate in this section, is only possible because of the original life-mood. A number of authorities believe that agriculture began as a by-product of the worship of the Great Mother. Sowing, watering, reaping, were at first sacred rituals, fertility-symbolism; and even after cultivation became large-scale, it was probably pursued as much for religious reasons as for practical -- or at least the two motives were united. (E. Hahn, Die Entstshung der Pflugkultur, 1909; E. Wahle, In Ebert's Reallexicon der Vorgeschichte, xiv. pp 323 ff; cf. Christopher Dawson, Progress and Religion, pp. 107 ff. on the connection between the Earth-cult and the beginnings of civilization.) In short, agriculture, with all its derivatives, proceeds from Earthconsciousness, from the suprahuman.

× Fechner combined in himself the two moods, with characteristic thoroughness. On the one hand, he was an expert in the physics, chemistry, and physiology of his day, as well as the father of modern experimental psychology. On the other hand he was a humorous author (writing under the name of Dr Mises), a poet, one of the chief modern exponents of panpsychism, and the great apostle of the living Earth. Thus it was no mere visionary, unacquainted with scientific method and despising the painstaking procedure of the laboratory, who (in Zend-Avesta, ii) wrote of a country scene, "It was only a small piece of Earth; it was only a moment of her existence; and yet as my look embraced more and more of her, it seemed to me not only so beautiful an idea, but so true and clear a fact, that she is an angel, so rich and fresh and blooming, and at the same time so stable and unified, moving in the heavens, turning wholly towards heaven its animated face ... --- so beautiful and so true that I wondered how men's notions could be so perverted as to see in the Earth only a dry clod ... "

"And her desires are those

For happiness, for lastingness, for light. 'Tis she who kindles in his haunting night The hoped dawn-rose." So writes Meredith in 'Earth and Man'. But this is only one aspect of her influence: it is she who has first plunged man into the night, and what Blake calls "Newton's sleep." man is a secondary consideration. But it will in fact be to his advantage in many ways. † We cannot go on maintaining, without increasing intellectual dishonesty, theories about Earth which are not self-referential; ° that is to say, theories which do not include themselves in their own subject matter, and which (in particular) leave out of their account of Earth that most relevant of all her aspects --- the theorist himself and all his labours. The historical issue of materialism is a growing mass of contradictions which it is disingenuous to ignore. In fact, the time is approaching, and has perhaps already come, when the value of the deathmood has exhausted itself, when the returns are rapidly diminishing, and persistence in the mood can only work more harm than good. Mr Aldous Huxley rightly says, "Modern man no longer regards Nature as being in any sense divine and feels perfectly free to behave towards her as an overweening conqueror and tyrant." * And tyranny ends in revolution. The materialism which developed Earth's life by denying it has now reached the point where further denial tends to destroy that life. Even if (contrary to all the indications) materialism were able to fulfil its promise of peace and plenty, it would remain a means rather than an end --- a means which, if it never gave place to the end, would become the enemy of the end. Though death is one half of life, it is the subordinate half, and life's instrument. Earth's necessary asceticism and voluntary self- abasement, as manifested in her death-mood, will lack their fruition if they are not followed by the life mood. What she sows in unselfconsciousness she reaps in self-consciousness. "God is God only in so far as He knows himself," says Hegel; "his self-knowledge is, further, his self-consciousness in man" + Whether these words are true of God or not, they are certainly true of Earth: in so far as she is ignorant of herself she is not herself, and in so far as she is not herself man is not himself.

The situation may be viewed from two angles. We may say, with Rainer Maria Rilke, "Earth, isn't this what you want: an invisible re-arising in us?..... What is your urgent command, if not transformation." ϕ Or we may say, with Jung, × "Remoteness from the unconscious..... means an uprooted state. That is the danger.... confronting every individual who through one-sidedness in any kind of -ism loses his relation with the dark, maternal, earthy origin of his being." (It is the Protestant (Jung tells us) rather than the Catholic (for whom the archetypal ideas are present in a variety of symbols) who has "destroyed the earthly body of the godhead," and the Jew has never found it; for Jew and Protestant, "the archetypes, which to Catholic Christianity have become a visible and living reality, lie in the unconscious.") The poet asserting Earth's need of man, and the psychologist asserting man's need of Earth, are really the same voice saying the same thing. "For behold, I am with you, am in you and of you; look forth now and see." -- so does Swinburne's Earth address man -- "Man, pulse of my centre, and fruit of my body, and seed of my soul." o

One last point --- while recognition of the living Earth is at once an intellectual and a psychological necessity (and an aesthetic and religious desideratum as well), there can be no question of worshipping her. Nothing in this chapter can be taken to justify a new polytheism or angelolatry. At present there is little danger of anything of the kind --- the risk is

° Cf. the articles by F. B. Fitch in <u>Mind</u>, Jan, 1946, on theories which are self-referentially consistent, and inconsistent.

* <u>The Perennial Philosophy</u>, p. 93. Bergson finds, in the history of human society, a "law of dichotomy" whereby a single tendency splits into a pair of opposed tendencies; and also a "law of twofold frenzy" whereby each of these tendencies is, in turn, pursued to the bitter end, before giving place to the other. This swinging of the pendulum appears to us to be futile and self-cancelling, but in fact it is the condition of progress. A society marches like a man --- by getting as far as one leg takes him, and then changing over to the other. See <u>The Two Sources of Mortality</u> and Religion, pp. 254 ff.

+ Encyclopaedia, 564.

φ Duino Elegies, IX.

× See his contribution to Count Keyserling's symposium Mensch und Erde, Darmstadt, 1927; the English translation, by H. G. and Cary F. Baynes, appears in Jung's Contributions to Analytical Psychology. In another work, Jung describes a powerful fantasy experienced by one of his patients --- a fantasy which led from the idea of her mother to her mother's country, and then to the earth, in which the lower part of her body is caught. Jung believes that these symbols "point to psychological layers --- to increasingly unconscious pre-stages of individual consciousness," one of which -- Earth -- is presumably common to all men and animals. The Integration of the Personality, p. 45. I think there is more than mere sentiment or superstition in the anxiety of European women in the East, to return home to bear their children. "For men and women are not only themselves;" writes Somerset Maugham in <u>The Razor's Edge</u>;"they are also the region in which they were born."

ө 'Hertha'

all the other way. It is true that Shelley could exclaim

"How glorious art thou, Earth! And if thou be The shadow of some spirit lovelier still, Though evil stain its work, and it should be Like its creation, weak yet beautiful, I could fall down and worship that and thee." ×

But even here there is the suggestion that Earth's office is to point beyond herself, to a more inclusive spirit and a higher plane of reality. The true role of this planet (as of every other grade of being that comes between man and the Whole) is mediation: if she were to attract to herself the kind and intensity of adoration that is due to the supreme and only true Individual, then she would to that extent fail in her function in the hierarchy. A star, Fechner assures us, "has its own world of senseperceptions, and over and above that a world of consciousness, which comprises in a superior unity the consciousness of its creatures, while it is closed against that of the other stars, but altogether open to God; so that the stars constitute an intermediate and mediating grade of existence between their creatures and God, and the earth is one of those stars.^o Indeed it is Earth herself who, by her relentless downward pull, gives us the notion of height and holds us upright; it is she who secretly contrives that the vertical man shall transcend her. "I believe," says A. E., "that most of what was said of God was in reality said of that Spirit whose body is Earth." <u>The Candle of Vision</u>, p. 32. No doubt there are still many people like the old countryman of whom Belloc wrote: "Just as some holy men said that to be united with God, our Author, was the end and summit of man's effort, so to him who was not very holy, to mix and have communion with his own sky and earth was the one banquet that he knew."

× Prometheus Unbound, II. 3.

The author of <u>The Wisdom of Solomon</u> (XIII. 4, 5), writing of the gods of earth and air and the starry sky, says that if men "were astonished at their power and virtue, let them understand by them, how much mightier he is that made them. For by the greatness and beauty of the creatures proportionably the maker of them is seen." Ignatius (<u>To the Trallians</u>, V) excuses himself from writing about "heavenly things, and the places of the angels and the gatherings of principalities," for, though he understands these things, it is not on their account that he is a disciple; moreover, the Trallians are "babes."

° Tagesansicht, pp.64 ff. (Lowrie, p. 274)

CHAPTER X

THE DISTANT VIEW --- SUN.

Assuredly all the gods are august and beautiful in a beauty beyond our speech. And what makes them so? Intellect; and especially Intellect operating within them (the divine sun and stars) to visibility.

Plotinus, Tractate on Intellectual Beauty, V. 8.

I do not doubt that the orbs, and the systems of orbs play their swift sports through the air on purpose.

Walt Whitman, 'Assurances'.

Where now, our wiser modern men relate, Revolves a ball of flame without a soul, Once Helios in tranquil pomp of state Drove o'er the sky his chariot of gold.

Schiller, 'Die Götter Griechenlands'.

Heaven looks from the angle from which my people look, Heaven hears from what my people hear.

Mencius, V A. 5.

'What,' it will be questioned, 'when the Sun rises, do you not see a round disc of fire somewhat like a guinea?' O no, no, I see an innumerable company of the heavenly host crying, 'Holy, Holy, Holy is the Lord God Almighty.'

Blake, Descriptive Catalogue (A Vision of the Last Judgment).

The stars are not pulled this way and that by mechanical forces; theirs is a free motion. They go their way, as the ancients said, like the blessed gods.

Hegel, Werke (1842), vii. I. p.97.

It was His wisdom made you need the Sun Prize it now you have it, at that rate, and you shall be a grateful creature: Nay, you shall be a divine and heavenly person. For they in Heaven do prize blessings when they have them. They in Earth when they have them prize them not, they in Hell prize them when they have them not.

Traherne, Centuries of Meditations, I. 46.

A man's supreme moment of active life is when be looks up and is with the sun, and is with the sun as a woman is with child. The actual yellow sun of morning. This makes man a lord, an aristocrat of life. The true aristocrat is a man who has passed all the relationships and has met the sun, and the sun is with him as a diadem. Caesar was like this. He passed through the great relationships, with ruthlessness, and came to the sun. And he became a sun-man. But he was too unconscious.

D. H. Lawrence, Reflections on the Death of a Porcupine.

1. OBSERVING EARTH'S OBSERVER.

There is in Self-consciousness a principle of endless development --- a matchless power of expansion, whereby the knower is always greater than he knows. * This power he owes to his ability to travel throughout his regions.

"He from his small particular orbit flies With blest outstarting! From himself he flies, Stands in the sun, and with no partial gaze Views all creation" ×

But of course it is impossible to fly from oneself: the viewer in the sun, and the Earth he contemplates, are one. His flight was growth. The self-conscious planet of the previous chapter has already, without knowing it, colonized the sun and the solar system; ° for to know Earth is to leave Earth and join her companions, in whom she is herself. Her discovery of her finiteness is her advance towards the infinite --- as Traherne ob-

* J.W. Dunne, in <u>The Serial Universe</u>, illustrates this principle by the case of the painter who mentally stands back to paint himself as he paints the landscape, and then stands back still further to paint himself painting himself, and so on <u>ad</u><u>infinitum</u>. (There is also the more familiar instance of the beer-bottle label that shows the beer bottle with its label....) The point for me, however, is that this retreat from the Centre, in search of full self-consciousness, involves growth to new hierarchical status.

× Coleridge, 'Religious Musings'.

° "The flickering, and limited selfconsciousness of any moment of my life logically implies far more than it directly contains. I am never fully aware of the content, or of the deeper meaning, of my present self. Unless, then, I am in deeper truth far more of a self than I now know myself to be, I am not even as much as of a self as I now suppose myself to be." Royce, <u>Studies of Good and Evil</u>, p. 145. serves:

"One star made infinite would all exclude, An earth made infinite could ne[°]er be viewed. But one being fashioned for the other's sake, He bounding all, did all most useful make."

The paradox of social life is that we transcend our limitations by becoming aware of them: thus, in the planetary society, Earth becomes great only by realizing how small she is. + And, in general, each plane of being, in becoming wholly itself, has already shifted to the next: an inner dynamism, a principle of levitation such as bore Dante through the heavens, × operates throughout the hierarchy. "Neither things nor thoughts can be treated as simply self-identical..... They are essentially parts of a whole, or stages in a process, and as such they carry us beyond themselves, the moment we clearly understand them." $^{\circ}$

2. LIFE AS A SOLAR FUNCTION.

The physical incompleteness of my Earth-body, its need of the sun in order to complete itself as an organism, is a more familiar aspect of the selfsame expansive tendency. * I require the sun to make me a living whole. I <u>must</u> hitch my wagon to a star, otherwise there is neither wagon nor wagoner.

Consider a cell in my hand. How is this little body of mine sustained? It lives on me, the man, on my life's blood. And the man feeds on Humanity: it is Humanity's body that I find on my dinner plate ---- substances that Humanity has taken in, digested in a hundred organs, and thoroughly incorporated. Humanity, in turn, feeds on Life, on the species of plants and animals which are the parts of Life's body. Life feeds on Earth: Earth's carbon dioxide, and water, and nitrogen, and mineral salts, together with the radiation that Earth has digested and so made her own, go to compose the meal. Finally, Earth feeds on the Sun: her material was derived in the beginning from the Sun; and, ever since, she has been unceasingly conditioned by the radiant energy that the Sun pours into her. Such vital planetary processes as winds, ocean currents, rain, rivers, hydro-electric plants, as well as that most important of solar engines the green leaf, are all kept going by solar radiation. Directly or indirectly, the Sun is the source of all terrestrial energy, ever sustaining the life that is, after all, its own. Nowhere is this dependence more vividly expressed than in the ancient Egyptian Sun-disc, (the symbol of the Aton), whose rays end in little hands, and in the famous 'Hymn to the Aton', composed, perhaps, by the Pharaoh Akhnaton himself.

In effect, then, the cell in my hand is feeding on the Sun. Let me consider, briefly, the preparation of this meal. In other words, let me glance at a typical sequence in the physiological processes of my greater, or solar, body.

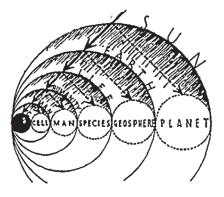
The story begins in the Sun's interior, where the temperature is many millions of degrees. It is believed that matter is being built up here ---

+ It is noteworthy that the appearance of the planets to one another is of sufficient popular interest for the American magazine <u>Life</u> to devote an article, with elaborate coloured illustrations, to the subject. When millions of persons are thus enabled to enjoy Saturn's view of Earth, it is not true to say (without qualification) that Saturn is uninhabited. Nor does Alexander Blok's rapturous description (in the poem 'Demon') of a flight to a place where Earth is a star and a star is Earth, leave our planet's environment unmodified.

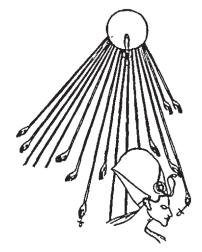
×<u>Paradiso</u>, I.

° Edward Caird, <u>Hegel</u> p. 137.

* The human body is an essay upon its own incompleteness. As male genital organs do not make sense without the female, or man's brain without Humanity, or his digestive apparatus without Life, or his muscular-skeletal apparatus without Earth, so his eye (to mention only one of the more obvious instances) does not make sense without the Sun.



The process of 'digestion' in the Sun, from the point of view of a cell in me. At each stage there is (i) 'feeding' on the higher whole, (ii) the breaking up of the 'food', with rejection of 'waste', and (iii) the 'feeding' of the lower whole or organ.



that hydrogen atoms are combining to become helium atoms. In any case, vast energy, atomic in origin, is set free. And this energy is digested by a number of outer Sun-layers, which absorb radiation of various wave-lengths, before the 93-million-mile journey to Earth is begun. (For Earth, the solar radiation is shaped like a pencil; or a billiard cue, with the planet at the striking end of it. This pencil is (so to say) the alimentary canal of my greater body --- an organ that is all the more efficient for being tenuous and invisible. The two celestial bodies are as truly united as if a rigid tube joined them: they are no more separate than my mouth and my stomach are separate. Or, to put the matter another way, my domestic economy consists of a blazing kitchen fire, a little round dining table, and between them a corridor in which service proceeds at the rate of 186,000 miles a second --- all three careering about the universe as a unit.) $^{\circ}$

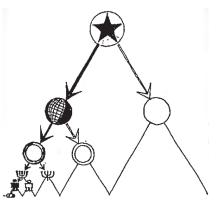
The light that arrives in the region of Earth, some eight minutes after having left the sun, though already a pre-digested product, is as yet unfit for Life's consumption. It must first pass through the ozone layer to remove a part of the ultra-violet radiation, and be diffused by the fine dust and water vapour of the lower layers of the atmosphere. Thus the light which sustains Life is Earth's own --- a light that is tempered in many ways and made internal. And as Earth traps solar energy, so (though in a very different fashion) Life traps the solar energy that Earth has made her own, and stores it in the green leaf. Humanity carries the process one stage further, appropriating and processing life's primary (plant) tissues and secondary (animal) tissues, so that there is always a reserve of prepared food upon which to draw. And what Humanity does for man, the man does for his cells. For them, all the preliminary stages of appropriation, and refinement, and storage, are mere fitness of the environment; but for the observer of stellar status, the entire manylevelled process occurs in the living body of the Sun. \times

3. THE SUN AS THE SOLAR SYSTEM.

For self-consciousness, for life, even for existence, Earth needs the sun. It does not therefore follow that the sun stands above Earth in the hierarchy of individuals. Quite evidently, the sun we see in the sky does not include Earth, as Earth includes Life, and Life includes Humanity. But there is a greater Sun, invisible to us in its entirety, which includes Earth and all the planets --- that developed, highly organized Star (which we call the solar system) is a unit of integral status, alive, self-conscious, and an aspect of the total personality of man. This individual I call the Sun (with the capital initial), as distinct from the sun, which is only one member (and not in all respects the most important) of the adult solar body.

Briefly, what is the constitution of this body of mine? Only one seventh of one per cent of its mass is in the planets: the rest is in their common nucleus. Around this nucleus, and held in by its gravitational

° This is psychologically important. According to Jung, the sun (often furnished with a penis, or a tube which is the source of the winds, is an archetypal idea, a product of the racial unconscious that crops up, for example, in the contemporary patient, as well as in ancient mythology. One version of the idea appears in mediaeval pictures of the Immaculate Conception, that show a tube (down which the Holy Ghost flies in the form of a dove) reaching from heaven to beneath the Virgin's robe. See Contributions to Analytical Psychology, pp. 108, 109. Of. Plato, Symposium, 190, where the male is associated with the sun and the female with the earth. Bachofen (Das Mutterrecht) finds the struggle between the masculine solar principle and the feminine telluric principle, enacted in man.



× The practice of saying grace before meals is realistic, inasmuch as it recognizes the fact (which we now seem determined to ignore) that all things come down to us from heaven, from larger aspects of our being, from the suprahuman levels. We are as dead to the planes above man as we are alive to those below him.

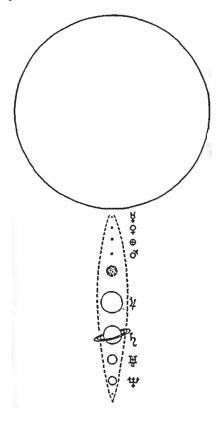
Roberto Ardigò, (La Formazione naturale nel fatto del Sistema Solare) held that the reciprocal action of the heavenly bodies that compose the solar system is only intelligible on the theory that they are still one in the Sun; they are not less truly united now than before they became distinct, and the primitive unarticulated Sun is the ground of their unity. In fact, the Sun has not broken up into the solar system, but unfolded like a flower. See Harald Höffding, Modern Philosophers, pp. 45, 46. Fantastic though the details of his cosmology may be, Robert Fludd (1574-1638) did grasp the concrete living unity of the Sun --- a Sun which feeds and is fed by all the subordinate bodies; which crowns a splendid hierarchy of angels, men, animals, and plants; which is itself the chief organ, or even the body, of God. This hierarchical scheme is, however, scarcely in agreement with his theory that the Sun copulates daily with Earth, as male with female.

pull, swing the nine planets, and the asteroids which are believed to be the fragments of a tenth. The planets are very widely spaced, so that, like the atom, the Sun is practically empty. (If a model were made in which the central body were the size of a beer barrel, then Earth, represented by a pea, would circulate at a radius of a hundred yards or so; and the other planets, ranging in size from an orange (Jupiter and Saturn) to a speck of dust (the smaller asteroids), would circulate at distances up to two miles from the centre. Naturally, the time which the planet takes to complete one round of its journey varies widely: Mercury's sidereal period or 'year' is 88 of our days, and Pluto's about 250 of our years.) And, in addition to the planets, there are the planets' satellites, comets, and vast numbers of meteors, dust particles, and stray atoms, all of them revolving round the sun and therefore to be reckoned members of the same system.

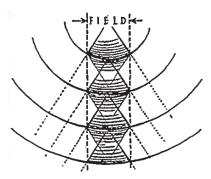
That the planets were at one time contained in the original compact Sun ° is suggested, not only by the fact that they travel round the sun in the same direction as the sun's own rotation about its axis, but also by the fact that the planetary orbits are, with minor exceptions, in practically the same plane as that of the sun's rotation. How and why the planetary material left the parent body are questions that do not concern me here: it is enough to note that, in all probability, such a differentiation did occur, and that, in due course, a similar differentiation occurred in the planets. As the Sun became organized into a nucleus surrounded by rings of planets, so the planet tended to organize itself along similar lines, into nucleus and satellite rings. The planets' moons represent a second stage in the growing-up of the Sun. \times

(The fact that the mass of a planet tends to increase with its distance from the sun, and then to fall off again, has been accounted for by supposing that the planets are fragments of a cigar-shaped projection raised on the Sun by the gravitational pull of a passing star. The satellite systems of Saturn and Jupiter show a similar tendency, and hint that the history of moons recapitulates the history of their planets. I suggest that this 'cigar effect' is a special case of a general law which has several times been noticed in this inquiry --- the law that, while the content of experience (in certain respects) increases as observer and observed recede from each other, the increment is not constant but fluctuating. In the long run there is increase, but in the short run there is increase up to a certain optimum (around the middle of the region concerned) and then decrease. For example, a painting is more impressive at two feet than at two inches, but it is not therefore still more impressive at twenty yards. Again, the most expensive seats in the cinema are neither too near nor too far from the screen. As I pointed out at the start of this chapter, the solar system is a complex of mutual observers: it is, then, not at all surprising that its constitution should reflect, in some degree, the laws of observation in general. Mercury, in the front row of the stalls, is too near to do the sun full justice; and Pluto, in the back row of the gods, is too far away, yet too near to appreciate the Sun as an individual of a new and higher order. Jupiter and Saturn, avoiding these extremes, make much of the sun and so of themselves. If even planets (and electrons *) are not exempt from the law that to grow is to grow in one's estimation of others,

° The primitive Sun may, according to recent theories, have been a double star, one member of which disintegrated, leaving as debris the material out of which the planets were formed. As for the Moon, some think it a fragment of some primordial planet, and not derived from the Earth.



 \times See Jeans, <u>The Universe Around Us</u> , p.248



In his <u>Theory of the Heavens</u>, Kant adheres to the view that the matter of the planets is more refined the further they lie from the centre, and he goes so far as to link this 'regional effect' with "increasing grades of perfection of intellectual faculty". His speculation is somewhat fantastic, but at least it recognizes a connection between range and status.

* In Chapter IV, \$10, I have shown how the 'law of the spindle' applies to the electron rings of the atom. then indeed it is time we took notice of it.)

Concerning the structure of the sun itself, a surprising amount is known or reasonably conjectured, considering the natural difficulties of investigation. The heat and the pressure of the interior are so extreme -- temperatures of many millions of degrees are suggested -- that atoms here have lost many, if not all, of their circulating electrons. Surrounding the core, and transforming the radiant energy that streams from it, are cooler and more tenuous layers of incandescent gas. These include the photosphere (the brilliant visible surface, and the source of the sun's continuous spectrum), the reversing layer (which, absorbing light of various wave-lengths as it comes from the photosphere, reveals to the spectroscopist its own constitution), and the much more extensive chromosphere (consisting mainly of the light gases helium and hydrogen, with calcium). Finally, there is the deepest, coolest, and most rarefied layer of all --- the corona, which is visible only during a total solar eclipse.

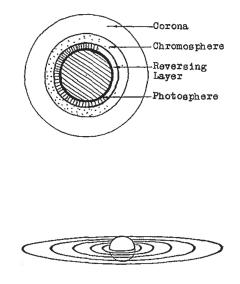
Such, in mere outline, is the structure of this new order of individual, the Sun. But note an important qualification: to the properly constituted observer -- to the observer whose grasp of time matches his grasp of space -- the Sun is not a large hot globe with certain small cold globes moving round it. Rather it is a single object resembling the planet Saturn, a disc of rings with a globular nucleus --- for each planet, given the time and the observer, reveals itself as a circle vastly exceeding in diameter the sun itself. Nor is this an illusion: just as the ignited end of a piece of string, when whirled round and round, really does become a circle of flame, so the tiny asteroid (as in the Sun) grows to truly solar dimensions. If you do not see the Sun like this, if your present moment is not extensive enough to take in every planetary 'year' as a whole, then you cannot see the Sun, but only a collection of celestial bodies. Θ

4. LIFE IN THE SUN.

What manner of life does the Sun live?

First, there is the question whether any of the planets, besides Earth, supports life. Physical conditions throughout the solar system are now fairly well known; and science is better able to estimate the possibilities of planetary life than when, only two centuries ago, the great Kant gave, with some confidence, particulars of the rational beings in the planets. × And the verdict is that, throughout the greater part of the solar system, the environment which is necessary for living organisms as we know them does not exist.

Mars has a cold climate, and its somewhat rare atmosphere contains little moisture and little, if any, oxygen. Nevertheless conditions (so far as they are known) are not such as to rule out all possibility of vegetable life. Seasonal variations in the planet's markings (large patches are seen to darken in the Martian autumn) may well indicate some form of vegetation --- vegetation which is, presumably, dying a slow death for



 Θ If we judge by our diagrams of the solar system (which are part of the solar selfconsciousness) the Sun certainly does see himself as a system of planetary rings; and we have no difficulty in attaining to the solar level of consciousness, where our 'specious present' is at least 250 years --- that is, the minimum time in which the orbit of Pluto can exist as a whole. This theme is developed in Chapters XVI and XVII.

× Theory of the Heavens.

H. Spencer Jones (Life on Other Worlds, pp 178 ff.) considers that there is almost certainly vegetation on Mars, and he suggests that while life has probably not yet appeared on Venus, it may well do so as soon as conditions there become more favourable (p. 170). Eddington (The Nature of the Physical World, p.174) believes that "a rather strong case" had been made out for the presence of life on Mars, but Jeans (The Stars in their Courses, p. 60; The Universe Around Us, pp. 269, 275) prefers to suspend judgement. For a statement of the canal theory, see Lowell's Mars as the Abode of Life. The U.S.S.R., indeed, has gone so far as to found an Institute of Astro-Botany for the study of Martian plant-life, with a view to promoting Soviet agriculture in the Arctic.

lack of water. As for the famous 'canals' of Mars, these have been dismissed by many observers as subjective or illusory. Recently, however, Lyot and Gentili (using composite photographs combining hundreds of exposures, to supplement visual observation of the direct kind) have found lines which closely resemble the 'canals' of earlier observers. At least we cannot exclude the possibility that, though Martian life is now at a disadvantage, it is the heir to a long and brilliant evolutionary history --- a history whose achievements now enable the planet to conserve (by means that include, perhaps, vast systems of irrigation) its waning resources, and to contrive ways of living under circumstances which we should regard as almost impossible. Only a stupid parochialism can take it for granted that Mars is certainly dead, or at best the scene of a life not worth mentioning. For all we know to the contrary, Mars may long ago have excelled, in physique and intelligence, and in degree of selfconsciousness, Earth's present condition; it is even possible that Earth may owe to Mars a great debt of which she is at present unaware.

Mars has been called the planet of spent life, Venus the planet of dawning life. The latter is shielded by a permanent cloud-layer, which moderates the otherwise high daytime temperature, and makes inspection of the surface impossible. There is no spectroscopic evidence of free oxygen in the atmosphere, though there is carbon dioxide in abundance. Probably conditions are not as yet very favourable for life: if the sun is continually cooling, however, they tend to improve on Venus as they worsen on Mars. In fact, however, it is by no means certain that the sun is cooling appreciably: the likelihood is that, so long as it remains a main-sequence star, its radiation is practically constant. \times There is, in that case, no reason to suppose (as some have done) that life gradually travels from the outer rings of the solar system to the inner.

The remaining planets, by reason of their very low temperatures (with the exception of Mercury), their lack of water, and the unsuitable composition of their atmospheres, are generally held to be altogether incapable of supporting life. $^{\circ}$

To sum up, then, there are four broad possibilities --- (1) that, of all the planets, only Earth is alive, or has ever lived; (2) that there is, in addition, a low order of life on Mars, and (conceivably) on Venus; (3) that there exists in the Sun a belt of life that embraces Mars, Earth and Venus --- three different varieties of planetary life which are complementary aspects, or rather organs, of the total life of the Sun; (4) that, in addition to the foregoing, some or all of the remaining planets are alive, but with an order of vitality that is altogether different from the terrestrial --- an order founded on some other basis than protoplasm. James Ward was inclined to take this last view; + and so was Bergson, who went so far as to write, "It is probable that life animates all the planets revolving round all the stars", the life being of many kinds. *

For myself, the last of these hypotheses is unlikely and unnecessary, while the second or the third, while probable, is not essential to my argument. So far, in this inquiry, I have found that the most valuable clues are those that lie directly under my nose, and that it is rarely necessary to go in search of remoter and more doubtful evidence. It would seem that

The belief in a plurality of living worlds, each with its Gospel, is beautifully expressed in Alice Meynell's well-known poem, 'Christ in the Universe'. Christian theologians and apologists have generally rejected the hypothesis of the plurality of worlds --- otherwise there arises the dilemma: either the other worlds are innocent, or there is enacted in them a plan of salvation analogous to the earthly. In one of his novels, H. G. Wells chooses the latter alternative, as Sir David Brewster had done. Thomas Chalmers believed that our redemption "is known in other and distant places of creation, and is matter of deep interest and feeling amongst other orders of created intelligences". On the other hand, John Wesley, Whewell, and Hegel get over these difficulties by dogmatic denial of the plurality of worlds: their universe is geocentric.

(Cf. Irenaeus (<u>Adversus Haereses</u>, V. 36. 1): "There is one Son who performs the Father's will, and one human race in which the mysteries of God are realized."

× Indeed, according to some recent theories, as more and more of the Sun's hydrogen is converted into helium, its temperature tends to rise, and Earth's life will eventually perish by overheating.

° There are, it is true, many curious and unexplained facts. Observers have reported minute changes in the Moon's configuration (in particular, a mysterious object in the crater of Eratosthenes has caught their attention). Jupiter has a very complex atmosphere, with numerous coloured belts and spots which vary in themselves and move in relation to one another. But to argue from such data to any kind of lunar life, or to a Jupiter that lives as a whole, is quite unjustified.

+ It may be true that a fauna and a flora analogous to ours are possible nowhere else, that human beings could only exist on this one planet. But metabolism, stimulation, and spontaneous direction may be possible in a protoplasm very different from that with which we are familiar, and evolution might progress indefinitely on quite other lines than those that have obtained for us." <u>Realm of Ends</u>, p. 184.

* <u>The Two Sources of Morality and</u> <u>Religion</u>, p. 219. Cf. <u>Creative Evolution</u>, p. 269.

In Mr. C. S. Lewis's novel <u>Perelandra</u> (e.g. p.248), the life of Venus is described as the fruit of the tree which was planted on Earth; and, in general, the life of the planets is regarded as more or less unitary.

all the materials for the solution of my problem (the problem of what I am) are to be found in the reinterpretation of the ordinary rather than in the detection of the extraordinary. Accordingly, I shall leave open the question of the life of the planets, and shall proceed on the basis of the ascertained facts of terrestrial existence, in the expectation that here, in the despised commonplace, the master key is to be found. It may well be that in this present point of time and space, through which all reality's contour lines pass, the whole truth is waiting to be discovered. $^{\circ}$

5. <u>THE LIFE OF THE SUN</u>.

If, then, Earth is regarded as the only living part of the Sun (or at any rate the only living part that has advanced to self-consciousness), is it reasonable to suppose that this tiny fragment is sufficient to bring the whole to life? Hegel, \times for one, had no doubt as to the answer. The Earth is what he calls "the body of individual totality", whose function as organic is "to digest the entirely general astral powers, which as heavenly bodies have the illusory appearance of independence, and to bring them under the control of its individuality, in which these Titanic members sink to moments." Though physically insignificant, Earth is the home and vehicle of the spirit that masters the material universe, overcoming all its externality. And Hegel is certainly right in principle: the relative dimensions of Earth and Sun have nothing to do with the capacity of the first to invigorate the second --- it is not that self-consciousness can colonize dead worlds and so bring them to life, but that, to exist at all, it must already have done so. There is no room for death in a universe that contains a point of self-consciousness. But what Hegel failed to bring out was that (because the self-conscious individual cannot grow upon one plane, but must climb to expand) the Earth that 'digests' the solar system is no longer herself, but the living Sun. Success means self-transcendence, which is a kind of failure. The extension of the terrestrial is, strictly speaking, impossible: the life of the Earth is not the life of the Sun. "All flesh is not the same flesh There are also celestial bodies, and bodies terrestrial: but the glory of the celestial is one, and the glory of the terrestrial is another" --- thus does St Paul guard against confusion of levels. *

And in any case the question (can the live part vivify the dead whole?) is an improper one, for it assumes that Earth is alive by herself and in her own right. To distinguish in the body of the Sun one small region, and to say of it: here, and here alone, are the chemical and thermal conditions of life, and life itself, and self-consciousness, while all the rest (however essential for the maintenance of these local peculiarities) is so much dead material --- to do this is to fail to see the Sun. 'If the observer insists upon remaining at the level which is death to the Sun, why then of course the Sun is dead. But let him shift to the higher observational level, and at once it is apparent that life is not simply a matter of enough water, carbon, and so on, provided within a very limited temperature range. Such immediate conditions are probably amongst those that life requires, but they are only a small and rather arbitrary selection from

° This is not to say, as Hegel did, that the Earth is <u>the</u> planet, the 'truth' of the solar system. Egoism at the planetary level is no more virtuous or reasonable than at the human: Earth cannot afford to live with inferiors, nor can she come to selfconsciousness in a one-membered society.

× Encyclopaedia, 280. At one extreme is Bruno, who wrote, "No, the earth is but a planet, the rank she holds among the stars is but by usurpation; it is time to dethrone her. The ruler of our earth is not man, but the sun, with the life that breathes in common through the universe. Let the earth eschew privilege Dwellers in a star, are we not comprehended within the celestial plains, and established within the very precincts of heaven?" (See Frith, Life of Bruno, pp. 42 ff.) At the opposite extreme is Hegel, who thought so little of the stars that he compared them to a swarm of flies, and so much of this planet that he makes it the reason for all the rest. In my view, the truth combines Bruno's plurality of worlds with Hegel's masteridea that in this world the meaning of them all is to be found. The saying in Hesiod's Theogony that Earth is the parent of the Heavens, is the less important half of the truth.

Earth as Earth cannot transcend the planetary; nevertheless, seeing that her proper study is her own kind, she embraces all the parts of the Sun. Gustav Holst's The Planets is the planets' own music in Earth, just as their colour and markings are their own in her. She lives in them, and they in her: to this extent there is truth in Huyghen's view that there is probably no more difference between the inhabitants of different planets than between the inhabitants of the Earth --- "There are on the Earth men of cold temperament who would thrive in Saturn, which is the furthest planet from the Sun, and there are other spirits warm and ardent enough to live in Venus." Cosmotheoros, seu de terris coelestibus.

* I <u>Cor</u>. XV. 39, 40.

"I won't be told that the sun is a ball of blazing gas which spins round and fizzes. No, thank you..... I know that life, and life only, is the clue to the universe. And that the living individual is the clue to life How it is contrived that the individual soul in the living sways the very sun in its centrality, I do not know. But it is so." D. H. Lawrence, <u>Fantasia of the Unconscious</u>, XIII. the total conditions of life. For example, the great range of extremely high temperatures in the layers of the sun; the intense cold, approaching absolute zero, of interplanetary space; the more moderate temperatures of Earth's upper atmosphere and core --- these are as necessary to life, as truly the temperatures <u>of</u> life, as are the temperatures of the ocean and of the troposphere. + The material which, at the core of the sun, is so hot that a pin-head of it would kill my human body at a range of a hundred miles, is, in its proper place in my solar body, an invaluable organ of my life --- I could spare my right hand sooner than this part of my physique. Ordinarily, I consider that my body should have a temperature of about 98.4° F. --- a degree more or less than this indicates that I am ill. But I am taking into account only a particle of my body. The truth is that, to enjoy normal health, I must enjoy it throughout my solar organism, every region of which has its proper or 'healthy' temperature.

And what is true of thermal conditions is true of conditions generally. The bulk, the chemical composition, the motion, the mass, of every part of the Sun upon which my life indirectly or directly depends, are my physical characteristics, by virtue of which I may claim to be a living individual. Truly speaking, they are <u>vital</u> characteristics --- solar-biological phenomena. In such a universe as this, it takes such a body as this (however extravagant and cumbersome it may at first sight seem to be) to live the kind of life which I am now enjoying. The overwhelming probability is that no lesser anatomy, no other kind of physiology, will work. If biology is the study of living units rather than of their fragments, then here, in the Sun, is the supreme, the primary, the only complete biological specimen which is available for inspection. The life, the mind, and the values that we credit ourselves with, are nothing if they are not solar. Emphatically the situation is not that these things find a home on Earth, the rest of the solar system being inhospitable: the Sun is not a kind of desert, of which we are the oasis. Big creatures live this way, or not at all; and Fechner is neither perverse nor flippant when (in his Comparative Anatomy of Angels, and later in Zend-Avesta) he maintains that the spherical form is the only appropriate one for heavenly beings. Angelic pinions, the winged solar disc of ancient Egypt, the hands (one free, the other holding a bow) with which an Assyrian obelisk credits the Sun, ° the human face he so often wears --- these are obvious monstrosities, solar disfigurements. But at least they pay tribute to solar vitality. Modern man clips the life with the wings, and in restoring the form destroys the substance. *

What is a star? Or rather (to be on the safe side), what is this star of which we have inside knowledge, and are entitled to speak? The reply of the astronomer and the physicist (notwithstanding all its interest and value) is ludicrously inadequate, yet we take it for the whole answer. We allow the technique of science to blind us to the facts of science. What sort of reason is it that tells us that the presence of atoms of lead and carbon and oxygen (and so on) is relevant, but the conjunction of these atoms in the Mona Lisa is irrelevant, to the understanding of the Sun that holds them all? To discover the meaning of silver and gold, are we not entitled to go to Cellini as well as to Mendeleöff? Are the sunflower, and the sunfish, and the sunbird, and the sunstar, any less solar than + So also the major variations in solar energy, which were (it seems) responsible for the ice ages, and consequently for the course of vital evolution, must be reckoned pulses of the total solar life.

Jeans, <u>The Universe Around Us</u>, p. 196. The common-sense view (which I am combatting here) is nowhere better put than in <u>Paradise Lost (VIII)</u>:

"The Earth,

Though, in comparison of Heaven, so small,

Nor glistering, may of solid good contain More plenty than the Sun that barren shines,

Whose virtue on itself works no effect, But in the fruitful Earth; there first received,

His beams, unactive else, their vigour find. Yet not to Earth are those bright luminaries

Officious, but to thee, Earth's habitants.' But the analytical mind cannot leave the matter here --- the "bright luminaries" are not "officious" to the man but to his nervous system, and not to his nervous system but to his brain..... And so we put off our bodies. The synthetic mind, on the other hand, is driven by the facts in the opposite direction, and claims more and more of the world for body. Actually, both movements are necessary, and we must decrease to increase.



A priest impersonates the Sun-god. From an ancient Mexican picture (after G. Elliot Smith).

° See Count Goblet D'Alviella, <u>The Migra-</u> tion of Symbols, p. 26,

* On Sun-gods, their psychological significance, and the many traces in Christianity of Sun-worship, see Jung, Psychology of the Unconscious, pp. 61 ff. But, D. H. Lawrence says, "Don't let us imagine we see the sun as the old civilizations saw it. All we see is a scientific little luminary, dwindled to a ball of blazing gas. In the centuries before Ezekiel and John, the sun was still a magnificent reality, men drew forth from him strength and splendour, and gave him back homage and lustre and thanks. But in us the connection is broken, the responsive centres are dead. Our sun is a quite different thing from the cosmic sun of the ancients, so much more trivial." And he goes on to speak of the great wild life of the sun, its blazing consciousness, and how we can commune with this consciousness by finding again our sun-self. Apocalypse, pp. 46-8.

sunspots? If the sun-dance of the North American Indians throws no light upon the Sun's constitution, why should the dance of their atoms do so? Does the small copper butterfly disport itself in the Sun by accident, as a stranger there; and is the kingfisher not yet domesticated? + Is the thinking that goes on in the Sun parasitic, as if the Sun were possessed by a devil? Is there no fundamental distinction between a self-conscious star and an unself-conscious star?

"It is true", says Thoreau, "I never assisted the sun materially in his rising, but, doubt not, it was of the last importance only to be present at it." × The scientist, on the other hand, considers his presence of no account in the Sun: and no wonder --- he cannot very well kill all the solar life by dissection and leave only his own life intact. (I speak of the scientist as scientist, but I must point out that he may be far more alive than the ordinary man to the limitations and consequences of the scientific method. The best men of science know that analysis is not the only road to truth. Professor R. A. Sampson writes, "This process of dissection (of the sun) might well give us pause, for how do we know that in the course of it something may not take flight, like the life from a living thing, that we shall not succeed in putting back into it again?" ° All the same, science is irretrievably committed to the lethal methods which are the secret of its success.) In effect, science has eyes only for the immature and un-awakened Sun: * the adult star, in full possession of his powers, might as well not exist. It is as if we were to look, for the real man and for the full meaning of human nature, in the human embryo and the fertilized ovum, and were to regard grown men as superannuated foetuses of no scientific interest. It is as if the seed were the end and fulfilment and meaning of the flower, or rather as if the seed were the only reality, and the flower a fiction. This procedure would be a defensible one if it were consistently practised; but what I normally do is to treat different levels of my bodily constitution on different principles. Thus I repress the embryonic stage of my human body, and the adult stage of my solar body. In the one case I deny my past, in the other my present. Such contradictions will not do in this inquiry. It is permissible to be a scientific seedsman who ignores flowers, or an unscientific florist who ignores seeds, or a philosophical gardener who ignores neither; but what I may not do is change my role as I pass from plant to plant.

Admittedly there are many parts of this grown-up Sun whose contribution to the life of the whole is obscure. What influence, apart from slight gravitational perturbations, can the comets and the remoter planets exert upon Earth and upon Life? It may be that here science has much to discover, and that, as the ancient tradition maintains, the physical effects are considerable. (It has been suggested that sunspots are bound up with the gravitational pull of the planets on the outer layers of the sun. And sunspots affect radio communication and the performance of various instruments --- a series of aeroplane crashes early in 1946 were at the time attributed by some to sunspot activity. More important are the effects upon the weather, and so upon vegetation and all living organisms. For instance, the study of the annual rings of certain trees has shown that rate of growth is linked with the 11-year sunspot cycle; possibly, also, the migration of certain animals, at 11-year intervals, depends (however

+ Note that, to attempt to 'explain' the kingfisher, it is necessary to drag in the Sun --- at the very least. For example (to take only one of many possible lines of 'explanation') we may refer from the kingfisher's wings to those of its Mesozoic ancestors; and from the survival value of the primitive wing to the splitting of the equable Mesozoic year into seasons --- an event which favoured the organism capable of migration; and from the birth of the seasons to some solar commotion which tilted the Earth's axis. Whatever degree of truth there may be in this and similar trains of thought, they all lead in the end to the Sun: the kingfisher is solar or nothing.

× Walden, 'Economy'.

° The Sun, p. 4. Mr. C. S. Lewis, The Abolition of Man, p. 49, has an interesting passage on our modern determination to strip the stars of all divinity and concreteness. * Nevertheless the abounding confidence of modern man in his ability to 'invigorate' the Sun is as much an assertion of the immanent life of the Sun as it is a denial of the transcendent life. Milton's bold words are typical of the mood: "When universal learning has once completed its cycle, the spirit of man, no longer confined within this dark prison-house, will reach out far and wide, till it fills the whole world and the space beyond with the expansion of its divine greatness He will indeed seem to be one whose rule and dominion the stars obey, to whose command earth and sea hearken, and whom winds and tempests serve; to whom, lastly, Mother Nature herself has surrendered, as if indeed some god had abdicated the throne of the world and entrusted its rights, laws, and administration to him as governor." Prolusiones Oratoriae. But in fact there is neither abdication nor usurpation: a man remains a man and a star a star. Astronomy is by stars, as well as about stars. Of course there is a sense in which Dr. J. Bronowski is right when he says that science is "not strange, not outlandish, and not at all magical; neither godlike nor devilish, but human". (The Listener, Oct. 27, 1949) This is true if we take the human to embrace the hierarchy, untrue if we take it by itself, as the merely human. Dr. Charles Abbot of the Smithsonian Institute has investigated at length the terrestrial effects of sunspot activity: see the Annual Reports of the Institute. His view that "major changes in the weather are due to short period changes in the sun" is not, however, unchallenged by meteorologists. On the relation of the growth of trees to the sunspot cycle, see E. Huntington, Earth and Sun, and Wells, Huxley, and Wells, The Science of Life, iii. p. 671. As long ago as a century and a half, Sir William Herschel noticed a connection between price fluctuations and sunspot periods.

indirectly) upon the same solar rhythm. Here, then, is one possible connection between the 'dead' planets and the 'living' Earth: it may well be that evolution would have taken a very different turn but for Saturn and Jupiter.) • But whatever the physical influences, there is no doubt about the psychical: \otimes the planets (as I pointed out in the previous chapter) have, by stimulating science in a hundred ways, played a large part in the intellectual growth of Earth.

What is reasonably clear is, first, that the mind and the life of the Sun are inseparable from his total physique, none of which is superfluous <u>in the adult stage</u>; and, second, that (by virtue of their inclusion in this totality) all his parts, down to the least of the asteroids, are abundantly alive. The biologists J. H. Woodger and Joseph Needham tell us that "a molecule, an atom, or an electron, if it belongs to the spatial hierarchy of a living organism, will be just as much 'alive' as a cell" + : by the same token Pluto, in the spatial hierarchy of the living Sun, is just as much alive as I am.

6. THE SOLAR OUTLOOK AND THE TERRESTRIAL.

The Sun is at once transcendent and immanent, at once above me and in me, other than myself and myself. As in theology so here --- the only way to avoid damaging distortions is to allow equal importance to the two aspects. All depends upon what I make my object. When (turning from men and species, from geospheres and planets) I become alive to the stars, † then I am this living star, though my human companion can see no change in me. According to him I remain nothing but a man; but, in fact, he is not in a position to say what I am, for he cannot see me. My amazing physical metamorphosis escapes him: the dissolution and remodelling of my body is apparent only to the travelling observer. ° To the latter it is obvious that I have the backing of a star. And even common sense must recognize that it is only because I put the sun behind me, at my back, that I am able to see my star-companions. As Sir Thomas Browne says, "Were it not for darkness and the shadow of the earth, the noblest part of the creation had remained unseen, and the stars in heaven as invisible as on the fourth day." * The transcendent Sun of day becomes the immanent Sun of night. And my nature is a rhythm of night and day.

When all the arguments have been put, this broad fact emerges ---the evidence for solar life is no different from the evidence for human life: at both levels I experience the abolition of this body. I find it no more difficult to reduce the Sun to an empty receptacle for stars than to reduce the man to an empty receptacle for men. ϕ It is not a case of human life sufficing to animate the solar corpse, by a species of artificial respiration, or undertaking to think and feel for ever vaster volumes of insensate matter. \otimes Man is utterly incapable of anything of the kind. How can this little brain, thrown out of gear by the slightest rise or fall of temperature, by a few grains of a common drug, or by the feeblest On the Moon's effects upon Life, see H. Munro Fox, <u>Selene, or Sex and the Moon</u>, and Dr C. F. C. Beeson in <u>Nature</u>, Oct. 26, 1946.

 There have been a number of attempts to link the periodicity of epidemics with the sunspot cycle. Thus Professor Tchijevsky (at the Third International Congress of Comparative Pathology, 1936) claimed to have established a connection between sunspot activity and influenza.
 ⊗ For example, the mind of the Sun owes something to that facet of itself called Victor Hugo, who wrote of the planets: "N'as-tu pas des amours pour ceux-ci et des terreurs de ceux-là? N'es-tu pas un peu épris de Vénus? N'es-tu pas très effrayé de Saturne?" (Les Tables Tournantes de Jersey).

Nor is our modern painting exclusively terrestrial. Paul Klee says of the artist (for whom he is admirably qualified to speak): "Then, flying off to the infinite, he thinks: it is very probable that, on other stars, creation has produced a completely different result. Such mobility of thought on the process of natural creation is good training for creative work. It has the power to move the artist fundamentally." <u>On</u> <u>Modern Art</u>, p. 47.

+ Needham, Order and Life, p. 117.

† On the tendency for worship to observe the hierarchical sequence, men turning their attention first to geospheres (rain, sunshine, thunder, the weather generally), then to the Moon, and finally to the Sun and the stars, see Payne, <u>History of the</u> <u>New World called America</u>, i. p. 474.

° Cf. F. H. Bradley: "If the soul is resolved and disappears into that which may restore it, does not the same thing hold precisely with regard to the body? Is it not conceivable that, in that interval when the soul is 'conditional', the body also should itself be dissolved into conditions which afterwards recreate it?" <u>Appearance and</u> <u>Reality</u>, p. 314.

<u>The Garden of Cyrus</u>, IV. 27. Blanco White's famous sonnet 'Night and Death' makes use of the same idea.
φ In his poem 'The End, the Beginning', D. H. Lawrence speaks of the "utter and absolute dark of silence and sheer oblivion" which lies at the core of the sun and of all things --- the core without which the sun would be "terrible".
⊗ Men have generally recognized that the

truth is the other way round. Thus the Sun was regarded by the Mystery religions of the Hellenistic age as the world-controlling reason -- <u>mens mundi et temperatio</u> -- the source of the reason in man, and the origin and final home of his soul. See Franz Cumont, <u>Astrology and Religion among the</u> <u>Greeks and Romans</u>, (trans. J. B. Baker). blow, take care of the solar system? The human brain is not the organ of solar thought, or the physical basis of mind in the Sun: it is only a small fragment of that basis. Even at the strictly human level, the brain is nothing without the rest of the body, and the whole man is involved in his mental functioning. And so, at their respective levels of mental functioning, are involved the whole body of Humanity, of Life, of Earth, and of the Sun. When the Sun thinks, the whole Sun thinks. I say that I think of the Sun and the stars. Now this statement is as true and as false as the statement that <u>I</u> turn on my axis and revolve about the sun. The question is: which "I" is responsible? The only "I" that can think Earth's thoughts and perform Earth's actions is Earth's --- and mine, in so far as I realize my Earth-hood. My realization is curiously uneven: for, while I know very well that it is as Earth that I revolve about the sun, and that it is as the Sun that I travel through sidereal space, I mistakenly suppose that it is as man that I possess this knowledge. But once I stop to consider, the inconsistency is obvious. When I deal with men I am not a brain, but a whole man become capacity-for-other-men; when I deal with planets I am not a man, but a whole planet become capacity-for-other-planets; when I deal with stars I am not Humanity, or Life, or Earth, but this star -- the living Sun -- reducing himself to nothing but an environment in which other stars can come to themselves.

Is this self-flattery? On the contrary, it removes all occasion for pride. For, firstly, I am as much less than man as I am more than man; secondly, to become anything at all, at any level, is to annihilate myself in favour of others; thirdly, I can only transcend my narrow human self by fully recognizing its limitations and its total inability to rise above itself. The solar thinking that goes on in me is not mine in any ordinary sense; for no man, as man, can lay claim to more than a fraction of his thoughts. Thinking that belongs to many levels happens in and through me, rather than by me. "It is absurd", says Plotinus ° of the Gnostics, "that they who have bodies like other men and are subject to sensuous desire, and to fear and anger, should form such a high idea of their own capacity, and should assert that they can attain to the intelligible, while they will not concede to the sun, which is far less exposed to passion and disorder and change, a greater wisdom than belongs to us men.... "The point is, not that this greater wisdom is inaccessible, but that it is inaccessible to man as such: it is inalienably solar. × Plotinus teaches that our soul is at once animal or sensual, human or reasoning, and suprahuman; and it is by virtue of the last that a man "thinks himself according to the higher intelligence, with which he has become identified, knowing himself no longer as a man, but as one who has become all together changed, + and has transferred himself into the higher region." Some centuries before Plotinus, the writers of the Book of Enoch grasped (in their own odd fashion) the essential fact that knowledge of celestial things is celestial knowledge (and not terrestrial or human), when they taught that it was the stars themselves who instructed humanity in the secrets of the heavens. * Certain of the stars --- or angelic Watchers of heaven --- having come down to earth to cohabit with the daughters of men, begot giants, to whom they revealed their secrets. "Baraqijal taught astrology, Kokabel the constellations, Ezequel the knowledge of the clouds,...Shamsiel

Anaxagoras, when asked what was the object of being born, replied, "To investigate the sun, moon, and heaven." (Heath, Greek Astronomy, p. xxxiii.) In a somewhat similar spirit, Maeterlinck writes; "We have no other thing to do in this life of ours than to seek to know where we are..... Not to know is merely vexatious; no longer to seek to know is the supreme, the irremediable misfortune, the unpardonable desertion." Mountain Paths, p. 174. Such passionate interest in the remoter environment is no more human (in the strict sense) than its subject matter. Our curiosity about the stars is the Sun's curiosity. We are quite justified in saying of people who dwell on these planes that they are not human. Nevertheless, as the Greeks believed, knowledge of the stars is a very important part of the wisdom that is in us --- the author of Epinomis, for instance, is chiefly concerned to show the value of astronomy as a means to true wisdom.

° Enneads II. ix. 5.

× In Harmonice Mundi, Kepler was chiefly concerned to explain the system of planetary harmonies heard by the Sun. If Kepler had been a mere visitor, his description of the solar system as a species of musical-box would be merely curious; but he is solar, and so are his absurdities. Similarly, the fact that our temperaments -- jovial, saturnine, mercurial, and so on -are interwoven with the planetary system, is by no means irrelevant to that system. Fernel's doctrine that the life principle in us is Sun-derived, and Leonardo's that all earthly souls are Sun-descended, are themselves solar phenomena, which no serious student of our Star may ignore.

+ Cf, II <u>Cor</u>. V. 16, 17: "Wherefore henceforth know we no man after the flesh he is a new creature: old things are passed away; behold, all things are become new."

* Better known is the story of Prometheus who, in defiance of Zeus, brought fire from heaven and taught mortals the useful arts, thereby bringing upon himself a punishment not altogether unlike that which befell the wicked stars of Enoch. And Prometheus was, on the side of his mother Clymene as well as of his father Iapetus, descended from Uranus or Heaven. Note the assumption that man cannot, by himself and without suprahuman help, acquire any but the most rudimentary knowledge. And the assumption is no wild one. Just as agriculture probably arose out of Earthworship, and was in that sense her gift, so astronomy arose out of star-worship, and was the stars' gift. Directly or indirectly, all our higher knowledge is 'from above'.

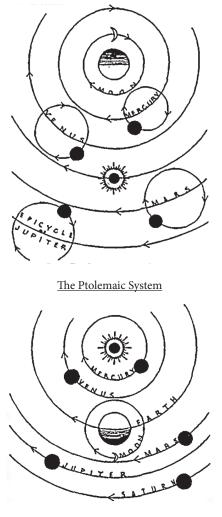
the signs of the sun, and Sariel the course of the moon." Their indiscretion did not pass unnoticed in heaven. The fallen Watchers are accused of having "revealed the eternal secrets which were preserved in heaven, which men were striving to learn", and are punished accordingly ---- archangels "took all the great stars (who had done these things) ... and bound them all hand and foot, and cast them in an abyss of the earth." \oplus

By means of such grotesque parables, man has, from early times, laid hold of the all-important fact that the mind in him is not only human, that the sources of his experience are cosmic. It is now possible, thanks to science, not only to rid the doctrine of fictitious detail, but to make the doctrine really operative. For, ultimately, there is only one science --- psychology. The other sciences are the psychology of the infrahuman and the suprahuman. The astronomer, for example, is a kind of stellar Freud or J. B. Watson. And indeed there are some psychologists -- notably Jung -- who are aware that their subject covers, besides the strictly human mind, the mind which operates at every level of the hierarchy. From both sides the <u>rapprochement</u> is being made --- only the most superficial psychology can confine itself to the human plane, and ignore the wider universe that science treats of; and only the most naive science can ignore the psychology of science. If the total personality is the psychologist's subject matter, and if the total personality covers the entire hierarchy, then the science which is the conscious working and self-revelation of the hierarchy is only psychology in disguise. The same astronomy is at once an important part of the Sun's psychology and of mine.

These are easy generalizations. Common sense asks for a concrete example of this suprahuman psychology.

Such an example is not difficult to find. What is Earth's original opinion of the sun? It is the Ptolemaic opinion that the sun revolves about her; that, in effect, she lies at the Sun's centre. Now it is essential to recognize that this is not an error: it is true for the juvenile planet, thinking in her pre-Copernican astronomers, and nothing has happened since their time to make it untrue. Earth as Earth is necessarily self-centred. But Earth is not only Earth. Transcending her geocentric limitations, she becomes a thoroughly self-conscious social being, with a new centre in each of her companions. In particular, she becomes heliocentric, and advances from terrestrial to solar status. The old geocentric view is not superseded -- Galileo and the Roman Inquisition were both right \times -- but the new heliocentric view is added to it. Clearly Earth is not abolished, neither is her private perspective rendered invalid: since Copernicus, the sun has not ceased to rise, and move across the heavens, and set. To grow is not to outgrow. The lower levels of physical and psychical functioning remain indispensable to the higher.

Note, first, that one and the same psychological principle (the principle of growth by shifting to new centres) appears at the human level and at the terrestrial; and second, that this is only to be expected, seeing that one and the same mind -- the mind that is in man rather than of man -- is involved throughout. Earth-psychology could not be more intimately linked with the human, in that the laws are substantially the \oplus I Enoch, VIII; IX. 6; LXXXVIII. 3. Cf. <u>Gen</u>. VI. 2. ff. Note that there are really two Jewish versions of the Fall, in which the introduction of evil is attributed to (1) the serpent (<u>Gen</u>. III) and (2) the stars -- or 'Watchers of heaven' or 'sons of God' -- (<u>Gen</u>. VI. and I <u>Enoch</u>). I suggest that this duality is true to the facts: the infrahuman serpent and the suprahuman star are inseparable --- the extremes that require each other and meet. When man (phylogenetically and ontogenetically) loses his primal innocence, he comes under <u>both</u> influences: he cannot become more than man without becoming less than man.



The Copernican System

× Now that there is no all-pervading ether relative to which motion can be measured, we are free to say of any point that it is at rest, and to measure all motion with respect to that point. This does not mean that any centre of reference is as good as any other. For my status in the hierarchy is a question of which centre I happen to choose. Thus, while Ptolemy and Copernicus are in a sense equally right, Copernicus realizes a higher level of his personality. same, and the experiencing subject is the same; the fact is that they cannot be separated without injury. The total personality, embracing every plane of the hierarchy and every department of science, is an organic whole. Jung \otimes may well say that the man who alters his world-picture alters himself, and that he whose sun still revolves about the Earth is a different person from one whose centre has shifted to the sun. The Copernican revolution which the former (as a self-conscious member of the society of men) has achieved at the human level, the latter (as a self-conscious member of the society of planets) has achieved also at the terrestrial level of his personality. +

The rule is simple: to advance from one level to the next, take the companions that are centred upon you, and centre yourself upon them. Put them at rest, and yourself in motion. In other words, place yourself at their point of view. Copernicus, leaping out of himself to catch a glimpse of himself (as Earth) from the sun's point of view, and Copernicus, many years earlier, leaping out of himself to catch a glimpse of himself (as a human being) from his playmates' point of view, is the same person making the same discovery about himself, and growing by the same method, but at two very different levels.

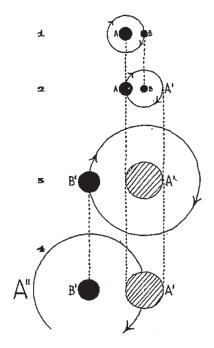
7. <u>SOLAR SENSE ORGANS</u>.

One reason why common sense fails to accord to the Sun a status surpassing that of Earth and Humanity is that no specifically solar sense organs are apparent. That a man is more than a collection of cells is abundantly clear, and not least from the fact that he has his own sensory equipment --- equipment which, while it is composed of cells, is a vast improvement upon the cellular. The Sun, on the other hand, seems to lack eyes worthy of a star.

Astronomical observatories are regarded by common sense as mere extensions of the human eye, improving its acuity and extending its range. But such extension involves a change of kind rather than a change of degree. In fact, everything goes to show that observatories are not human sensory equipment at all, but organs of Earth (in so far as they are used to study other members of the solar system) and of the Sun (in so far as they are used to study the other stars). ° It is true, of course, that, unlike the human eye, the observatory is artificial: it comes into being as the product of the most painstaking and elaborate foresight, and the manner of its evolution from prototypes is very different from the manner of biological evolution. But which of the two methods is appropriate to the higher level --- the old, slow, blundering, immensely wasteful method, where the best is a makeshift, or the new, swift, certain, extremely economical method, where each material and device is specially chosen for the work it will be required to do? There can only be one answer: it is <u>natural</u> that the higher organs should be <u>artificial</u>.* Inefficient procedure is no more praiseworthy for being natural than efficient procedure is blameworthy for being artificial; but the truth is that

⊗ <u>Seelenprobleme der Gegenwart</u>, (1931) p. 301.

+ Actually, of course, the geocentric view is not due to Ptolemy (who in the second century A.D. summed up the work of the Greek astronomers), and the heliocentric view is very much older than Copernicus. It was propounded as early as the third century B.C. by Aristarchus of Samos.



(1)The Ptolemaic stage, in which my companion (B) revolves about me (A). (2) The Copernican stage, in which our roles are reversed, and I grow to become an individual (A') of the next grade. (3.) The Ptolemaic stage again, in which my new companion (B) revolves about me (A).
(4)The Copernican stage again, in which I become an individual of a still higher grade (A").

° Aldous Huxley invites us to "consider the change in his being which the scientist is able to induce mechanically by means of his instruments. Equipped with a spectroscope and a sixty-inch reflector, an astronomer becomes, so far as eyesight is concerned, a superhuman creature; and, as we should naturally expect, the knowledge possessed by this superhuman creature is very different, both in quantity and quality, from that which can be acquired by a stargazer with unmodified, merely human eyes." The Perennial Philosophy, p. 2.

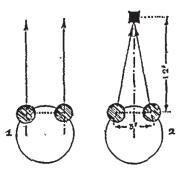
* Darwinism, Lamarckism, and Paleyism are all true in principle: some natural organs are the result of 'blind' selection; others have developed by use; a third kind are the product of design. All depends on the hierarchical level involved. The evolutionary story as a whole (and it <u>is</u> a whole) combines all three. such artifice is more natural than nature. The new solar sense organ on Mount Palomar in California is the work of nature at her best, and is worthy of its great owner.

How does Earth perceive her fellow planets, not as points of light that are uniformly small and uniformly remote, but as ranged at various distances and as comparable in bulk with herself? Human eyes are useless for such a task, and for two reasons. First, they are much too small (they each admit only one millionth part of the light that the Palomar telescope admits); second, they are much too close (their distance apart is much less than a millionth part of the distance between a pair of Eartheyes engaged in stereoscopic vision). The more remote the object I am examining, the larger my eyes must be in order that I may see it plainly, and the further apart they must be in order that I may gauge its distance correctly. My body must be big enough to provide two observation posts giving two distinguishable views of the object, otherwise my vision is not stereoscopic: the base of my triangle must broaden as the apex recedes. Thus to see a planet at its proper distance, I must use a pair of Earth-eyes or observatories some hundreds or thousands of miles apart. My body is scaled up and scaled down to its object, in accordance with the law of equality. As a child I saw that the cow could jump over the moon: the reason I now think otherwise is not simply that my moon has grown up, but also that I have grown up with it --- from child-size to Earth-size.

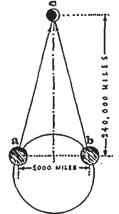
But my Earth-eyes must always be something less than 8,000 miles apart, and this base (which is Earth's diameter) is far too small to enable me to appreciate the distance of even the nearest star. Earth's incapacity to observe objects of higher status than herself is, of course, only natural. But where else in the Sun shall I find a home for my second eye which, along with my Earth-eye, will provide stereoscopic vision of the stars? On Mars, or on Venus? Even if a second eye were to exist on one of these, how should I use it? Apparently the conclusion must be that the Sun, unlike the Earth, is a celestial Cyclops, and that we have here passed beyond the limits of binocular vision.

The facts are quite otherwise. The Sun is magnificently provided with his own sense organs, by virtue of which he is able to refer his fellows to their proper places in the heavens, and to attribute to them their proper sizes and motions. That is to say, I am as well organized at the solar level for objective estimation of my equals, as I am at the terrestrial and the human levels. I am no more deceived (in my solar capacity) by the <u>apparent</u> luminosity and motion of a star, than I am deceived (in my human capacity) by the <u>apparent</u> rotation of men around me every time I turn my head, or by their continual swelling and shrinking.

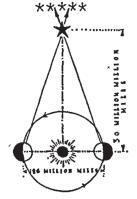
To what organs that are not Earth's do I owe this stellar outlook? Only observatory-eyes will do, and they must be many millions of miles apart. Even the sun's diameter -- a mere 864,000 miles -- is hopelessly inadequate. There remains the Sun --- the Sun whose Earth-ring is 186 million miles across. And, in fact, it is at the poles of this ring or orbit that the solar eyes are situated. (The circumstance that his eyes are six months apart in time, does not hinder, though it certainly complicates, the Sun's vision.) The one eye provides a slightly different picture of the stars from



<u>Convergence</u>. (1) The eyes are resting on a remote object. (2) The eyes, directed upon a near object, are pulled out of parallel by the eye-muscles, the state of which gives a clue to the distance of the object.



Parallax. The data needed to calculate the distance of the moon are (1) the length of the base-line that links observers (a) and (b); (2) the angle <u>bac</u>, between the direction of the moon at (a) and the base-line; (3) the angle <u>abc</u>. The 'convergence of Earth's eyes' (that is what observation of parallax amounts to) in this example is the same as the convergence of the man's eyes in the example given above --- 3" : 144" :: 5,000 miles : 240,000 miles. The diagrams are not to scale.



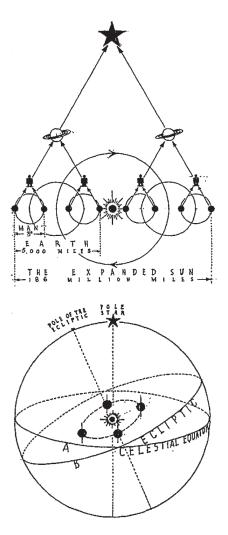
A lapse of 6 months alters the position of the near star relative to distant stars, so giving the solar observer a clue to the near star's distance. (In the same way, my right eye sees a near object in one position relative to the background, my left eye in another, and I am helped to place the object.) But even the base-line of 186 million miles is too short for measuring the distance of any but the nearer stars. Other methods have to be used for the more distant ones. that provided by the other eye (other in time and space, though it may bear the same name), and the difference gives the clue to the distances of those stars which have apparently moved.

(Note here that the physical growth of the primitive star into a solar system is in every way the prerequisite of its psychical growth. Only so are developed the thermal and chemical conditions of life; and only so are developed the spatial conditions of social life, which involves the objective appreciation of other stars. All other considerations apart, the original Sun was too small to know his kind, and consequently too small to know himself. But really it is misleading to separate psychical from physical development: at my solar level (as at every other) my constitution and growth are psycho-physical.)

Common sense objects that the astronomer cannot step off the Earth on to the Sun. Is he not, in reality, as Earth-bound when he is measuring the parallax of a star as when he is measuring the parallax of the moon?

Common sense is wrong. The astronomer is a master of the art of stepping from Earth to Sun, and he knows very well that his success in studying the stars depends upon his success in getting rid of his Earthhood. Until he ceases to be Earth and becomes the Sun, he cannot begin his researches into the stars as such --- hence the fact that so much of his work must consist of an elaborate mathematical denial of his terrestrial self. Recognizing that he has set up his observatory on a base as unsteady as a raft in a rough sea, he has to note the motions of this base so that he can discount them from every motion which he observes in the sky. Only when be has made full allowances for Earth's behaviour as Earth, removing all the 'errors' for which she is responsible (and they are many), is he in a position to look out upon the Sun's world. His calculations have made him a new creature. Now, as be looks out at the stars, he does so with a star's backing: behind him, attached to him, is the giant and stable Sun, and no mere whirling fragment of a planet. No boast could be more vain than Ptolemy's -- "When I search out the massed wheeling circles of the stars, my feet no longer touch the earth" \times -- for the only way to get the better of your limitations is freely to admit them all. The Alexandrian's "massed wheeling circles" were not above him but at his feet. He did not realize the paradoxical truth that the only way to step off the planet is consciously to take root in her, and never forget your roots. To rise in the world is to know all the reasons why you can never do so.

For common sense, of course, this is so much theory, carrying very little weight; and it takes more than a few calculations to turn a planet into a star. In reply let me say that the essential difference between a planet and a star is a theoretical difference --- a difference between two world-views, two attitudes to the universe, two estimates of the character and behaviour of one's fellows. Nevertheless there is plenty of evidence, of a sort which common sense can scarcely rule out, of transformation. There is, for instance, the coelostat, a solar organ which is in the Earth but not of the Earth, seeing that its function is precisely to counteract all that Earth does: it is an Earth-eliminator, conferring solar status upon the user. The gyroscope is another such unearthly instrument --- when it Page 240



The celestial equator (A) is an imaginary line in the sky exactly above Earth's equator. The ecliptic (B) is an imaginary line in the sky in the plane of the Earth's orbit. The position of a star may be given with reference to A (it is then described from the terrestrial point of view) or to B (it is then described from the solar point of view).

× Heath, Greek Astronomy, To be fair to Ptolemy, I must quote the whole passage --- "I know that I am mortal and the creature of a day; but when I search out the massed wheeling circles of the stars, my feet no longer touch the earth, but, side by side with Zeus himself, I take my fill of ambrosia, the food of the gods." But it is not enough to acknowledge, as Ptolemy does here, our human limitations, while ignoring our terrestrial limitations. Egocentricity is egocentricity whatever the level.

is set going with its axis pointed to some star, it remains in that position, irrespective of the Earth's rotation, and follows the star as it rises and sets. The gyroscope is, for the time being, sidereal. Even the clocks of the astronomer break loose from the Earth: keeping sidereal time, they tell him, not where the sun is in the sky, but where the stars are. $^{\circ}$

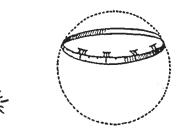
8. MAN AS A SOLAR BEING.

If it were only as an astronomer that a man becomes solar, then few would ever attain to that distinction, and those few only at intervals. But the truth is that the life we all lead is, in countless ways, a life in the Sun: rather it is the life <u>of</u> the Sun. Let me give a few examples, derived from everyday experience.

The garden which I cultivate is not one garden but a number of gardens. The first of these is that ordinary rectangular plot of land (measuring about a third of a rood) which common sense and the title deeds credit me with. But such a plot is really not a garden at all: it is far too small to be anything of the kind. For a garden needs a place in the sunshine of day and a place in the darkness of night, and the two places are thousands of miles apart. My little plot must extend itself accordingly: to grow anything, it must first grow itself. It must become a terrestrial property some twenty thousand miles long, no less than a local property some twenty yards long. The tiny oblong patch must develop into a vast Earth-ring, part of which is in perpetual day, part in perpetual night. Now this is not an unnecessarily whimsical way of stating the plain fact that my garden is what it is because it rotates daily about the planet's axis --- for an observer with a generous grasp of time (i.e., for one whose specious present is sufficiently capacious) my garden is not a tiny patch that moves in a big circle, not a visible object making its way along an invisible path, like a bead on a fine thread; it is the whole circle filled in, the moving object become the still path. To such an observer my Earthring garden is as much a physical fact as my third of a rood is a physical fact to the borough surveyor. * The two versions of the extent of my land are equally valid and equally objective. (In a later chapter I shall argue that the <u>only</u> way to occupy space is constantly to patrol it, and that static occupation is impossible. Positions are like bayonets --- you can do anything with them except sit on them. Matter itself takes time to fill space. Nothing exists at this moment.) Every garden, then, is ring-shaped, part dark and part light, and every plant in every garden follows the same pattern. And the two exceptions are not exceptions at all --- there are no polar gardens.

My garden is an Earth-garden no less than a British garden. Also it is a solar garden, a Sun-ring no less than an Earth-ring, 186,000,000 miles in diameter as well as 6,000. It is no valid objection to say that only a minute fraction of this circular plot of Sun is truly mine, seeing that all the rest is inaccessible now, and remote in time; for it takes time to walk round even the smallest piece of land. This house does not cease to be ° Similarly, an important part of the spectroscopist's work is to recognize and allow for the effects produced in sidereal spectra by the planet's atmosphere, as well as by his own lenses and photographic plates. He too must in effect, by close study and then denial of everything merely planetary in his observations, outgrow Earth.

Paley (in his <u>Natural Theology: or Evi-</u> <u>dences of the Existence and Attributes of</u> <u>the Deity, Collected from the Appearances</u> <u>of Nature</u>, 1802) remarks that the relation "of sleep to night, is the relation of the inhabitants of the earth to the rotation of their globe; probably it is more; it is a relation to the system, of which the globe is a part; and still further, to the congregation of systems, of which theirs is only one. If this account be true, it connects the meanest individual with the universe itself; a chicken roosting upon its perch with the spheres revolving in the firmament."

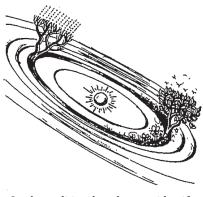


* The transition from Bohr's solar atom, with its planetary electrons, to Schrödinger's wave-model, is matched by a somewhat similar transition at the solar level itself --- planetary particles are no longer valid, and their place is taken by planetary rings. Aristotle had some justification after all (<u>pace</u> Dr. S. H. Mellone, <u>Western Christian Thought in the Middle</u> <u>Ages</u>, p. 167) for treating his planetary spheres as physical facts rather than as mathematical hypotheses. There really is in the Sun a Land of Perpetual Spring, just as there really is on Earth a perpetual Land of Nod.

In his well-known poem 'Solar Creation', Charles Madge takes for his theme "The sun, of whose terrain we creatures are". And not only (I would add) are we creatures sprung from the solar terrain, but we actually stand upon it now. The ground under our feet is at once national, terrestrial, and solar. I do not have to move an inch to step from Earth to Sun; yet the dimensions of the patch of Earth on which I stand are very different from those of the patch of Sun. mine because I cannot be upstairs and downstairs at the same moment. Neither does my Earth-garden cease to be mine because it is so big that I need a whole day to look over it. And the year which I need to make a tour of my Sun-garden is (in view of the size of the garden) the very minimum period that I could expect or desire --- an estate that reveals all its beauties at a glance is nothing to be proud of. Common sense, of course, says that I look out upon the same patch of ground every day; but the delight of my solar garden is that every day reveals a new stretch of it. The trees of this part are bare, the flowers are dead, and the grass is snow-covered; but I am coming to another part (some 300,000,000 miles further on) where the trees are full of leaves, and there is an abundance of flowers and birds and butterflies. And this part is intimately related to that, for the garden is a well-integrated whole. My digging here does not make sense without my sowing further on, and the flowers I shall pick in the far distance. In fact, the only good earth, the only soil worthy of the cultivator's pains, is the Sun's. Every seed is planted in a field the size of a star, and in a star. Every flower is a sunflower.

Agriculture is only one instance of solar rhythm in our life; the calendar provides another. * All anniversaries are annular. They are positions in space, and indeed it is almost impossible to avoid speaking of them as such --- they are distant or close at hand; they are spaced conveniently or inconveniently; they lie ahead of us, and draw near, and come round again; we observe them when they arrive, and then we leave them behind us. This is the language, not of a traveller on Earth, but of a starexplorer. Our birthdays and wedding anniversaries, our saints' days and public festivals, our red-letter days of every kind, are so many places in the Sun --- places which we approach at a pace exceeding a million miles a day. Christmas is a feature of the solar landscape which we discover periodically. Our calendars are true Sun-maps, × charts of a ring-shaped country whose diameter is 186 million miles: failure to observe times and seasons is failure to observe the natural configuration of this our vaster native land. But in fact it is impossible to ignore the scenery past which we are travelling: the whole of our life -- in its work and play, politics, religion, studies, finances, dress, food -- is adapted to the climate of our solar country just as surely as it is adapted to the climate of our terrestrial country. In respect of its annual rhythms our life is lived by the Sun rather than in the Sun: it is solar organization, spatial and altogether present in the Sun, temporal and therefore elsewhere for man. Here, in this expanded star (so different from the abstract solar system of the astronomers), the life of man begins to realize what is implicit in it; his time-shattered and time-scattered existence is here gathered up and concentrated. The Sun, whose Now is twelve months, is a notable station on the journey from the time-ridden to the timeless.

If the pulse of our lives is the pulse of a star, if the annual pattern of human existence is the Sun's psycho-physical organization, then little wonder that men in all countries and throughout history should regard the correct observance of annual rites and festivals (particularly those which are consciously linked with the Sun) as all-important. Our present laxity in these matters is really a partial breakdown of our solar physique. The self-styled rationalist, simultaneously reducing the living



* On the traditional tendency to identify the cosmic and the social elements in the liturgical year, see Christopher Dawson, Religion and Culture, p.138. The archon of Venus, in Mr. C. S. Lewis's Perelandra (p. 237), is present throughout the planet's orbit. In the later phases of Greek religion, not the planet only, but also its sphere -- consisting of the places where, for the moment, the planet is not present -- is filled with the spirit of the planet. The sphere is all Mercury, or Mars, or Venus. (See Gilbert Murray, Five Stages of Greek Religion, IV.) This doctrine, however unacceptable in form, is in substance perfectly true. It restores to the small and moving part the dimension which reveals it as a large and stable whole; it glimpses the truth that, given time, the part is the whole. This topic is more fully treated in Chapter XVI.

× The Chinese Emperor was lord of the sacred calendar, and the imperial palace was planned and regulated accordingly. For example, as the seasons changed, so the Emperor changed his quarters, his dress, his food, and even his music. Thus the solar character of life was not only recognized, but made central and holy. Indeed, the whole State-cultus was, basically, the ritual harmonizing of heaven and earth. The ancient Chinese astronomers who claimed to produce the eclipses they predicted (and to avert them when the prediction failed) were not necessarily fraudulent or mad. If I claim to move my human body why should I not claim to move my solar body? --- the claim is equally difficult to substantiate in the two cases. The astronomer's claim that he arranges an eclipse is no more fantastic than the general's claim that he wins a battle, or the builder's that he puts up a house, or mine that I am moving the hand that writes this. We do as much of the world's work as we sincerely claim to do. The Sun's behaviour is a part of our 'automatic' or 'reflex' behaviour, until we make it fully conscious and deliberate. If the fly on the hub of the chariot wheel, in Aesop's fable, really could feel responsible for the wheel's dust, his claim to have raised it would not have been vainglorious. Thus Edward Caird: We cannot give man credit for what goes beyond his view of himself --- "He is what he thinks himself, and thinks himself what he is." Evolution of Theology, ii. p. 302.

Sun to a collection of discrete particles in respect of its space, and to a collection of discrete moments in respect of its time, attempts solar suicide. † To dismiss as mere superstition the yearly rites that bind man to the Sun, without supplying in their place a more reasoned and conscious version of the selfsame impulse, is more than irrational: it is a kind of madness, in which a man cuts himself off from himself. ° With modern Western man, this dissociation has gone, perhaps, as far as it can go, and the reaction is already beginning. Indeed it may well be that the cults of the future are no great improvement upon the vacuum that they fill. The only safeguard against blind nihilism (with its denial of the 'unconscious') on the one hand, and blind superstition (with its surrender to the 'unconscious') on the other, is to render the 'unconscious' conscious. That is to say, we ought to bring to light, without reservation or concealment, the whole range of human personality from the lowest to the highest hierarchical level. The alternatives to this attempt at full self-consciousness are those equal and opposite extremities of failure --the modern insulated self, and the primitive submerged self.

In other words, if I do not give the Sun his due he will take more than his due. To show that the danger is no invention of mine, let me cite the example of Sun-worship in Mexico. The cult of Tonatiuh (that is, the Sun) was a mixture of profound and beautiful intuitions with barbaric practices. The god, after his morning conquest of the stars, and his long journey all day across the heavens, sinks exhausted into the west, shedding in every red sunset his precious blood for man. Man's duty is obvious --- the god must be sustained. The sacrificial priest-victim, whose blood is shed to replenish the Sun's, is identified with the Sun, and leaves Earth to take up his new duties in the sky. Note that, not only does man feel responsible for the Sun's continued functioning, but he realizes in some fashion his own Sun-hood: indeed he re-creates the Sun. All this came to an end, of course, four centuries ago, when Cortez conquered Mexico. But the significant thing is that the Mexican Government have recently revived on a magnificent scale the pageantry of the renewal of the Sun. × Thousands take part, with great enthusiasm, in ceremonies which (apart from the human sacrifices) follow the ancient ritual very closely.

Here, then, is one of innumerable indications that our nature remains what it was: we can repress and deny, but not kill, the living Sun, for the simple reason that our own life is, in one of its aspects, his life. Comically enough (tragicomically rather), we imagine we know so much better than Pythagoras, and Plato, + and Aristotle, and the Stoics, and the Alexandrine Fathers, * and Plotinus, and almost all the writers of the Hellenistic Age, for whom the Sun was gloriously alive. We are confident that the innumerable rites by which men have everywhere sought to identify themselves with the Sun are childish practices that we have altogether outgrown. But in truth it is ourselves who are, for the present, not in our right minds. And the danger is that when we come to ourselves, we shall find too much of ourselves in the Sun, and too little above and below the Sun. Always we tend to rush from the extreme denial to the extreme assertion: it is a case of all or nothing. Safety lies in recognizing nothing less than the whole man, and rendering to every level no more † "The sun is a great source of bloodvitality, it streams strength to us. But once we resist the sun and say: It is a mere ball of gas! -- then the very streaming vitality of sunshine turns into subtle disintegrative force in us, and undoes us." D.H.Lawrence, <u>Apocalypse</u>, p. 50. --- Lawrence's intuition is not so far, after all, from the exact truth.

° A mere man is 'not all there'. Dr William Brown writes, "It is the feeling of isolation from nature, animate and inanimate, which is the terrible thing, and which we find in such pronounced form among some of our mentally deranged patients." <u>Mind and Personality</u>, p. 283.

"Not basely to contract thy soul" was one of the maxims that Marcus Aurelius laid down for himself. (<u>Meditations</u>, VIII. 49.) Something like a base contraction of the soul is endemic in modern man.

For many striking instances, taken from many lands and many ages, of the belief that the Sun's business is man's business, see Frazer's Golden Bough (Abridged Edn, 1924), pp. 78 ff. The king, or the priests, or in some instances the common people, feel responsible for the behaviour of the Sun, helping him on his journey with many rites. The Chilcotin Indians used to walk round in a circle leaning on staves, in order to help the Sun during an eclipse; the Pharaohs, as representatives of the Sun, perambulated the walls of a temple to ensure that the Sun should perform his daily journey; the Brahmin's morning offering causes the Sun to rise.

There are three necessary stages: (1) the primitive belief in magical control; (2) the scientific destruction of this belief; (3) the recognition that, so far from destroying the belief, science may confirm it and raise it to a higher plane.

× For a description, with photographs, of the pageant held in the restored Temple of Quetzalcóatl, see Carmen Cook's article 'The Creation of the Fifth Sun', in <u>The</u> <u>Geographical Magazine</u>, Aug. 1938.

+ See, e.g., Plato, <u>Laws</u>, 898; <u>Timaeus</u>, 38; <u>Republic</u>, 507-9.

* Origen taught that all celestial bodies were living beings. A star may sin, and is endowed with will and desire; the Sun desires freedom from the body, but continues on his way in a spirit of service. Clement held similar views. See R. B. Tollinton, <u>Alexandrine Teaching on the Universe</u>, pp. 89 ff. and no less than its due.

9. <u>THE SUN, AND THE PURSUIT OF TRUTH, BEAUTY, AND GOOD-NESS</u>.

There now arises a query of the greatest moment --- what is the use of the Sun, apart from his physical functions? What, in terms of the spiritual needs of man, of his aspirations and his destiny, is the value of the solar level of integration? What essential evolutionary stage, what phase of self-realization, finds embodiment here?

Now, these questions are no mere academic exercise, for common sense emphatically says that the living Sun, no matter how true a fact, and no matter how necessary to the physical well-being of man, is superfluous otherwise, irrelevant to his moral well-being, and perhaps best left alone. The saint and the thinker, if not the poet, do very well without any notion of the living Sun. ° It is generally acknowledged that, to grow to his full stature, a man needs only to act as a conscious organ of the social body (with its many subdivisions, from the family upwards) and (many would add) as a conscious organ of a much greater body --- the Whole. In other words, to be a loyal freeman of the city of man and of the city of God is the whole duty and privilege of man, and no other citizenship is required or permissible. Or (since there is an increasing concern, in Western religious thought, for the animals) let me go to the limit, and say that the hierarchical grades which are now recognized as relevant to the moral life are those of the ('voluntary') bodily organ, of the human body as a whole, of the many mesoforms that link man with Humanity, of Humanity, of the animal kingdom, and (for rare souls such as Albert Schweitzer) of Life. But the unspoken assumption everywhere is that the units that stand above Life -- in particular, Earth and Sun -- add nothing of value that has not already been included below, and that will not also be included above, at the level of the Whole. They may therefore be safely ignored. *

To this formidable-looking objection let me say, at once, that my chief task in this inquiry is to lay bare, so far as I am able, the whole of anatomy, without regard to its practical value. The value that counts here is truth: whether the truth happens to be good and beautiful and useful, or evil and ugly and useless, is not the primary consideration. And I take it that the truth of my Sun-hood -- as nothing less than a star can I live in this universe -- has already been sufficiently established, at least on the physical side. As for the psychical aspect, if that (though actual) is superfluous, at least my realization of its superfluity cannot be superfluous. It is advisable to know the worst about oneself.

But this will not do. To believe that there exists a vast hierarchical organization linking Humanity and Life with the Whole, and that in it all psychical and moral life is either moribund or absent, is to assert the discontinuity of nature and its opaqueness to the light of reason. Is it likely that the fabric of the universe, after steadily improving in de-

° It is the poet who witnesses to the sidereal level, while the priest and the philosopher have temporarily forgotten it: he keeps the truth alive, against the time when it will flourish again. A good example is Victor Hugo, who wrote, "And, in the midst of all these concentric abysses you would have me shrink and shrivel up into my ego! Into what ego? Into the I of my flesh, into the I that eats, the I of my digestive apparatus, the I of my clay? You would have me refuse my adhesion to the indivisible! You would have me refuse to obey the law of gravitation! No. It may not be. The pancreas is not the sole consideration. The processes of my chyle, my bile and my lymph cannot be the goal of my philosophy. The sidereal universe is in question." (Intellectual Autobiography, 'Things of the Infinite'.) What an age will not take from its philosophers it will take from its poets: what it rejects as false, it will often accept as beautiful. If C. F. Krause, who, in his ethical philosophy of man, links terrestrial humanity with humanity in the sun, had been a poet, nobody would have accused him of writing nonsense.

* Yet, if we have any imagination at all, it should occur to us that stellar procedure may be to us as human procedure is to our dogs --- something that goes on over our heads, unless we happen to be a Rilke or a D. H. Lawrence or a George William Russell. When we are shy of the stars; when walking out suddenly into the starry night is as much of an ordeal as walking into a drawing-room full of strange people, then we shall know we are coming into our starhood. And Russell's words will be true of us: "In this dilation of consciousness he felt the gods were with him, and it was then he looked up at the stars, feeling in an instant of vision that he was comrade with them and with all god-inspired life." The Interpreters, p. 2.

sign from the foundation up to the middle storeys, should then suddenly deteriorate, and mount an impenetrable top-heavy mass on such a fine substructure? + Or, if this is not improbable, is it likely that the structure should, in spite of everything, suddenly come to perfection at roof-level, thus doubling its discontinuity? Large tracts of reality may be somehow defective, or arbitrarily fashioned; but all our experience goes to warn us that the fault is much more likely to be in us than in reality, and that the values we miss are there if we could but adjust our capacity to them. Though it is more by faith than by sight that we apprehend the reasonable order of the universe, and deny that it is idiotic or meaningless, our faith is wonderfully borne out in practice. Science is founded upon such a faith, and common sense could not manage for a moment without a large measure of it. ° There are, then, even before we come to the empirical evidence, excellent grounds for doubting the commonsense view that the Sun is only of physical importance. And, as soon as we go into details, it is apparent that the 'astronomical' levels of the hierarchy are of the greatest moment in the unfolding of the spirit which is in us. The bridge of the suprahuman is neither a folly nor an ornamental background for the human scene: on the contrary, it is the only way across the gulf that separates man from his true home, and every span of this viaduct is needful. Indeed the extraordinary thing is that we should ever have imagined otherwise, that we should for so long have concealed from ourselves the identity of the better part of man with the more exalted hierarchical orders. But there are signs that the intellectual climate of our time -- the weather in which only the infrahuman can thrive, and against which the suprahuman has to wrap itself up till it is past recognizing -- is unsettled and about to change. ×

I come now to the evidence that the Sun, like the other astronomical orders, is actively concerned in the attainment of (I) truth, (II) beauty, and (III) goodness.

(I) The proposition that knowledge of the stars is knowledge by the stars, and the further proposition that this knowledge tends to be of a high intellectual order, guiding and inspiring to a large degree the development of science, have already been supported by evidence which, I think, carries conviction --- or, if it fails to do so, then nothing I can add to it is likely to mend matters. Our incalculable debt to astronomy, both for the vision it directly gives, and for what it inspires or suggests or demands indirectly, is obvious enough. Less obvious is that very different way of saying the same thing --- the mind that is in us is in great part stellar, or it is nothing.

(II) Nor do I need enlarge here upon the beauty of the heavens, or the role which they have played throughout history in firing the aesthetic imagination, or the poetry they have inspired. * It is only necessary to add that the heavens improve upon acquaintance, and there is much more in them than meets the casual eye. Bruno, for example, did not look upon the same stars as his inquisitors: in him the artist was joined to the philosopher and the mystic --- the astronomer in him is half poet. The immense enthusiasm with which the Renaissance welcomed the new heliocentric universe, and the still more wonderful system in which

+ The Apostolic Fathers and the Hermit Saints had little doubt as to the quality of the 'higher levels'. Earthly spirits, says The Shepherd of Hermas (Mand. XI), are feeble, but everything that comes from above has great power -- even hail hurts a man's head! Ignatius (To the Ephesians, IX) speaks of believers as stones "carried up to the heights by the engine of Jesus Christ using as a rope the Holy Spirit". Evagrius (I. 13) says of St Simon Stylites: "This man, endeavouring to realize in the flesh the existence of the heavenly hosts, lifts himself above the concerns of earth, and, overpowering the downward tendency of man's nature, is intent upon things above: placed between earth and heaven, he holds communion with God, and unites with the angels in praising Him; from earth, offering his intercessions on behalf of men, and from heaven, drawing down upon them the Divine favour." (Margaret Smith, Studies in Early Mysticism, pp. 21-2.) The idea was all right, but to spend 30 years on top of a 72-foot pillar was not the best way of putting it into practice.

° Few nowadays would have the hardihood to say with Hegel, "What is reasonable is actual, and what is actual is reasonable". (<u>Encyclopaedia</u>, 6.) Nevertheless, without making some such assumptions as these, philosophy, or indeed any serious thinking, could never get under way.

× Between ourselves and God -- nothing. "First, you and I, just as we are in this room; and the moment we get below that surface, the unutterable absolute itself! Doesn't this show a singularly indigent imagination? Isn't this brave universe made on a richer pattern, with room in it for a long hierarchy of beings?" William James, A Pluralistic Universe, p. 175. Cf. Olaf Stapledon: "The assumption that man is of the highest order of importance seems to be based upon nothing but lack of imagination, Of course mere physical immensity and subtlety do not themselves constitute intrinsic goodness in the universe. But if we claim intrinsic goodness for human persons we must recognize that the physical immensity and subtlety of the universe do suggest, and do offer scope for, beings incomparably more developed than human persons. The human race is rooted in a very minute fraction of the whole universe, and it is possible, even probable, that the rest contains modes of life which excel us in mental lucidity as man excels the amoeba." Philosophy and Living, i. pp. 34, 35.

^{*&}quot;....You stars,

is it not from you that the lover's delight in the loved one's

face arises? Does not his intimate insight into her purest face come from the purest star?"

the Sun himself is only one of myriads, was as much an apprehension of cosmic beauty as it was of cosmic truth. Here was an escape from a prison-house of the imagination into an astronomical El Dorado, rich with unending possibilities of life and beauty, and at least as valuable for what it hinted to the artist as for what it proclaimed to the scientist. It was as if the pent-up aesthetic spirit of man had at last broken bounds, refusing to be contained in a smaller compass than the galaxies. And this spirit, of which we are the heirs, cannot owe so much to the heavens without itself being heavenly.

(III) The ethical prerequisites of science are well known --- the indispensable humility before the facts, the selfless devotion to truth whatever the consequences, ϕ the willing admission of human limitations (and indeed the deliberate study of the instrument's defects, in order to allow for them). These are more than a kind of intellectual asceticism or girding of the loins: they are the necessary <u>moral</u> equipment of the man of science, and also (to a less extent) of all who are alive to his work. There is a sense in which a thoroughly bad man is disqualified from studying the Sun.

But there is another, and less advertised, aspect of the morality of science --- the matter, no less than the method, of science has moral implications. Because man is more than man, ° his egoism is more than human egoism, and his sins are on a cosmic scale. Thus it is common to find that a good man is a bad planet, or vice versa. The good man is not wholly virtuous until he is good at all levels of the personality --- until, for example, he is a reformed planet and a reformed star. Θ That is to say, the Copernican revolution by which he is enabled as a child to see himself and his world through another's eyes, is only one of a series of such revolutions of increasing scope, every one of which must be accomplished if the child is to grow to his full moral stature. + Again and again he has to shift centre. The man whose family or country lies at the centre of the universe, as the end to which all other families or countries are means, may as father or patriot perform miracles of self-sacrifice, but he is still self-centred. Self-centredness has to be overcome level by level, painfully and painstakingly, leaving no exceptions. The mediaeval saint, in so far as his Earth was the hub of the universe, was like Joseph dreaming that the sun and moon and stars bowed down to him, and anything but saintly. A good planet knows that it is only a planet, a good star that it is only one of billions, and that its centrality is more apparent than real. If we were simply inhabitants of a star or a planet, we could leave them to work out their own salvation, but this is impossible seeing that they are ourselves --- if they go unsaved so do we; if they remain selfcentred we remain self-centred. It is incumbent upon us to reform this planet and star of ours, and in this work science is our chief instrument. Of course there are other aspects of moral advance (intension may not be neglected for extension *), but in the end it will be found that man's salvation involves universal salvation, if only because he is himself universal. × Because his evil is suprahuman, his good must be suprahuman also. He drags down the Earth and the Sun in his fall, and his recovery is their restoration.

These lines, from Leishman and Spender's translation of Rilke's 3rd Elegy, are (in at least one sense) as true as they are beautiful.

"By this knowledge", says Bruno, referring to the Copernican theory, "we are loosened from the chains of a most narrow dungeon, and set at liberty to rove in a most august empire; we are removed from presumptuous boundaries and poverty to the innumerable riches of an infinite space, of so worthy a field, and of such beautiful worlds.... It is not reasonable to believe that any part of the world is without a soul life, sensation and organic structure. From this infinite All, full of beauty and splendour, from the vast worlds which circle above us, to the sparkling dust of stars beyond, the conclusion is drawn that there are an infinity of creatures, a vast multitude, which, each in its degree, mirrors forth the splendour, wisdom, and excellence of the divine beauty." (Frith, Life of Bruno, pp. 42 ff.)

 ϕ "In its best, its sincerest form scientific detachment contains, I believe, a core of piety, an emotional acceptance of the universe <u>whatever</u> its nature turns out to be. This I regard as a more sincere piety than the attitude of those religious people who insist that the universe must conform to certain moral standards if it is to be emotionally accepted." Olaf Stapledon, <u>Saints and Revolutionaries</u>, p. 85.

° "Humble yourself, weak reason; be silent, foolish nature; <u>learn that man infinitely</u> <u>transcends man</u>." Pascal, <u>Pensées</u>, 434.

Θ Rosetti only announces his own limitations when he says that "it makes not the slightest difference to anybody whether the earth goes round the sun or the sun round the earth." It makes a world of difference.

+ Note that priority of position is not priority of status. The defect of the Ptolemaic cosmology is not that it makes too much of Earth, but rather that it makes too little: the sublunary world, inferior to all the spheres, is the repository of all imperfection. Self-centredness is as often self-abasing as self-glorifying. Thus Pascal: "Let the earth appear to him a point in comparison with the vast circle described by the sun; and let him wonder at the fact that this vast circle is itself but a very fine point in comparison with that described by the stars." Pensées, 72.

* Quality matters, as well as scope: to dilute one's sympathies, making a little go a long way, or to extend one's loyalty at the expense of its genuineness, is no gain at all.

× Cf. <u>Rom</u>. VIII. 21, 22.

It is important to remember, however, that while the work of science is an essential ingredient of this cosmic process, it is in itself quite insufficient. In so far as the scientist, while shifting his 'theoretical' centre, retains his 'practical' centre fixed and unchallenged, he remains egocentric. ° If for him Earth is the sole repository of the life of the Sun, and the Sun is (so far as he can tell) the one spark of life in a dead universe, then it is of little consequence that Earth is tiny and eccentric, or that the Sun is only one of myriads and extremely remote from the galactic centre. Earth and Sun are still, in effect, the hub of the universe, and the true Copernican revolution has yet to be accomplished. By itself, our science necessarily remains Ptolemaic, in that it has little to say either for or against the existence of other life in the universe. It is neutral, but its influence in this matter is far from neutral: the idea has got about that the universe is, as a matter of scientific fact, a howling wilderness, a ghastly and altogether pointless rubbish heap, in which an accidental life-speck survives for a few moments as if by miracle; it scarcely occurs to us that there may be in the heavens other centres of life than our own --- centres worth shifting to. On this subject I say enough elsewhere in this book. The points to note here are, first, that at no level can I prove that my companions are my equals in worth and status; second, that until I am prepared nevertheless to take them as such on trust I can never become social, or self-conscious, or self-transcending; third, that science and art and religion are partners in this act of faith. Every complete Copernican revolution is threefold --- at once the discovery of a new truth, an artistic creation, and an act of piety. In it the cognitive, emotional, and conative sides of the mind act as one. And everything depends on it; for my life is nothing else than my companions' life, and the more I find in them the more I have. Only by saying 'Thou' to my equal (after the manner of Buber) and ceasing to say 'it' of him, can I complete the work of the scientist and the artist, and find my new centre. This is a moral universe, well fitted at every level to bring out the best in us. It is not merely that the planets and stars are a graduated series of moral exercises, or problems in resurrection whose solution means our resurrection: rather they are, in their living reality, the very working out and embodiment of the one life that is in us trifurcated into science and art and religion. Their threefold Copernican revolutions make them. *

10. THE SUN, AND THE MYSTICS.

Nevertheless (it may be objected) the universe of the typical mediaeval mystic was thoroughly geocentric; it was also biocentric, and anthropocentric; indeed it might be said to revolve about Christendom in general, and (say) the Western Church in particular. Yet this extreme of intellectual self-centredness at the higher levels of the personality (an extreme of which anyone with the rudiments of education is now incapable), even when it went along with indifference to natural beauty, by no means prevented the attainment of the mystic's goal, which is the 'unitive life'. Is it not apparent, then, that while Copernican revolutions have intellectual and aesthetic and moral value, they do not necessarily enter into the ° Or, more accurately, in so far as he places himself at the new centre simply and solely for scientific purposes, and for all other purposes remains at the old centre, he is still Ptolemaic.

The current and acceptable way of presenting the facts is to describe the Sun as psychologically important, inasmuch as it stands for a stage in the integration of the personality. Thus Jung: "The sun is a symbol of the wellspring of life and of the final wholeness of man (as hinted at in the solificatio)." The Integration of the Personality, p. 122; cf. pp. 108, 264, and Psychology of the Unconscious, p. 127. The psychological validity of the Sunsymbol rests, I say, upon a sure foundation of fact; indeed the symbol is powerless apart from the reality. In so far as the Sun's importance is merely psychological it lacks importance for psychology: the objective reality of the living Sun is what counts, even in this field. The great principle of the ultimate identity of the two 'ways' or hierarchies -- the physical and the psychological (or the natural and the spiritual) -- was implicit in alchemy. One procedure and one set of terms applied to the two aspects of the opus: solificatio, for instance, had a spiritual and a material side. The alchemists did, at their best, grasp the profound truth that nature is at bottom spiritual --- the truth that Walt Whitman celebrates in his line; 'I say the whole earth and all the stars in the sky are for religion's sake. ('Starting from Paumanck')

* "The sun that Kant set at the centre of the world was man himself, so that his revolution was the reverse of Copernican, and led to an anthropocentrism a good deal more radical, though radical in another fashion, than any of which the Middle Age is accused. It was only in a local sense that mediaeval man thought himself to be at the centre of things; the whole creation of which he was the destined crown and end, which he recapitulated in himself, was none the less something outside himself, something to which he had to submit and conform himself if he would know anything of its nature." Etienne Gilson, The Spirit of Mediaeval Philosophy, p. 245.

Browning (<u>Paracelsus</u>, V) speaks about planting a sure foot upon "the sun-road"; and D. H. Lawrence proposes that a new order of "sun-men" should be founded. "Conscience", he says, "is sun-awareness and our deep instinct not to go against the sun", while to be immoral is to be "sunextinct" and put out the sun in others. (<u>Pansies</u>, pp. 117-20) religious life in its highest expression? Briefly and in particular, the mystic has no use for the Sun. Or, at most, the Sun is an accident, and not an essential stage, of the mystic way.

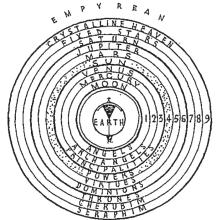
In reply to this final objection, let it be said, first of all, that mysticism per se, torn from the life of the intellect, from the moral struggles of active existence, and from the appreciation of beauty, is a figment and a misnomer. ° The only genuine mysticism contains, and indeed raises to their highest power, the intellectual and aesthetic and moral faculties. And even when, in rare and momentary instances of attainment, these three are transcended, it is only because the completion and fulfilment of each requires the completion and fulfilment of all: neither goodness nor beauty nor truth can get very far without the other two, and in the end all three coalesce. Hence whatever is fundamental in morality and art and science, is fundamental also in the mystical life: or, if it is not, then mysticism deserves the contempt that its critics pour upon it. The real mystic knows no short cuts; he has found no easy way that dispenses with the need for moral and intellectual sinew. It is, then, extremely unlikely (if not actually impossible) that he could afford to ignore the steppingstones which the other travellers must use to get from the human part to the divine Whole. Everything goes to show that there is in fact one way upwards, \times seen through the different temperaments of those who travel it, and not one for the scientist, and another for the artist, and another for the active, and another for the contemplative. To succeed is to combine all these: and if the wayfarer is one, the path he treads is surely one. Certainly the law of parsimony would not have it otherwise.

What have the mystics themselves to say? I take for my first example the most explicit and detailed account of the upward path -- that of Dante -- in which religion and art and science are incomparably blended. (In the Divine Comedy all that is finest in the mediaeval way of life -- or perhaps I should say the mediaeval way to life, the life of the Whole -- is not merely mapped, but its labyrinthine tendencies take on direction and order. Here, if anywhere at all, is to be found mysticism at its healthiest --- because it is so much more than mysticism in the narrow sense of the word. Where such a lover, statesman, philosopher, theologian, scholar, poet, and contemplative come together in one man and in one work of that man, we may well pay attention.) For Dante, the Earth lies at the centre of nine spheres or heavens (after the pattern of the Ptolemaic cosmology), beginning with the sphere of the Moon and leading, through the spheres of the other planets (of which the Sun is one) to the sphere of the fixed stars, then the crystalline heaven, and finally the empyrean itself: the last, beyond space and time, is the true Heaven of light intellectual, love, and joy, and the end of the mystic's ascent. The higher the sphere to which Beatrice conducts Dante, the holier it is, and the more exalted is the rank of the angelic intelligence that guides it, and the more radiantly beautiful is Beatrice herself. The fourth heaven, controlled by the fourth angelic order -- the Powers -- is the sphere of the Sun, of whom Dante says, •

> "The great minister Of nature, that upon the world imprints The virtue of the Heaven, and doles out Time for us with his beam, went circling on

° "The mystic has recovered the power to be realistic, to face the facts the power of plain scientific observation. What we call the scientific attitude toward the world is clearly the result of a moral development, --- a new reverence for Nature (as in Bruno) developing into a new care in recording fact and discerning natural law The mystic, then, is entirely right in his doctrine that the chief conditions for truth getting are moral, --- not alone the metaphysical truth of the One, but the truth of physical detail as well." W. E. Hocking goes on to say that science requires, not ordinary imagination, but the kind which marks the mystic: it is no wonder, then, that mystical and scientific genius so often go together. Further (says Hocking) the mystic recovers the power to appreciate the qualities of things, and the capacity for genuine friendship. (Types of Philosophy, pp. 417 ff.)

× The occultist and the mystic travel together for a part of the way. "Both must pass", writes Evelyn Underhill, "through the plane of consciousness which the concept of the 'Astral' represents, because this plane of perception is the one which lies 'next beyond' our normal life. The transcendental faculties may become aware of this world; only, in the case of the mystic, to pass through it as quickly as they can. But the occultist, the medium, the psychic, rest in the 'Astral' ... " Mysticism, pp. 155, 156. Cf. Meister Eckhart, "Creatures which God has given us for a step-ladder to God we have ourselves made into an offence by stopping in them on our way to safety." Works (trans. Evans), ii. p. 110.



• <u>Paradiso</u>, X. A millennium before Dante, Origen had taught that the created universe is a ladder whereby the fallen soul may climb back to God; and Aphraates (<u>Of Monks</u>, 19) had called virginity the heavenly portion, the fellowship of the Watchers or star-angels, with which nothing else is comparable. (Margaret Smith, <u>Op. cit.</u>, p. 28) Along the spires, where each hour sooner comes; And I was with him."

The Poet has become truly heliocentric: and the physical superiority of the Sun is the least of the solar virtues. Here Dante finds the spirits of St Thomas Aquinas, Albertus Magnus, and others of the blessed, a luminous band circling round him like stars around the pole-star, or a kind of "holy mill". × In other words, here (described in poetic language) is the concrete reality, of which the astronomer's solar system is the abstract form.

Among the several sources of Dante's vision is the angelology of the Pseudo-Dionysius, whose ninefold celestial hierarchy is at once a descending system of government whereby God's providence is transmitted to the lower world, and an ascending system of stages in the mystic way of illumination: + Thus men are able, "by straining towards the living angelic powers, through their good guidance to mount towards the Bounteous Origin of all things; so can they (according to their measure) participate in the illuminations which stream from above and share the bounteous gift..." * And in their ascent men are transformed, becoming assimilated to the heavenly Intelligences who are their guides and mark out the way. The Intelligences themselves, as contemplating the Beautiful and the Good, are said to move in a circular manner. †

The teaching of Dionysius, which profoundly influenced the course of Christian mysticism, has many links with the later religious cults of the Greeks and the Romans. In Mithraism, for example, the initiate is described as rising above the Earth, through nine celestial regions of increasing sanctity and illumination in order to attain at the end of the journey complete union with the divine nature: of these nine grades of mystical attainment, the sixth is the Sun, where the purified soul becomes fiery. "A star am I myself among stars", says the adept to the stars he encounters in his upward flight through the heavens, "perambulating my orbit with you and shining forth from the depth." Θ Apuleius -- or rather his Lucius -- initiated as a priest of Isis, was crowned to represent the Sun, after having "approached the presence of the Gods beneath, and the Gods of heaven". Nor are these isolated instances: Hellenistic literature is, as Professor Gilbert Murray tells us, "permeated with a kind of intense language about the Sun, which seems derived from Plato. \otimes There was a widespread conviction that the planets, the Sun, and the stars were so many rungs of the Jacob's ladder whereby the soul mounts to its divine source, either after death, or in the experience of the man who is, in this life, initiated into the mystery. They did not symbolize, so much as embody, the suprahuman life of which man is capable. \oplus

In the Gnostic and other early heresies, in the Kabbalah and the Hermetic literature, in astrology and alchemy, these doctrines survived (in encysted and degenerate forms) till the Renaissance furnished the climate in which they could, for a time, flourish again. Mysticism can then use once more such language as Boehme's --- "The body rises in Sol's splendour, it also forsakes its will." "So must all the forms in the philosophic work be changed into one, viz. into Sol." \circ "The Sun is nobler, and a degree deeper in nature, than the mystery of the outer world."‡ "If

× Aquinas having addressed the Poet at length, rotation recommences:

"Soon as its final word the blessed flame Had raised for utterance, straight the holy mill

Began to wheel; nor yet had once revolved, Or e'er another, circling, compass'd it, Motion to motion, song to song, conjoining."

Paradiso, XII

+ "There, amidst the blinding blissful impulsions of His dazzling rays, we shall, in a diviner manner than at present, be like unto the heavenly Intelligences." The human mind becomes godlike by entering <u>angelically</u> into states of union. <u>The Divine</u> <u>Names</u>, I. 4, 5.

* <u>Op.cit</u>., IV. 2.

† <u>Op.cit</u>., IV. 8.

e From the <u>Mithraic Liturgy</u>, a Greek papyrus in <u>Bibliothèque Nationale</u>,
Paris. Cf. the Orphic inscriptions, which are the subject of an appendix to Jane Harrison's <u>Prolegomena to the Study of</u> <u>Greek Religion</u>. And, lest it should be thought that these doctrines are dead, let me mention that it was found necessary for the Astronomer Royal to certify that (contrary to a widespread rumour) no new star appeared in Orion on the night of Browning's death. (J. Estlin Carpenter, <u>Comparative Religion</u>, p. 231.)

\otimes <u>Five Stages of Greek Religion</u>, IV.

⊕ Cf. Elijah's ascent to heaven in a chariot of fire (II <u>Kings</u>, II.11); the Ascension (<u>Acts</u>, I. 9, 10); and St Paul's account of one "caught up to the third heaven... whether in the body, or out of the body, I cannot tell." (II <u>Cor</u>. 2, XII. 2, 3). Anna Kingsford called one of her books <u>Clothed with the</u> <u>Sun</u>, after the Woman in <u>Rev</u>. XII. I.

• The Signature of All Things, XII. 28, 30.

‡ On the Election of Grace, II. 24.

you take the <u>spirit</u> of the tincture, then indeed you go on a way in which <u>many have found</u> Sol; but they have followed on the way to <u>the heart</u> of Sol, where the spirit of the heavenly tincture hath laid hold on <u>them</u>, and brought them into the liberty, into the Majesty, where they have <u>Known</u> the Noble Stone, <u>Lapjs Philosophorum</u>." • Here, plainly enough, is the perennial solar element in mysticism, revealing itself after centuries of partial obscuration. × But the mediaeval eclipse of the Sun was never total. Nor could it be. The mystic way, though its description is always being altered to comply with the current theology, remains essentially one and the same at all times and for all religions. The topography of the way (whether ancient or mediaeval or modern) follows, in the main, the now familiar hierarchical pattern; for the mystic is none other than the 'travelling observer' of the earlier part of this book, become peculiarly observant. Let me give some illustrations: ----

(1) The mystic's progress is not uniform: the joyful attainment of one stage is followed by a period of deprivation and barrenness of spirit before the next stage is reached. "The typical mystic" -- to quote a well-known authority \dagger -- "seems to move towards his goal through a series of strongly marked oscillations between 'states of pleasure' and 'states of pain'. The existence and succession of these states -- sometimes broken and confused, sometimes crisply defined -- can be traced, to a greater or less degree, in almost every case of which we possess anything like a detailed record. <u>Gyrans gyrando vadit spiritus</u>. The soul, as it treads the ascending spiral of its road towards reality, experiences alternately the sunshine and the shade. These experiences are 'constants' of the transcendental life." Or, in the language of this inquiry, the 'law of the spindle' \times (characteristic of regional travel in general, and of astronomical travel in particular) is exemplified in the mystic way.

(2) The pilgrim can only advance by taking with him what he seems to leave behind. His progress is cubic rather than linear, growth rather than travel: it is a task of world-acceptance and world-inclusion (no less than of world-denial and world-exclusion); in which the self, by refusing to give priority to itself, by refusing to cut itself off from any other self, continually transcends itself. Without love, without the sympathetic imagination and generosity of spirit which progressively overcome externality, the mystic cannot move an inch; nor can he arrive so long as a single alien self remains. In other words, the only way to get to the All is to become the All. The question for me here, then, is not whether, in this process of assimilation, the Sun and the other celestial units of the hierarchy are involved -- they are involved as a matter of course -- but how far they are <u>explicitly</u> involved, and how far they mark off stages of mystical attainment. ϕ

(3) And the answer is that on this subject the mystics are remarkably consistent and remarkably explicit, all things considered. Their quest is frankly <u>heaven</u>wards: \ddagger the terms, the imagery, the very structure of mysticism are inseparable from the hierarchical cosmology. "Set your affection on things above, not on things on the earth." ° "Ye are from beneath; I am from above." \otimes Not only mysticism, but our everyday language as well, equates height with worth in scores of common express-

• <u>The Threefold Life of Man</u>, X. 3.

The Mortalists of the 17th century taught that Christ ascended into the Sun, which is the physical manifestation of God; and the Christadelphians of our day have a similar doctrine. See Denis Saurat, <u>Milton; Man</u> <u>and Thinker</u>, p. 270.

× In Traherne the solar and sidereal element is well marked, though it takes a very different form: "Would one think it possible for a man to delight in gauderies like a butterfly, and neglect the Heavens? Did we not daily see it, it would be incredible. They rejoice more in a piece of gold than in the Sun; and get a few little glittering stones and call them jewels. And admire them because they be resplendent like the stars But the stars themselves which are ten thousand times more useful, great, and glorious they disregard." "He that thinks the Heavens and the Earth not his, can hardly use them." Centuries of Meditations, I. 34; IV. 15.

† Evelyn Underhill, <u>Mysticism</u>, p. 168. Jung (<u>Contributions to Analytical Psychol-ogy</u>, p.203) refers to the "violent prejudices and superstitious fears" that bar the entrance to each new stage in psychic development. For the Hellenistic world, these hierarchical obstructions took the form of planetary powers, who were by no means eager to let the aspiring soul pass on to higher realms.

 \times See Chapter IV. §10; Chapter V. § 8; and §3 of this Chapter.

"The spirit of the teachings of the Upanishads is: In order to find him you must embrace all In fact, the only true human progress is coincident with this widening of the range of feeling. All our poetry, philosophy, science, art, and religion are serving to extend the scope of our consciousness towards higher and larger spheres..... 'Everything has sprung from immortal life and is vibrating with life,' for 'life is immense.' This is the noble heritage from our forefathers waiting to be claimed by us as our own; this ideal of the supreme freedom of consciousness..... To be truly united in knowledge, love, and service with all beings, and thus to realize one's self in the all-pervading God is the essence of goodness, and this is the keynote of the teachings of the Upanishads: 'Life is immense!" Rabindranath Tagore, Sadhana, I. φ Cf. Fray Francisco de Osuna: "All created things are a ladder whereby the feet of the wise ascend unto God." (Allison Peers, Studies .of the Spanish Mystics.) # Wordsworth (Prelude, III) speaks of

"...sky, whose beauty and bounty are expressed

By the proud name she bears -- the name of Heaven."

° <u>Col</u>. III. 2.

sions: the fact is that the hierarchical cosmology, in its broadest outline, is an indestructible part of our nature, and we have never really ceased believing in it. For this reason we find nothing fantastic or obscure in the words of Dionysius, "Let us then press on in prayer, looking upwards to the Divine benignant Rays, even as if a resplendent cord were hanging from the height of heaven unto this world below, and we, by seizing it with alternate hands in one advance, appeared to pull it down; but in very truth instead of drawing down the rope.... we were ourselves being drawn upwards to the higher Refulgence of the resplendent Rays." * Or St. Thomas: "As all the perfections of Creatures descend in order from God, who is the height of perfection, man should begin: from the lower creatures and ascend by degrees, and so advance in the knowledge of God.... And because in that roof and crown of all things, God, we find the most perfect unity, and everything is stronger and more excellent the more thoroughly it is one; it follows that diversity and variety increase in things, the further they are removed from Him who is the first principle of all." +

(4) And the celestial traveller finds exactly what we should expect him to find --- light and fire. There is the great light from heaven, above the brightness of the Sun, of St Paul; \dagger the Light of the prologue to the Fourth Gospel, the Sun-faced angel of The Revelation; ° the Sun shining brilliantly at midnight of Apuleius; × the "lume fuori di mesura" of Jacopone da Todi; • the "flowing light of the Godhead" of Mechthild of Magdeburg; the light more brilliant than the brightness round the Sun of St Hildegarde; the "infused brightness" of St Teresa; Θ Boehme's divine Light that lasted seven days; Pascal's ecstatic Memorial --- "Depuis environ dix heures et demie du soir jusques environ minuit et demie, Feu;"..... but the list would be endless. Of 'the awakening of the self' Evelyn Underhill \oplus says, "It is significant that an actual sense of blinding radiance is a constant accompaniment of this state of consciousness." Θ

The obvious objection is that I am here mistaking the symbol for the reality, and that the light of the mystics is spiritual and not physical. William Law replies for me: "In Eternal Nature, or the kingdom of Heaven, materiality stands in life and light." \ddagger ("The cumulative testimony on this point", Evelyn Underhill \varnothing comments, "is such as would be held to prove, in any other department of knowledge, that there is indeed an actual light.") And Richard Rolle: \otimes "Heat soothly I call when the mind truly is kindled in Love Everlasting, and the heart on the same manner to burn not hopingly but verily is felt. The heart truly turned into fire, gives feeling of burning love." And in another place he says that his heart burns "not imaginingly, but as it were with a sensible fire". The mystics are, in fact, realists, who declare that the spiritual world is not other than the physical, but the physical seen "under the form of eternity"; 𝔅 there is nothing common or unclean, and the splendour of God shines in the meanest things of the world.

"Every visible and invisible creature is a theophany or appearance of God", says Erigena; and always it is the visible universe transfigured, not some new and fabulous realm, ¤ which forms the subject of the true mystical revelation. All the raw materials of the most splendid vision of

Of the emanation-doctrine of mysticism, Evelyn Underhill writes, "The path of the soul's ascent to union with the divine must be literally a transcendence: a journey 'upward and outward', through a long series of intermediate states or worlds till, having traversed the 'Thirty-two paths of the Tree of Life, she at last arrives, in Kabbalistic language, at the Crown: Such a series of worlds is symbolized by the Ten Heavens of Dante, the hierarchies of Dionysius, the Tree of Life or Sephiroth of the Kabbalah: and receives its countersign in the inward experience, in the long journey of the self through Purgation and Illumination to Union. 'We ascend', says St Augustine, 'thy ways that be in our heart, and sing a song of degrees; we glow inwardly with thy fire, with thy good fire, and we go, because we go upwards to the peace of Jerusalem He (the mystic), and with him the Cosmos -- for to mystical philosophy the soul of the individual subject is the microcosm of the soul of the world -- has got to retrace the long road to the Perfection from which it originally came forth; as the fish in Rulman Merswin's Vision of Nine Rocks "must struggle upwards from pool to pool until they reach their Origin." Mysticism, p.98.

* The Divine Names, III. 1.

+ Summa Contra Gentiles, IV. 1.

† <u>Acts</u>, IX. 3; XXII. 6; XXVI. 13.

° Rev. X. 1; cf. Rev. I. 16; Mat. XIII. 43.

× <u>The Golden Ass</u>, XI. • <u>Lauda</u>, XCI. • <u>Vida</u>, XXVIII. 7, 8. The records of sufism are full of the same kind of fire-imagery; see, e.g., Margaret Smith, <u>Studies in Early Mysticism in</u> <u>the Near and Far East</u>.

⊕ <u>Op. cit</u>. p. 179.

 Θ Cf. The Sun of Plato's famous cave myth in the <u>Republic</u>, the Psalmist's angelic flames of fire (<u>Ps</u>. CIV. 4), the Hebrew prophet's "Sun of righteousness... with healing in his wings" (<u>Ma</u>l. IV. 2), St Francis' chalice of life, which made his brethren's faces shine like the Sun (<u>Fioretti</u>, XLVIII), the Vedic Agni or world-begetting fire. ‡ <u>An Appeal to All who Doubt</u>.

ø <u>Op. cit</u>.<u>, p</u>. 250.

⊗ Fire of Love. I. Cf. D. H. Lawrence, Fantasia of the Unconscious, XIII: "Fire. FIRE. I insist on the absolute word. You may say that fire is a sum of various phenomena. I say it isn't.... It is the sudden flare into the one mode, the sunmode..."

^a Whatever may be said for the worlds which Swedenborg visited and then described in such circumstantial detail, and for the higher planes of Helena Blavatsky, Rudolph Steiner, and others, they have little to do with mysticism as I use the term. Rather they are extreme instances reality are with us all the time: nothing else is needed, except to see them in a new light. (In terms of this book, the solar life has no secrets, or at least they are open secrets; for it is nothing else than this despised ordinary life of ours as it is in the Sun. Whether it is called by that name or another, the Sun is an indispensable stage in the apotheosis of common fact, in the revelation of the divine in the human. Like the other individuals of the hierarchy, it is nothing in itself, but only a way of taking reality.) If the spiritual is a kind of milk-and-water version of the physical, if it means increasing abstraction and not increasing concreteness, it is an idle dream, rejected by all who have the courage and the good sense to wake into the strong light of reality. Fatal to all living values is the view that there are two worlds, one physical and base and to be superseded, and the other spiritual and undefiled by terrene imperfection. * This is not to deny the important truth that without distinctions there can be no advance --- if there is nothing base, there is nothing exalted. Valuation there must always be, but in the end its distinctions are not distinctions of subject-matter, but of how the subject-matter (which is common to all levels) is apprehended.

(5) The mystic, then, deals in the self-same goods as common sense and science, without adding to them any mysterious essence or elixir, and without subtracting from their force and richness. What he does is to gather up the data of the physical universe, as they are atomized in space and in time by our ordinary perception, and hold together the fragments.⊕ He restores the lost unity of the natural world. He discovers the greater living wholes and the longer living rhythms, not by contemplating their life from outside alone, but by actively living it. That is to say, he comes to himself at the higher levels by increasing his timespan and his space-span. He ascends by the progressive achievement of simultaneity. "The natural mind is conscious only of succession: the special differentia of the mystic is the power of apprehending simultaneity. In the peculiarities of the illuminated consciousness we recognize the effort of mind to bridge the gap between Simultaneity and Succession: the characters of Creator and Creation. Here the successive is called upon to carry the values of the Eternal." × And William Law: + "Everything in temporal nature is descended out of that which is eternal, and stands as a palpable visible outbirth of it, so when we know how to separate the grossness, death, and darkness of time from it, we find what it is in its eternal state."

It may be said, of course, that the living Earth and Sun of this book, since they do not and cannot exist as such in the fragmented time of common sense, but require another order of time in which to be themselves, are spiritual rather than physical, or products of the creative imagination rather than stubborn facts of which science can take account. In a sense, this is true. And, in the same sense, the Sun of the mystics, the heavenly pilgrimage, the dazzling illumination, are indeed 'spiritual' realities very different from the 'physical' phenomena of the sensible universe. But such a bifurcation of reality is not only unnecessary: it is confusing and mischievous. † There exists no break, no hint of discontinuity, between the suprahuman levels with their vast time-spans and space-spans, the common-sense level with its moderate spans, and the infrahuman levels of that bogus spirituality which does not know that mysticism, like charity, begins at home (and in one sense never leaves home). How much profounder, how much more wholesome, is (for example) Wordsworth's vision of the infinite in the common things of nature: we do not need to go further than

"the light of setting suns, And the round ocean and the living air, And the blue sky,"

to find sublimity. The true mystic does not attempt the impossible task of pitching his Jacob's ladder between Arcturus and Heaven, but (with Francis Thompson) between Charing Cross and Heaven. * According to Bishop Gore, we owe to Irenaeus the first clear affirmation "That no fundamental antagonism exists, or can be tolerated in idea, between spirit and matter, for the whole universe is 'of one substance' as coming from one God, and 'the Word has been made flesh.' This principle of Christian faith and philosophy... is one of the central certainties of modern science." <u>Belief in God</u>, III (footnote).

 \oplus "For God to be born in the soul time must fall away altogether or she must escape from time by willing or longing..... Suppose someone had the knowledge and the power to sum up in the present now, all the time and the happenings in that time of six thousand years, including everything to come until the end, that would be fulness of time. That is the now of eternity, where the soul in God knows all things new and fresh and pleasing like the ones that are present to me here..... The soul that God is born in will be lost to time, she shall escape out of time, and rising up stand staring into the kingdom of God." Eckhart, Works (trans. Evans), ii. pp. 152, 153.

× Evelyn Underhill, <u>Op. cit</u>., p. 239.

+ An Appeal to All Who Doubt.

"Past and future veil God from our sight; Burn up both of them with fire. How long Wilt thou be partitioned by these segments, like a reed? So long as a reed is partitioned, it is not privy to secrets, Nor is it vocal in response to lip and breathing." Jalal-uddin Rumi, <u>Masnavi.</u>

† "Temporary nature is nothing else but eternal nature separated, divided... made visible and changeable for a time." William Law, <u>An Appeal</u> (Hobhouse, p. 45). with their very small spans. From the apex of the pyramid, where time and space are transcended by inclusion, to the base, where they are nullified by exclusion, there is devolution stage by stage, impoverishment, loss of quality. Or, reading from base to apex, there is evolution stage by stage, enrichment, emergence of quality, just in so far as space and time are made whole again. Now if any part of this world-process of unification with emergence is 'spiritual', then all of it is 'spiritual'; if any part of it is supernatural, then all of it is supernatural; if any part of it is imaginary, then all of it is imaginary. If life at the higher levels is mystical, then life at the common-sense level is also mystical in its degree, and all existence is mystical, and the mystic way covers the entire hierarchy. The life of the saint is the completer realization of the life of the plain man and the animal and the sub-animal: the 'spiritual' is in this sense more 'physical' than the 'physical', for it <u>is</u> the 'physical' coming into its own, healed of its time-wounds and space-wounds. * Mysticism is not mysticism if there is anything essential in it that is queer, or stuffy, or secretive. If its realism does not exceed the realism of science, if it is not itself the science of the higher wholes of which the Sun is one (call them what you will), then it fails in its task which is the most vital of all tasks.

(6) Lastly there is the inescapable negative side to the mystical adventure --- the side of loss and death, without which there can be no increment of life. "This dying", says Tauler, "has many degrees, and so has this life.... The stronger the death the more powerful and thorough is the corresponding life; the more intimate the death, the more inward is the life. Each life brings strength, and strengthens to a harder death."° Note again, not an analogy between the 'spiritual' and the 'physical', but an identity --- throughout this inquiry, the common-sense objection has always been that one who would rise to a higher integral level must take on an altogether disproportionate weight of dead matter. Life must frankly accept death on an ever-increasing scale, whether as the lifeless geospheres in order to live with them the life of Earth, or as the lifeless sun and planets in order to live with them the life of the Sun. The tiny living seed must be lost in and overwhelmed by a great mass of dead soil, if ever it is to spring up to a more abundant life. It must merge and die; alone and alive, it is fruitless. Earth is the corn of wheat which, dying into the field of the planets, rises as the Sun. The higher the level, the more life, and (as a matter of course) the more death to be overcome.

The subject deserves a volume to itself, but I have perhaps said enough to show how profoundly true is that ancient wisdom, according to which the mystic way from the human to the divine lies through the celestial hierarchy, of which the Sun is a member.

The practical importance of this conclusion cannot be exaggerated. While the duplication of the cosmic hierarchy into (i) a secular and material system, abandoned to science and common sense, and (ii) a sacred and spiritual system, reserved for theology and mysticism (with art wandering uncertainly from the one to the other) was no doubt historically necessary (if only to free science for the work it had to do), the consequences of this duplication grow more and more damaging alike for religion, and for science, and for art. The greatest need of modern man is The principle of minimum time is at least as old as Aristotle, who, having distinguished (a) the vegetable life of nourishment and growth, (b) the animal life of sensation, and (c) the truly human life of reason, adds that the last requires a complete life --- "for as it is not one swallow or one fine day that makes a spring, so it is not one day or a short time that makes a man blessed and happy." (Nicomachean Ethics, 1098a.) This principle has been developed by a number of modern philosophers, and notably by Whitehead and Bergson. (See, e.g., the former's Science and the Modern World, pp. 46 ff., and the latter's Time and Free Will, passim.) R. G. Collingwood, in The Idea of Nature, (pp.19 ff), puts the principle of minimum time and of minimum space very clearly. In Chapter XV I shall develop more fully the thesis that we ascend the hierarchy by the achievement of simultaneity, and by the 'condensation' of space.

* The spiritual, A.C. Bradley says, is the unity and concentration of the physical. "It is not a ghost; and it is higher not merely because it is immaterial, but because it is the most intense and far-reaching unity of the natural or material. If we bear this in mind, we avoid the danger of thinking of the spiritual as something thin and empty." Ideals of Religion, p. 233. Provided a broad (but not absurdly broad) interpretation is given to the term 'senseexperience', I agree with Professor Ayer's dictum "that no statement which refers to a 'reality' transcending the limits of all possible sense-experience can possibly have any literal significance", or can fail to be nonsense. Language, Truth and Logic, p. 34.

° 'Second Sermon for Easter Day' (quoted by Evelyn Underhill, Op. cit., p. 218.) I take St Paul's resurrection-doctrine seriously: "That which thou sowest is not quickened, except it die.... There is one glory of the sun, and another glory of the moon, and another glory of the stars: for one star differeth from another star in glory. So also is the resurrection of the dead. It is sown in corruption; it is raised in incorruption.... The first man is of the earth, earthy: the second man is the Lord from heaven. As is the earthy, such are they also that are earthy: and as is the heavenly, such are they also that are heavenly. And as we have borne the image of the earthy, we shall also bear the image of the heavenly." I Cor. XV. 36 ff. The sure way to reduce this profound teaching to pious sentiment or windy verbiage is to tear it from the universe (the sacred universe) of the scientist and the poet, and to plant it in some bowdlerized shadowrealm of the spirit (falsely so called).

to put together the halves of the universe that he has thus torn asunder; or rather it is to rediscover the one, living, sacramental universe --- the beautiful, sordid, vulgar, difficult, and infinitely surprising world that, with its lost time and subdivided space restored, is holy because it is whole. He needs to know that Earth is not only "crammed with heaven", but, given the time, <u>is</u> heaven; and that in the Sun every common bush really is "afire with God." *

Albertus Magnus was one of the first to draw the fatal line between natural and theological knowledge, and his pupil St Thomas furthered the division by his doctrine that God allows nature some autonomy. (All the same, St Thomas did leave his angelic hierarchy some concreteness, as star-guides.) But it was not the Dominicans, so much as the Franciscans, who (in striking contrast to their Founder's attitude) completed the bifurcation. Thus Duns Scotus and William of Occam went almost so far as to say that what is true for science may be false for theology.

* Mr. C. S. Lewis is at his most interesting on this topic. No doubt, he says, the writers of the New Testament never doubted that God was up in the sky; but their Heaven was neither <u>merely</u> physical nor <u>merely</u> spiritual. The Ascension was not less spiritual because it was also physical. Indeed, when Nature and Spirit are fully harmonized, Heaven and the sky will no longer be divorced. <u>Miracles</u>, pp. 188-192.

Of course I do not deny that the divorce of the physical and the spiritual may be less damaging than the premature and uncritical identification of the crudely physical (as it exists at the lower time-divided levels) with the spiritual. Warnings (e.g. <u>The Cloud of Unknowing</u>, 51, 57) against misunderstanding of such words as 'up' and 'in' will always be necessary.

CHAPTER XI

THE DISTANT VIEW ---- GALAXY.

Man has for himself a spacious domain. His mind may roam to heaven. If there is no room in the house, the wife and her mother-in-law run against one another. If the mind cannot roam to heaven, the faculties will be in a state of antagonism.

Chuang Chou (Giles, Musings of a Chinese Mystic, p. 107.)

This All that has emerged into life is no amorphous structure -- like those lesser forms within it that are born night and day out of the lavishness of its vitality -- the Universe is a life organized, effective, complex, all-comprehensive, displaying an unfathomable wisdom.

Plotinus, Tractate on the Gnostics, II. ix. 8.

Not till the fire is dying in the grate, Look we for any kinship with the stars.

Meredith, 'Modern Love', IV.

It is the stars, The stars above us, govern our conditions.

Lear, IV.3.

The stars... by moving in a procession and a dance the most beautiful and impressive of all dances, minister to the needs of all living things.

<u>Epinomis</u>, 982.

From the little cell in which he finds himself lodged, I mean the universe, let him estimate at their true value the earth, kingdoms, cities, and himself. What is as man in the Infinite?

Pascal, <u>Pensées</u>, 72.

Unshaped universes With manes of fire and a raging sun for heart. Gestation, generation and duration ----The cycles of all lives upon the earth ----Plants, beasts and men, must follow those of heaven.

Edith Sitwell, Song of the Cold, 'An Old Woman'.

O the joy of my spirit -- it is uncaged -- it darts like lightning! It is not enough to have this globe or a certain time, I will have thousands of globes and all time. O to realise space! The plenteousness of all, that there are no bounds, To emerge and be of the sky, of the sun and moon and flying clouds, as one with them.

Walt Whitman, 'A Song of Joys'.

Let the constellations look at me before I disappear!

Rilke, Later Poems, 'To the Angel'.

The Spirit of Life has been born It knows itself a member of that mighty family in which the stars are numbered: the family of the sons of God, who, free and creative, share the rapture of a living, striving Cosmos, "shout for Joy".

Evelyn Underhill, Mysticism, p. 197.

1. <u>THE GALAXY</u>.

We live in the company of men, and of stars. * Every clear night, every godly night, as Meredith calls it,

"... is a night to make the heavens our home More than the nest whereto apace we strive." +

We live in heaven without noticing it. We are princes who suffer from the illusion that our palace -- the most splendid conceivable -- is a hovel.° "If the stars should appear one night in a thousand years, how would * The woman of Venus, in C.S. Lewis's <u>Perelandra</u>, says to a visitor from Earth: "Your world has no roof. You look right out into the high place and see the great dance with your own eyes. You live always in that terror and that delight, and what we must only believe you can behold..." And later she speaks of our roofless world "where men walk undefended beneath naked heaven." (pp. 67-8, 75, 78.)

+ 'Winter Heavens'.

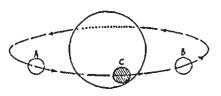
° "Endow the fool with sun and moon, Being his, he holds them mean and low." Coventry Patmore, <u>The Angel in the</u> <u>House</u>, I. ix. 4. There is also the famous fragment, preserved by Cicero, from Aristotle's dialogue <u>On Philosophy</u>, on the same topic. Adult man is as indifferent to the Heavens as embryo man is to Earth: he is unborn; cf, Nicholson, <u>Rumi, Poet and</u> <u>Mystic</u>, p. 39. men believe and adore; and preserve for many generations the remembrance of the city of god which they had been shown." + Reveal to me nightly this Heavenly Jerusalem, and the vision is unutterably boring --- or would be so if I took the trouble to observe it. Here am I, raised to undreamed-of majesty, conducted more magically than Cinderella into the beautiful society of the stars, sharing their glory --- and I am (for the most part) too oafish to take any interest in the matter. Apart from certain lucid intervals, I am at this higher level insane: content, as the insane are, to live wrapped-up in my own mean and private world, and as little concerned with my fellow stars as a pig is concerned with his fellow pigs in the next farm but one. But I am capable of rousing myself from my stupor. When I do so, what do I find? What, at its briefest, has science to tell me about the society of the stars?

The Sun is one of thousands of millions of stars. These are not solitary dwellers in space, but are grouped in a number of ways. The simplest association is the binary, made up of two relatively close stars circulating about a common centre of gravity. Sometimes three, four, or more, members go to make up such a group. On a much larger scale are the star clusters, consisting of hundreds, or thousands, or even scores of thousands of stars travelling together much as a flock of birds travels: some of these clusters are 'open' or of loose structure, others are compact and more or less globular. Still larger groups, containing millions of stars, are called star clouds. Finally there are the galaxies (also known as island universes or nebulae) --- lens-shaped systems, containing many thousands of millions of stars (organized into their clouds, clusters, and so on) rotating about a common centre of gravity much as the planets rotate about the sun. The diameter of our own Galaxy is reckoned in tens of thousands of light years. In other words, a ray of light reflected from our terrestrial body at the dawn of human history is even now scarcely clear of our galactic body, in spite of the fact that the light is 186,000 miles further away from us every second.

Our Sun, having no very near neighbours, is not a binary or a multiple star. It has often been regarded as a member of a local star-cluster, but recent research has failed to confirm the existence of any local concentration of stars. What is reasonably clear is that the Sun moves round the galactic centre, taking many millions of years to complete one circuit. And as in the solar system, so here in the galactic system, it seems that the bodies which are nearer to the common centre of gravity move the faster: accordingly the Sun overtakes the stars that lie outside its orbit, towards the rim of the galactic wheel; and is overtaken by the stars that lie within its orbit, towards the hub.

It is plain, I think, that such forms of stellar organization as mediate between the individual star and the galaxy or island universe, must be regarded as mesoforms, and not as individuals of integral status. The next definite hierarchical level above the solar is the galactic. I appear to the retreating observer as a "solid and spherical angel" of planetary rank, then as a rarefied disc-shaped angel of sidereal rank, and finally as a still more tenuous spiral angel, or fiery cherubic wheel, or -- less romantically -- a "gaseous vertebrate". + Emerson, 'Nature' (1836), I.

"They utter the unspeakable. They illumine the invisible..... They are terrible and charming. They are faint lights scattered throughout the unknown. We call them stars. The ensemble of all this passes the bounds of chimera and is overwhelming in its reality. A madman could not have dreamed it, a genius could not have imagined it." Victor Hugo, <u>Intellectual</u> <u>Autobiography</u>, 'Things of the Infinite'.



A model of a binary star, deduced from variations in its luminosity. In positions A and B, its total luminosity is greater than in position C.

The observational data are scanty, and astronomers are by no means agreed on the subject of the internal rotation of the galaxies.

"It is true that solid and spherical angels are not to our liking", says Fechner (<u>Zend-Avesta</u>, ii), "but to us this is incongruous because we have been taught in the school-room to think of the Earth as a papier-mache globe." I borrow the term "gaseous vertebrate" from Haeckel, <u>The</u> <u>Riddle of the Universe</u>, XV. 1.

2. THE DIFFERENTIATION OF THE STARS.

Our Galaxy certainly is a mechanical unit, having a definite and permanent shape, and a complex system of internal motion. But its organization appears at first sight to be loose and arbitrary, and its parts to lack differentiation. Here is a body, common sense would say, that is altogether unworthy to be compared with the human, a body that is little more than a magnified firework.

This inferiority is, however, an appearance which vanishes the more we study the Galaxy. What, in fact, do we expect to find at the higher levels but a society whose members have in common major characteristics, and are nevertheless distinguished by individual peculiarities --peculiarities which are in part due to differences of age? Now the stars of the Galaxy comprise just such a society. Firstly, they have much in common. They are spherical, self-luminous, and hot; and they are seldom ten times more massive, or five times less massive, than the Sun. They circulate about the galactic centre. Secondly, they have a life-history --of which, however, there have been many versions. (According to one of these, a star is born as a vast cloud of extremely rare and relatively cool gas, and grows up by becoming at once smaller and denser and hotter. As the central temperature rises, atomic reactions come into play, providing the star with radiant energy that lasts for many thousands of millions of years, and probably causing the star to fluctuate in size. But it is clear that this expenditure cannot go on indefinitely: the old star, so dwarfed that it may actually be smaller than our Earth, and so dense that a cubic foot of its material may weigh thousands or millions of tons, has only a fraction of its former luminosity; and how many star-corpses, burned out and invisible, litter the Milky Way, it is impossible to say.) Thirdly, a star's age makes a vast difference, not only to its luminosity, density, volume, temperature, and physical composition, but also to its colour and spectrum: it is, so to say, the complexion of the red giant, or of the white dwarf, which gives its age away. And since the star's lifehistory, for many millions of years, includes a prodigious and unceasing scattering of energy, the mass of the star is all the while wasting, though very slowly. * Fourthly, there are several stellar differences which are, it seems, not merely a question of age. For example, there are variable or pulsating stars, each with its own periodicity; novae and supernovae, which suddenly burst into a blaze of light perhaps a thousand times more brilliant than formerly; stars of abnormally great and abnormally small mass; and the so-called planetary nebulae, which are exceptionally hot stars surrounded by enormous luminous atmospheres.

* This wastage may well, however, be more than made up by the star's intake of interstellar gas; on this, see below.



<u>A Planetary Nebula</u> These enormous objects (of which only a few hundreds are known) are exceptions to the rule that stars are seen as no more than points of light in the telescope.

3. <u>THE ISOLATION OF THE SUN AND THE WHOLENESS OF THE</u> <u>GALAXY</u>.

It is not enough (common sense points out) that the members of the group shall be thus differentiated. If there is to be real organic unity, they must be mutually dependent: each must need and be needed by the others. Without doubt this lens-shaped star-body is a whole of a kind. But would the amputation of one of its star clusters make any difference to it, comparable with the difference which the amputation of a leg would make to the functioning of my human body? In particular, is it not plain that the Sun is a self-supporting individual, independent of his fellow stars and of the Galaxy as a whole? All he asks is to be let alone, and allowed room in which to be himself.

Whether the Sun is self-contained or not, he certainly does not lack living space. If he (i.e. the entire solar system) is represented as a football, the nearest of his neighbours -- Proxima Centauri -- is about half a mile off, and many stars of our Galaxy are hundreds and thousands of miles away. These great distances do not, however, prevent each star from being 'in touch with' every other star: every member of the Galaxy takes full account in its motions of the position and the mass of every other member. Stars do not move on their own: all their behaviour is subject to mutual adjustment, of which the subtlety and complexity are almost unimaginable. To reckon accurately the motions of the Sun <u>is</u> to consider the whole Galaxy, whose motions are, in truth, one motion. When from this totality we tear a fragment and attribute it to the Sun, we do violence to the facts.

Gravitation is not the only kind of commerce between the Sun and the Galaxy. Not all comets are necessarily solar in origin: some may have been picked up and incorporated, and others are, perhaps, just visitors. So with meteors: there is nothing to show that a proportion of them is not acquired by the Sun in his journeying through space. Again, the Galaxy contains vast volumes of rarefied gas, upon which the stars may be said to feed. Little is known as yet about the origin and affects of cosmic rays, × but it has been suggested that they are responsible for changes in the genes of germ-cells, thus giving rise to mutations. If this is the case, Life owes some of her characteristics (and conceivably her very existence) to galactic influences. Indeed it may well be mere ignorance and parochialism to take for granted the autonomy of solar life, or to suppose that the whole course of evolution as we know it is anything more than an episode of galactic development.

If the Galaxy really is a society, can the astronomer say of any of its star-members that the Sun has need of it, to the same degree that the astronomer himself has need of his fellow men? The answer is that he has often, in effect, said just this. He postulates that somewhere in this island universe of ours there exists a star to which the Sun owes planetary structure and life and intelligence: without this beneficent fellow star the Sun would still be a desolate ball of hot gasses, encircled by no planetary rings. The astronomer, that is to say, has some grounds for believing that there is, amongst the stars he studies, one which has rendered that study possible, one which has fathered the astronomer him-

Much recent cosmological speculation makes the Sun very dependent indeed upon the Galaxy. It has been calculated that the mass of the interstellar gas of the Galaxy exceeds the mass of the stars: in large measure, then, this gas controls their motions. Moreover (according to Hoyle), not only did the stars condense out of this substratum in the first place: they now 'feed' on it much as a whale feeds on plankton. Probably we owe some of the solar radiation we enjoy to the sustenance thus supplied by the Galaxy. Possibly, also, the advances and retreats of the polar ice have been due to variations in the quantity of gas swept up by the Sun at different epochs; in that case, vital evolution has been intimately linked with the galactic constitution and galactic events. And indeed the very existence of the solar system may well be due, as Hoyle has conjectured, to the collection by the Sun's companion star of an abnormally large quantity of gas, resulting in an explosion out of which the planets were born.

"The thread attaching it (the Sun) to the rest of the universe is doubtless very tenuous. Nevertheless it is along this thread that is transmitted down to the smallest particle of the world in which we live the duration immanent to the whole of the universe." Bergson, <u>Creative Evolution</u>, p. 11.

Cf. Edith Sitwell's line, "And I thought of the umbilical cords that bind us to strange suns", in her poem 'The Two Loves' (<u>The</u> <u>Song of the Cold</u>).

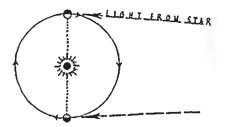
× See, e.g., Louis Leprince-Ringuet, <u>Les</u> <u>Rayons Cosmiques</u>. self, his instruments, and his world. I refer, of course, to the star that (on one theory) approached the Sun so closely as to raise on its surface a tide which, drawn out into space, became the planets; or to the star which (on a second theory) collided with the Sun, producing similar results; or to the star which (on a third theory) was the Sun's close companion till it exploded and withdrew, leaving behind as debris the planetary material. The probability is, in any case, that we have a sidereal father in heaven. One day, perhaps, the Sun will recognize him; and meantime, when I look up at the night sky, there is always a chance that I am gazing upon my star ancestor, who is a major cause of my seeing him. Indeed the Galaxy may well be the scene of many sidereal loves, fruitful of life and mind. At all events, neither in the beginning nor now does the Sun hold himself aloof from his companions: in the primitive Galaxy he was physically merged with them in the common substratum, and now, psychically, he is their receptacle. It is no mere speculation that the life of the star is essentially shared, essentially social. To speak of the Sun's life as if it were a kind of private property, and no more than solar, is to falsify it altogether.

A solitary Sun is an idiot Sun: no more than a child can he grow up on his own. It makes all the difference that at star level, as at man level, I am not lonely. ° A brief period of fertilizing contact with another star is not enough: life of a high order means elaborate social relationships, sustained and developing. I have already pointed out how much science in general owes, as a matter of historical fact, to astronomy, and how 'sidereal' our knowledge, even of the most mundane phenomena, really is. Now one of the chief functions of this science is the promotion of the solar self-consciousness, arising out of the Sun's active membership of the society of the stars. Let me give a few examples. (1) He 'places' himself amongst them -- recognizing himself to be, for instance, a mainsequence star of spectral type G, and of rather ordinary mass and brilliance -- just as a man 'places' himself amongst other men, discovering himself to be dark, of middle height, energetic, and so on. (2) He sees his own history enacted in them, for they vastly broaden the time-span of his self-consciousness by representing to him all stages of his past and future: they become his memory and foresight. The children I meet in the street, and the young giants I meet in the sky, are myself when young; the old men and white dwarfs are what I may expect to become. The society of the stars, as of men, calls time's bluff: it is my life-story rendered visible and simultaneous. (3) As an instance of how the Sun knows himself by knowing the stars, consider one of the methods of measuring Earth's orbit. The spectrum lines of certain stars are compared with the spectrum lines of the same stars observed after an interval of six months, when the Earth has changed direction: the displacement of the lines -- a Döppler effect -- gives the clue to the Earth's orbital velocity, which in turn gives the clue to her distance from the sun. In other words, the Sun discovers the dimensions of his Earth-ring by observing how other stars behave towards him, just as a man finds out what he is like by observing how people react in his presence. \times

The stars, then, are social beings --- even if (what is surely most improbable) their society exists for the Sun's sake alone. That, for members

Fourier, the half-mad socialist writer, taught that the stars eat and drink and make love. A cynic might well remark that this is on a par with his doctrine that the sea will turn into lemonade, and that new races of animals called anti-lions, antihorses, etc., will appear on earth. However he was perhaps not far wrong concerning the stars: the old idea of sidereal 'feeding' has been unexpectedly revived, and all the life of the Galaxy may well be the fruit of something like sidereal matrimony. On the other hand there are numerous theories which do not require, to explain the planets, the intervention of a second star. In the hypotheses of Alfvén and Weizsäcker, for instance, the planets are a condensation of interstellar gas picked up by the Sun in its travels; and in Berlage's hypothesis they result from atoms and molecules shot out spiral-wise into the solar magnetic field. Lyttleton has suggested that the Sun had two companions, which coalesced and disintegrated, leaving behind sufficient debris to form the planets; or, again, that the Sun had one companion which was captured by a passing star, and whose remnant is now the planetary system. Hoyle has supposed that the companion accumulated interstellar material till it became unstable, and exploded as a supernova. In general, the modern tendency is to make the formation of the solar system depend, in one way or another, upon the galactic environment.

° "Why should I feel lonely?" Thoreau asks himself; "is not our planet in the Milky Way?" <u>Walden</u>, 'Solitude'. And it is in a thousand ways an empirical fact that the life of the Sun is different on account of his fellows. For example: "The Pythagoreans were wont betimes in the morning the first thing they did, to look up into the heavens, to put themselves in mind of them who constantly and invariably did perform their task: as also to put themselves in mind of orderliness, or good order, and of purity, and of naked simplicity. For no star or planet hath any cover before it." Marcus Aurelius, <u>Meditations</u>, XI. 25.



× And just as Earth discovered her own diameter by paying attention to the sun rather than to herself --- it was the fact that at noon on midsummer day the sun was overhead at Syene, but not at Alexandria, which gave the clue to the Earth's curvature.

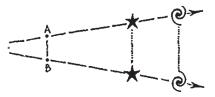
of a society, they are nevertheless remarkably aloof and self-contained, cannot be denied. Here is little or none of that cheek-by-jowl herding, and perpetual physical strife of a petty kind, * and close physical interdependence, that mark the societies of the lower hierarchical levels. Nor is this to be wondered at. Is it not a commonplace that those whom we most admire -- the true individuals -- have inner resources which make them unusually independent of us? and yet they are more deeply social than we are. I suggest that the relative self-sufficiency of stars is evidence, not so much of their lack of society, as of its fine quality. To develop from within rather than to be moulded from without, to combine so many internal complexities with so few external demands, to live so well yet so alone --- what is this but to be a member of the high society of the stars? If the best creatures are those to ask little and give much, then the stars are excellent indeed. It has been calculated that only one part in 120 million of the Sun's radiation is intercepted by the planets +: the rest may be regarded as promoting stellar intercourse and the wholeness of the Galaxy. Radiance, generosity, openness, distinguish this society. °

It is only to be expected that common sense should remain sceptical concerning the community of the stars and the wholeness of the living Galaxy. As the microscope cannot help but miss the wholeness of the man, so common sense cannot help but miss the wholeness of the higher individuals. Here are creatures whose life-history runs into thousands of millions of years, who are scores of thousands of light-years from end to end, whose bodies comprise thousands of millions of stars apiece --- how can a mere man possibly take them in? Of course he cannot. It cannot be too often repeated that knower and known stand at the same level. To be aware of a galaxy as a whole is to reduce its space and time to manageable proportions, and only a galaxy is capable of such a reduction. You have only to listen to a trained astronomer talking casually of light-years and parsecs, of <u>dwarf</u> stars and <u>near</u> objects that are <u>only</u> a few score light-years away, of small and late-type nebulae, to realize that he is not a man. He is built on quite a different scale, and to quite a different pattern. And yet, strictly speaking, it is meaningless to say that he is any bigger or more long-lived than the human self he leaves behind. Stars and spiral nebulae are in reality no more cumbersome than cells or men, and their tempo is no slower: to deny this is to deny their unity, or rather to destroy them. I am a 'field' where galaxies and men come to their full status as wholes, without difficulty or overcrowding.

The only way I can appreciate my own real unity is to ignore my own evident disunity, looking past it to the unity of my fellow creatures. Millions of galaxies are presented to me as truly galactic wholes, in which individual stars have given place to the higher pattern; and these my fellow galaxies do for me what my fellow men do for me at the human level --- they show me myself. Without companions, I am at every level the headless body of Chapter I, a collection of 'loose arms and legs'. And at every level the three stages of the discovery of my unity are: (1) I see my equals; (2) I know I am like them; (3) I see myself from their viewpoint, and to that extent become them. So it is among men, and so it is among stars and galaxies. To begin with, I look out upon myself and find, not a close-knit, well organized human body, not a visible and entire planetary * I do not say that there is no strife at this level: society without some kind of hostility or opposition is unthinkable. But we must not make the mistake of Karl du Prel, and, failing to allow for difference of level, 'biologize' the stars. This writer, in <u>Der Kampf ums Dasein am Himmel</u>, extended Darwinism to the heavenly bodies. They are competing organisms; space is the means of existence for which they struggle; the fitness of their motions in relation to other heavenly bodies is their organic efficiency. Survival is the reward of such fitness; dissipation or fusion with other bodies is the penalty for unfitness.

+ R. A. Sampson, <u>The Sun</u>, p. 18.

° Vision, to the exclusion of the 'lower' senses, characterizes the stellar society. Sight, Plato tells us, "is the cause of the highest benefits to us in that no word of our present discourse about the universe could ever have been spoken, had we never seen stars, Sun, and sky." The sight of these "has caused the invention of number and bestowed on us the notion of time and the study of the nature of the world; whence we have derived all philosophy, than which no greater boon has ever come or shall come to mortal man as a gift from heaven." (Timaeus, 47) Or (as I would say) it is only as an actively observant member of the society of the stars that we have any cosmology.



The constant field. Through my window pane I may see, coinciding with two spots A and B on the glass, a pair of trees, of mountains, of stars, and perhaps of galaxies. The distance AB is terrestrial, sidereal, or galactic, as the occasion requires. For a fuller discussion of this topic see Chapter V. 8, 9, 10.

body, or solar body, or galactic body, but only fragments of these: in particular, the Galaxy appears as a starry chaos. But, looking again and this time beyond myself, I see a whole man in my friend, a whole planet in Mars, a whole 'solar system' (as it were) in a so-called planetary nebula, and a whole galaxy in the Great Nebula M 31 in Andromeda. And so I come, by self-forgetfulness, to self-knowledge. On no plane is the discovery of my own living unity directly given, immediately obvious. It is a task of which three things may be said --- It is essentially social; it is never done; it is increasingly arduous as we come to the higher levels.

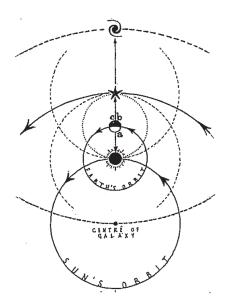
4. <u>SOLAR SYSTEMS IN THE GALAXY, AND THEIR LIFE --- THE VER-</u> <u>DICT OF SCIENCE</u>.

Common sense allows the unity, but not the life of the Galaxy. Is it not asking too much of the Sun that he -- an infinitesimal life-speck -- should infect the Milky Way? If the Galaxy is indeed alive as a whole, it will surely take more than the Sun to make it so. But what evidence is there of other life among the stars? When Meredith + calls them "the brain of heaven" he is talking beautiful nonsense, and Milton's more cautious lines × about the

> "stars Numerous, and every star perhaps a world Of destined habitation"

are (common sense goes on) nothing more than poetic fancy. "The shining systems hung in the heavens" -- modern man is convinced -- "have nothing but their bulk, their hugeness, with which to astonish us. They have neither theology nor mathematics. They neither feel nor understand." ° And observe that it is not some crass materialist; but a distinguished poet-philosopher, who describes the universe as an "immense engine" --- "an organism of mud and fire" that cannot be blamed "for what doubtless, it never knew that it did." *

Common sense is right in this: there is no direct scientific evidence of other life than our own in the universe. For life (so far as we can tell) is planetary in the first place, and even the nearest stars are far too distant to reveal to us their planets or their lack of planets. We are in the region where the other stars are nothing less than stars, where they live a stellar life or none at all. But (and here lies the great difficulty) the behaviour of a dead star -- supposing such to exist -- is at this range presumably not different from the behaviour of a living star. At all events, I cannot tell by direct inspection whether any of them live. Nevertheless it is possible to estimate -- however tentatively -- the likelihood of solar systems occurring elsewhere in the Galaxy. In 1928, Eddington's view was that less than one in a hundred million stars has been disrupted into planets; and he adds that, while it would be characteristic of Nature to use a million stars where one would do, it seems unlikely that ours is the only consciousness in the cosmos. But in 1944, Jeans finds reason to believe "that the number of planetary systems in the whole of space must be almost unthinkably great. Millions of millions of these must be almost exact replicas of our solar system, and millions of their planets must be almost



During the day, at (a), I am Earth, with Earth's bulk back of me, looking past her peripheral members the clouds and the moon, at the sun. During the night, at (b), I am the Sun, backed by Earth and sun, looking past the Sun's planet-members at the stars.

Alternatively, at (c), I am the Galaxy, looking past my star-limbs at one of my fellow nebulae.

On the history of the view that there is a plurality of inhabited worlds, see S. Arrhenius, <u>The Life of the Universe</u>, i. pp. 118 ff.

+ In the justly famous sonnet, 'Lucifer in Starlight'.

× <u>Paradise Lost</u>, VII. Cf. Shelley's belief (<u>Prometheus Unbound</u>, I) that "those million worlds which burn and roll around us" are inhabited.

° W. Macneile Dixon, <u>The Human Situa-</u> <u>tion</u>, p. 158.

* George Santayana, <u>Little Essays</u>. One may also believe, of course, that life and mind survive and even flourish elsewhere in the "organism of mud and fire"; one may even suppose that (as General Younghusband suggests in <u>Life in the Stars</u>) "on some planets of some stars exist beings higher than ourselves", who are guiding our development --- one may speculate indefinitely about life <u>in</u> the Galaxy without ever suspecting that it is the life <u>of</u> the Galaxy. The mark of the modern is not so much his blindness to life, as his ruthless determination to amputate it from what he calls its environment. exact replicas of our earth." \oplus And von Weiszäcker has recently published a theory according to which development into a planetary system is very likely a part of the history of the normal star. In fact, there is a large and apparently growing body of opinion that, as H. Spencer Jones says, the number of planetary systems is probably "very large". Our experts are coming round to Bruno's view: -- "There are countless suns and an infinity of planets which circle round their suns as our seven planets circle round our sun," $^{\circ}$ -- or to something very like it.

It is, of course, one thing to accept as a working hypothesis the plurality of solar systems, and another to believe, as Anaxagoras + and so many since have done, in the plurality of inhabited worlds. The question is: given a solar system not unlike our own, are there likely to emerge, at some time in its career, the chemical and thermal conditions of life? And further, if such conditions do emerge, is life itself likely to follow? To both of these questions Henderson's answer is 'Yes'. * His thesis is that, given a revolving planet, massive enough to be capable of retaining an atmosphere, and circulating in an orbit that is neither too close to its sun nor too distant, then an atmosphere containing water vapour and carbon dioxide will occur. There will come to pass, more or less as a matter of course, the differentiation of sea from land, denudation, and the formation of soil. "In short, a possible abode of life not unlike the earth apparently must be a frequent occurrence in space." † And where the conditions of life are, there (unless we are prepared to consider life miraculous) it is reasonable to expect the living. Benjamin Moore indeed, assuming that the chemical composition of planets is nowhere likely to be very different from Earth's, practically reduced the earlier evolutionary stages to a question of falling temperature: as a planet cools, complex molecules can and do form; further cooling provides an environment in which larger and more complex molecules and particles are built up; in the end that still higher synthesis -- protoplasm -- is inevitable. However this may be, it is a reasonable hypothesis that some of the stars that develop into solar systems are, at some period of their history, alive.

Are the other non-planetary stars necessarily lifeless? After all, the traditional belief is that a star lives, irrespective of whether it is furnished with planets or not; and this was Fechner's view also. It is one which has been revived and brilliantly developed by Olaf Stapledon × who describes the layers of a star as 'digestive apparatus', transmuting the crude radiation generated at the core, and passing it on to the outer 'tissues'. For Stapledon, such a living star is a beatific creature, a kind of angel, whose office is to execute with perfect precision his part of the general dance of the stars, and to know and to love his fellow dancers. Double stars are stars in love, who in due season merge in a blaze of joy and pain: the resulting new star, after a period of unconsciousness, generates new living tissues and takes its proper place in the heavenly company. Our own solar system was born of a more transient love. As for psychic character, the planets excel in analysis, the stars retain the fuller angelic wisdom of the golden age, while the nebulae are great religious beasts, longing for reunion with one another and with their cosmic source. * To ears long attuned to science's funeral oration over the dead body of the universe, all this has a very queer sound: it is almost indecent, as if some

① One criticism of the older theories (associated with the names of Chamberlin and Moulton, Jeans and Jeffreys) which attribute the birth of the solar system to a passing star, is that they are unable to account for the very large angular momentum of the planetary system. Accordingly Russell suggested that the intruder collided, not with the Sun, but with a companion of the Sun -- a notion that was further investigated by Lyttleton. Several later theories dispense altogether with an intruder; and such theories naturally tend to make solar systems (the majority of which may well achieve life) no rare occurrence in the universe. Dr Hoyle, for instance, has remarked that, on his hypothesis, it is not unlikely that a million planetary systems exist in our Galaxy alone.

° <u>Infinito</u>, Dial. III: quoted in Boulting, <u>Giordano Bruno</u>. Cf. Victor Hugo, "So many stars, so many loves... Each star is a sun. Around each star there is a creation." <u>Intellectual Autobiography</u>, 'Things of the Infinite'.

+ See Heath, <u>Greek Astronomy</u>, p. xxxv. The writer of Epinomis (986 B) goes to the limit in this direction: "Let none of us all even idly suppose that some of them (the stars) are gods, while others are not."

- * The Fitness of the Environment.
- † <u>Op. cit</u>., p. 60.

"Life is at present originating in countless other worlds and given a certain stage in evolution when matter has reached a certain complexity in structure, and become tenanted by certain types of energy, life must come, and having come must evolve into higher and higher forms." Benjamin Moore, <u>The Origin and Nature</u> of Life, p. 73.

× Star Maker, pp. 246 ff.

I must make it clear that, in <u>Star Maker</u>, Mr. Stapledon presents these descriptions of heavenly bodies as part of a romance or dream, and by no means as items in a definitive cosmology. It would be a mistake not to distinguish (or to distinguish too sharply) between what the artist in Mr. Stapledon imagines, and what the philosopher in him believes.

* This is more or less in agreement with my own view that the mystic way passes through the planetary, stellar, and galactic regions, which are none other than aspects of the mystic's own mind: in a sense, all religious experience of a certain very high grade is galactic, and lesser creatures are incapable of it. Mysticism is introspective star-psychology; and so is some poetry. Campanella's stars whose "sensibility is full of pleasure", Swinburne's "deep dim soul of practical joker were to galvanize the corpse at the most solemn moment of the burial service. But to men in other ages, and to poets in all ages, there is nothing essentially odd in Mr Stapledon's picture of the hosts of heaven. "With joy the stars perform their shining", Matthew Arnold declares, adding no qualifications about planetary rings and humans in them. And certainly Dante makes no such proviso when he describes the stars as enjoyers, in their various degrees, of the mystical experience, and progressing

> "In circling motion, rapid more or less, As their eternal vision each impels." +

This hypothesis of living but planetless stars (or rather, of stars whose life is independent of planetary life) cannot be ruled out altogether: it has aesthetic appeal, and science is unable to pronounce one way or the other. Nevertheless I shall do without it. For the life we live here and now is, truly speaking, more sidereal than planetary, and more galactic than sidereal. To postulate, without very forcible evidence indeed, a second and utterly different kind of star-life -- a kind which is presumably inaccessible to our direct experience -- is unnecessary to my argument, and not in accord with the method of this inquiry.

There is another hypothesis that deserves mention here. Life may very well have developed, in some of the stars, to the point where interstellar travel has become possible. If this Sun is seriously considering the possibility of sending out space-ships,‡ and even artificial planets to circulate about other suns, is it not probable that a few out of the myriads of living stars (whose existence we may now reasonably assume) have performed what we have only dreamed of? I see no reason to suppose that this Sun, whose science is so recent, should not be as yet an infant in knowledge, and an infant whose elders are at this moment busy colonizing the dead stars of the Galaxy, so bringing them to life. Who can be quite sure that our Sun does not himself contain a navigator from an older and wiser star --- a Columbus-planet who, though intensely alive, is too small to attract attention? There may, after all, be something in the suggestion of Arrhenius that life travels from star to star. °

5. THE ARGUMENTS FOR THE LIVING GALAXY.

Really there is no excuse for continuing to regard the Galaxy as a lifeless and mindless thing. Let me summarize the main arguments against such a view: ----

(i) <u>The scientific argument</u>. There is the fact that science (as I have just shown) is becoming more friendly to the hypothesis that solar systems are very numerous, and that some of them are the scene of life. Unlike its 'enlightened' parents, the newer generation is not quite so sure that life is the cosmic orphan, the gate-crasher of the universe, the most foreign of foreign bodies. Indeed, science itself, in its basic assumptions, is really on the side of life. 'I believe' -- so runs the materialist's credo -- 'in a dead world; and in protons and electrons (or some such <u>minima natu-</u>

a star" ('Hymn to Proserpine'), and Francis Thompson's "abashless inquisition of each star" ('<u>Sister Songs'</u>) are evidence about the stellar mind in precisely the same way that a man's pronouncements upon men are evidence about the human mind.

+ <u>Paradiso</u>, VIII.

Plato (<u>Laws</u>, 898), having given each heavenly body a divine soul, goes on to suggest three possible relationships of the star's soul to its body: (1) the soul may fill the whole sphere of the star, moving it as our souls move our bodies; (2) it may have a fiery or airy body of its own, enveloping the star's body and moving it; (3) it may have no body at all, and guide the star by means of "some surpassingly wonderful powers".

‡ In 1946 a number of British "astronautical" and "inter-planetary" clubs amalgamated to form the British Interplanetary Society. At that time plans were being prepared for a rocket to reach the moon. The intention was to record the progress of the first rocket by means of radar, as a preliminary to launching passenger-carrying projectiles.

° Worlds in the Making.

Robert Bridges (<u>The Testament of Beauty</u>, III) certainly does mince his words: men, he says,

"crawl greedily on their knees nosing the soil like swine,

and any, if they can twist their stiffen'd necks about,

see the stars but as stones."

In his famous (and, at the time, startling) address to the British Association in 1874, the physicist John Tyndall declared that matter contained the promise and potency of all life. In effect, he grasped the important truth that materialism contradicts itself in the end, and that when you refer life and mind to the lowest physical level you do not abolish them (in the way that ralia) which are the source or the potentiality of the life and mind and values that this dead world transiently achieves.' But these two articles cancel out. If life, given the chance, arises as a matter of course out of the minima naturalia, then potentially the galactic systems are all alive in every part. Every star has it in itself to live the finest life known to us, and only awaits certain exterior accidents (which, it now seems, are not rare) for the life to make itself manifest. In other words, it will not do to derive all higher processes from some ultimate and universal physical substratum, and yet go on labelling them freaks and strangers in the universe: they are, on science's own showing, very much at home, implicit from the beginning and everywhere. What we call inanimate nature is at once the soil and the seed of life. Science shows that, in time, by a process of integration, electrons and protons take the form of myself writing this sentence about electrons and protons; it also shows that, in time, by a process of differentiation, the Galaxy takes the form of myself writing this sentence about the Galaxy. To say that this twin development is no indication of the nature of the Galaxy is patently absurd.

(ii) The argument from the known to the unknown. Of the two or three thousand million human beings that populate this globe, only one is presented for my direct inspection. Yet I am prepared to accept this solitary instance as, in all important respects, a fair sample of the rest. And this act of faith -- upon which my human life depends -- seems to work out very well in practice. Nor can I feel that it is absurd to deny that all other men are automatons, without a trace of that inner life which I enjoy. In fact, to suppose them to be in this condition would be to argue from the unknown to the unknown, to multiply hypotheses unnecessarily, to leave the empirical method for the speculative. And indeed it is more likely to be self-centred lack of imagination than superior wisdom which tempts me to suppose that I am unique at any level --- human, stellar, or galactic. Only one star of the scores (or hundreds) of thousands of millions that compose the Galaxy is offered for my direct inspection, but (seeing that I cannot suspend judgement in this vital matter) it is more reasonable for me to argue from this one sample to the rest, than merely to dogmatize or to guess about them, without any real evidence at all. Of the two classes of stars -- the one alive and the other lifeless -- only the first exists indubitably. The superstition that stars in general are immeasurably inferior to ourselves (except in gross physical respects) is a kind of solar solipsism, and no more deserving of respect than any other kind of solipsism. *

(iii) <u>The argument from hierarchical continuity</u>. If the hierarchical schema of this book is in principle valid, and if the life and mind of the higher levels of integration up to the solar level are granted, then to stop short at this point, and without evidence to regard the galactic level as exceptional, is quite unwarranted. "Nature", Leibniz assures us, "never makes leaps." I am justified in extrapolating the curves which this inquiry has so far established.

(iv) <u>The argument from self-consciousness</u>. Even if all other arguments were dismissed, and the Sun were regarded as the only self-conscious star --- even so, his self-consciousness (as I have already argued at length, in respect of other hierarchical levels) would imply and require

materialists fondly imagine) so much as universalize them. Thus A. M. Fairbairn: "If, then, we attempt to conceive what was before life and mind as the condition or cause or factor of their being, we must invest it with the qualities which enable it to do its work. And what is this but turning it from dead matter into living spirit?" The Philosophy of the Christian Religion, p. 48. All depends on how we think of matter. On the one hand, there is Dr. Joseph Needham's view that biological order is "a natural consequence of the properties of matter", and his suggestion that the qualitatively new emerges as soon as these properties are no longer thwarted or cancelled out, or otherwise held latent; on the other hand there is the view of matter as mere raw stuff, to be fabricated from outside. The first view ends in giving everything to matter, the second ends in giving it nothing: and both, I say, are right. The Centre is the receptacle of All. Cf. Joseph Needham, Order and Life, pp.165 ff.

In objection to my argument here it may be said that, while we are obliged to assume the mental aspect of our fellow men, we are under no such practical necessity to believe in the mental aspect of the stars: on this point we should keep an open mind. My answer is that I find it impossible to remain in a state of indecision as to whether my companions (whatever their class) are my living equals or my dead inferiors. The difference between a world that may possibly be alive, and one that is dead, is merely theoretical. The only genuine alternatives are that I take men and stars and galaxies to be alive until proved otherwise; or to be dead until proved otherwise. There is no stable intermediate position.

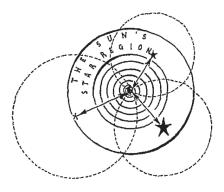
* "Why not admit", Zeno is said to have argued, "that the world is a living and rational being, seeing that it produces living and rational beings?" And seeing that (he might have added) we can never find anything in it which is outside of, or foreign to, life and mind. The more elaborately we prove that difficult mental construction -- mindless matter -- the more we disprove it; for there is no antiseptic by which mind can guard against infecting all that it handles. a society of equals. To speak strictly, there can be no such thing as one self-conscious star, or one self-conscious galaxy. The Sun and the Galaxy know themselves in terms of, and from the viewpoint of, their fellows,+ whom they necessarily infect with their own life and mind; or rather, the life and mind are necessarily shared, since no one can hold private property in these goods. "These myriad eyes that look on me are mine" --- when AE says this of the stars, ° he speaks on behalf of the self-conscious Sun. There is, in fact, any amount of empirical evidence that "the stars look down". By knowing inferior things, St Thomas tells us, we raise them, in a manner, to our own intelligence. And this, I say, happens in two ways: the life and mind that I claim, are not qualities which I own, so much as functions which I share, seeing that they can only characterize (1) my equals here in me (who am nothing in myself), and (2) myself over there in my equals (who again are nothing in themselves). Either way, I must drag them in. "There is something social and intrusive in the nature of all things; they seek to penetrate and overpower, each the nature of every other creature, and itself alone in all modes and throughout space and spirit to prevail and possess. Every star in heaven is discontented and insatiable. Gravitation and chemistry cannot content them. Ever they woo and court the eye of every beholder..... These beautiful basilisks set their brute, glorious eyes on the eye of every child, and, if they can, cause their nature to pass through his wondering eyes into him, and so all things are mixed..... And because all knowledge is assimilation to the object of knowledge, as the power or genius of nature is ecstatic, so must its science or the description of it be..... Ecstasy is the law and cause of nature." × The law of elsewhereness is as true for stars as for men. "Each of them", says Plotinus of the hosts of heaven, "contains all within itself and at the same time sees all in every other, so that everywhere there is all, ... and infinite the glory! Each of them is great: the small is great; the sun there is all the stars; and every star, again, is all the stars and sun; each is mirrored in every other." \oplus A star, indeed, is not stellar in one place but in two at the least. That is to say, any adequate definition of the term star becomes a definition of a pair of stars. Nor are these sidereal 'ecstacies' or 'mental voyages' unscientific. Modern physical science is nothing if it is not built upon a framework of widely scattered inter-communicating observers. I say that these observers must be taken seriously: they, no less than the data they supply, are data which cannot be ignored. It is naiveté itself to suppose that scientists can take the temperature of, and weigh, and measure the stars, and make themselves free of the whole Galaxy, yet leave their vitality and mentality behind on this planet, as if in a safe deposit. The study of a thing changes it. The most important astronomical fact is the fact of astronomy. And astronomy is nothing if it is not the product, or rather a vital part of the actual functioning, of the society of the stars. The astronomer puts into effect the words of Marcus Aurelius: * "Now among them that were yet of a more excellent nature, as the stars and planets, though by their nature far distant from one another, yet even among them began some mutual correspondency and unity. So proper is it to excellency in a high degree to affect unity, as that even in things so far distant, it could operate unto a mutual sympathy."

(v) The argument from the travelling observer. If my receding ob-

St John of the Cross said, "The soul lives by that which it loves rather than in the body which it animates. For it has not its life in the body, but rather gives it to the body and lives in that which it loves."

+ For example, Stromberg has measured the Sun's galactic orbit by studying the spectra of the nearer nebulae; - from these he arrives at the speed of the Sun's orbital motion, which in turn gives the clue to the radius of the Sun-ring of the Galaxy. In such ways the Galaxy comes to know itself by observing its fellows, just as a man does.

^o In the poem 'Star Teachers'. The stars are really most accessible, and Keats had little need to ask the way to them:
"Point me out the way
To any one particular beauteous star,
And I will flit into it with my lyre,
And make its silvery splendour pant with bliss."
<u>Hyperion</u>, III



× Emerson, 'The Method of Nature'.

Tractate on Intellectual Beauty.

We can derive the Sun's self-consciousness from his consciousness of other stars, or <u>vice versa</u>. Thus Hegel, "<u>Self-consciousness</u> is the truth of consciousness: the latter is a consequence of the former, all consciousness of an other object being as a matter of fact also self-consciousness." <u>Encyclopaedia</u>, 424.

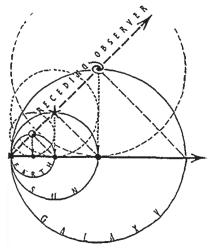
In some respects, science itself allows increasing importance to these observers. On this topic G. J. Whitrow writes, "Natural science is coming to be regarded as the study of these judgements concerning which 'universal' agreement can be obtained, in principle; and agreement implies the 'existence' of a community who can decide whether or not to agree. In the past these 'observers' have been regarded as mere spectators whose role was to act as judges in the final appeal; but today observers tend to become witnesses who themselves directly assist in determining the nature of the evidence." Philosophy, April 1946, p. 21.

* Meditations, IX. 7.

server grants that I am a living and intelligent creature, and then notes that I become a planet and a star and a galaxy, there is a certain presumptive evidence that the new forms are heirs to the old qualities: or at least it would not be surprising to find that such was the case. If the view from the side and from behind belong to me, why not the view from afar? (It can hardly be objected that the distant view is irrelevant. My observer's recession is no whim: he is forced to take in more and more of me, in order that the picture shall make sense. For instance, he finds that a great deal of my behaviour is inexplicable at the level of the individual man, and he is obliged to take account of Humanity; similarly, when he considers my life, he is driven to the conclusion that nothing less than Life can live. And so, by an inexorable dialectic, he finds it necessary to retreat from me for the purpose of understanding what I am, till he sees me become Earth and Sun and Galaxy.)

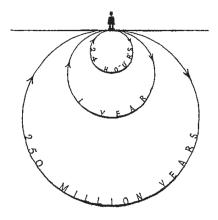
(vi) The argument from Copernican revolutions. By itself, my travelling observer's report would be inconclusive. Its force is chiefly derived from the fact that it agrees so well with my report. Thus, as he recedes from me, the direction of his gaze is slightly modified from time to time: his attention shifts from Earth's centre to the Sun's, from the Sun's to the Galaxy's. And this centre-shifting (which, as an important peculiarity of his observation of me, cannot be ignored) furnishes true insight into my nature. It is a part of my growth to maturity that I shall become geocentric, then heliocentric, then galactocentric. × These Copernican revolutions are the condition of my hierarchical advance, whether it is a question of my own view out, or of my observer's view in. For me, these more inclusive wholes (in particular, the Galaxy) become stages in a life-history, or moments in a vital process: their seeming deadness reveals itself as a mask for greatly increased vitality. ° Let me put the matter another way. I grow by increasing my spatio-temporal grasp, so that this time and place which I call 'here' and 'now' become successively an Earth-ring whose 'here' is 6,000 miles in diameter and whose 'now' is 24 hours; then a Sun-ring whose 'here' is 186,000,000 miles in diameter and whose 'now' is one year; then a Galaxy-ring whose 'here' is some 70,000 light years in diameter and whose 'now' is some 250,000,000 years. I grow by flattening my curvature, by extending my radius to a remoter centre. Without moving an inch, I can leave Earth and take my stand upon the Sun and the Galaxy. "This is not a journey for the feet", says Plotinus (in a context which is only superficially different). "Call up all your confidence, strike a forward step -- you need a guide no longer -strain and see." I cannot be accused of wild speculation here. Just as truly as I now stand upon the soil of England and of Europe and of the Old World, so do I stand also on the vast territory of the Galaxy --- upon that vast ring of the solar orbit which, given the time, is a physical 'solid'. The place whereon I stand is holy ground (in the original sense of that word, at least) to the extent that it is whole ground --- whole in space and in time --- and it is this in so far as I "cleanse the doors of my perception".+ There is a tradition that the Pythagoreans, not content with believing that all the stars are populated, supposed that souls can step from a star on to Earth, and from Earth on to a star, at the moment when the star meets the horizon. In principle, they were right. Indeed it is not only possible, but essential, that I should regularly and, in this life step off the

"It is only their polarized dynamic connection with us who live", writes D. H. Lawrence of the heavenly bodies, "which sustains them all in their place and maintains them all in their own activities. The inanimate universe rests absolutely on the life-circuit of living creatures, is built upon the arch which spans the duality of living beings." <u>Fantasia of the Unconscious</u>, XIII. Here Lawrence does justice to the cosmic character of the life that is in us, but less than justice to its vivifying power.



× Just as Ptolemy put the Earth at the centre of the solar system, so Sir William Herschel (deceived by clouds of interstellar matter) put the Sun at the centre of the Galaxy, making a further Copernican revolution necessary.

° The life in a thing varies with the hierarchical status of the whole to which that thing is seen to belong; it takes the Whole to invigorate the deadest parts of the world, but as in the Whole they wholly live. "The soul in man", says Eckhart, "is whole in every limb: in the fingers, in the eyes and in the heart and in every several portion of each member large and small. Just as in the eighth heaven, where there are so many stars, there is one angel who revolves that heaven and exists entire in each star." Evans, i. p. 29l.



+ "But first the notion that man has a body distinct from his soul is to be expunged; this I shall do by printing in the infernal

Earth on to those celestial countries of which I am by birth a citizen, if I am not to remain self-alienated, a stranger to myself. The astronomer who is still on Earth is no astronomer: he must make allowances for and undo every movement of his that is of the Earth, and at a later stage, every movement that is of the Sun, in order to identify himself with the Galaxy alone. He becomes the Galaxy, just as he is seen to become it. And this procedure of astronomy is only a particularly lucid aspect of a development which involves our whole personality.

(vii) The argument from first-hand galactic experience. Thus the galactic outlook and the galactic self-consciousness are not vague hypotheses, but rather works which we have to perform, and states of mind which we are privileged, on certain none-too-easy conditions, to enjoy. Common sense, though convinced of two things --- (a) the relativity and limitations of the human mind; and (b) our ability to survey the universe --- fails to draw the only possible conclusion: namely, that it is not man who surveys the universe, and who realizes man's insignificance in it. Knowing your limitations is getting the better of them. "To pronounce that our knowledge is, in any sense, limited, we must have access to some standard to which that limited knowledge is referred." × In any case, if I am nothing but capacity for all things, then it is meaningless to say that I am limited: only if I were something in myself would it be possible to set bounds to me. I find myself to be the locus of other stars and other galaxies: I entertain them here as easily and as naturally as I entertain other human beings. And the reason is that the accommodation I have to offer is no less galactic than it is human: here are no goods of mine to get in the way of my guests. "For what we are," says Ruysbroeck, "that we intently contemplate; and what we intently contemplate, that we are." What are we really looking for when we seek evidence that the Galaxy is a living self-conscious creature? We are looking for a system of experience of other galaxies, and it is just such a system that we do find, and know by the most direct and certain method. The evidence we seek is the experience we enjoy. For we have the power (more literally than Chesterton realized) --- "the power at some moments to outgrow and swallow up the stars". \otimes The galaxies that are here engulf the stars that are here. ° Becoming alive to more, we become more alive. And if common sense should need any further guarantee that we have genuinely transcended the human order, it is only necessary to point to our godlike ability to compass in one field of vision the dimensions, not merely of a star and a star cluster, but of a spiral nebula and a group of nebulae. Who but a being built on a galactic scale could thus effortlessly compress billions of miles into a hair's breadth? As with the spatial, so with the temporal aspect of galactic intercourse. In a later chapter I shall develop the view that our 'now' (or specious present) vis-à-vis the nebulae embraces millions, and sometimes hundreds of millions of years. The nebula that is presented to us here is at once the nebula of say, 300 million years ago (in respect of its action upon us) and of 300 million years to come (in respect of our action upon it): though it is presented here and now, research shows that the 'here' embraces thousands of light years, and the 'now' embraces 600 million years. My contention is that it is ridiculous to suppose that man is capable of thus extending his grasp of space and time. "For 99.9 per cent or more of its long journey, the light by which we

method, by corrosives, which in Hell are salutary and medicinal, melting apparent surfaces away, and displaying the infinite which was hid. If the doors of perception were cleansed every thing would appear to man as it is, infinite." Blake, The Marriage of Heaven and Hell. I do not know what Blake meant by this, but it sounds curiously like the doctrine that I am putting forward here: we cleanse the doors of our perception by melting away, in due succession, the apparent surfaces of Earth, and Sun, and Galaxy, till we reach the 'infinite surface' of the Whole. In other words, we extend the radius of curvature of the plane whereon we stand.

"The eye", says Bergson, "was only meant to reveal to us objects on which we can act; but ... nature could only obtain the requisite degree of vision with an apparatus whose effect goes beyond its object (since we can see the stars, while we have no control over them)." Morality and Religion, p. 144. This is really too much. Could anyone but a philosopher seriously believe that, while the first few miles of our range of vision are 'meant', the remainder (i.e., hundreds of light years) is an oversight? The fact that Bergson misses is that one and the same human eye is a unit of a series of compound eyes, belonging to a planet, a star, and a galaxy. Gerald Heard is on safer ground when he writes (The Code of Christ, pp. 124 ff.) of man's powerlessness to make any physical difference in the stupendous universe that science has discovered: altogether too tiny and too brief to act, he can only attempt to be, to achieve new planes of consciousness. I say that to attain to these planes is to attain to their action, which is the more real for being disciplined and for displaying the order of the heavens.

× John Caird, <u>Introduction to the Philoso-</u> <u>phy of Religion</u>, p. 15.

⊗ <u>The Napoleon of Notting Hill</u>, V. 3. ° "You came to see my stars", says the astronomer-Duke in Fry's Venus Observed; "I have them here." Eddington says, "There are no purely observational facts about the heavenly bodies. Astronomical measurements are, without exception, measurements of phenomena occurring in a terrestrial observatory or station; it is only by theory that they are translated into knowledge of a universe outside." (The Expanding Universe, p. 25.) In other words, the nebula that the astronomer studies is here: and this fact (I say), so far from being a disadvantage, is the secret of the astronomer's success. Browning realized this, that "to KNOW

Rather consists in opening out a way Whence the imprisoned splendour may escape,

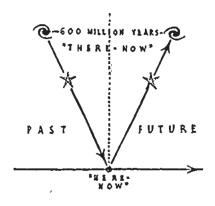
Than in effecting entry for a light Supposed to be without." 'Paracelsus'

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see the faintest of visible nebulae travelled towards an earth uninhabited by man. Just as it was about to arrive, man came into being on earth, and built telescopes to receive it." + But (I say) this is quite incredible, as it stands. No man ever saw a nebula. The age of the creature who receives the light is comparable with the age of the creature who is its source. Traherne's words -- "Your understanding comprehends the World like the dust of a balance, measures Heaven with a span, and esteems a thousand years but as one day" * -- are altogether inapplicable to human beings as such. †

While it is not as men that we perceive the nebulae, it is nevertheless we who perceive them. And, naturally enough, our procedure is much the same at the two levels. Let me cite an instance. One highly successful method of measuring the distance of the nearer nebulae is to measure the <u>apparent</u> luminosity of certain variable stars that they contain --- stars whose intrinsic luminosity is known: it is then a question of calculating the distance necessary to effect the dimming. This is, in principle, one of the chief means by which men arrive at the approximate distance of such objects as trees and houses. 'Unconsciously', we compare the 'seen' dimensions of the doors and windows and chimney-pots with their 'known' dimensions, and allow a distance sufficient to account for the difference. (Another means of estimating the distance of objects -- within the Galaxy -- is to determine, by a study of their spectra, the amount of interstellar cloud through which their light has travelled: in a similar way - as landscape painters well know - the mistiness of terrestrial objects is a clue to their remoteness.) Here again, the great law holds good --- the law that what we do 'unconsciously' and obscurely at the human level, we do deliberately and clearly at the higher levels. We know much more about our galactic perception as such than about our human perception. And indeed it is time that we turned for information and guidance in this field (as we have already done with such success in the field of physical science) from our terrestrial experience to our celestial. The odd thing is that common sense should imagine human functioning to be transparent to our inspection, and suprahuman functioning opaque; ° whereas the truth is the other way round. It is the nature of the upper levels of the hierarchy to be flooded with intellectual light: the others get what filters through.

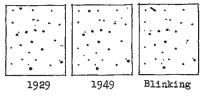
(viii) <u>The argument from galactic sense organs</u>. And if common sense demands more tangible evidence, such as specific sidereal and galactic sensory equipment, this is not far to seek. There is, for instance, the useful blink microscope, by means of which the astronomer (acting in his solar capacity) sees as one swift motion the slow and ordinarily imperceptible passage of a star over a period of several years. Above all, there is the reflecting telescope. It is no matter for biological speculation what kind of eye would be appropriate for an organism that is more than 10^{35} times as massive as the largest whale: its light-gathering power is equal to that of thousands of human eyes; its range is reckoned in millions of light years; its focal length is (in certain specimens) a hundred feet. \oplus Even its cost is precisely known. The little organisms are nests of mystery, but here, in the fabulous kingdom of fiery and nebulous monsters, physiology at last comes into its own: only, because this physiology has



+ Jeans, <u>The Universe Around Us</u>, p. 73. * <u>Centuries of Meditations</u>, I. 19.

† "My picture of the world is drawn in perspective, and not like a model to scale. The foreground is occupied by human beings and the stars are all as small as threepenny bits (F. P. Ramsey, Foundations of Mathematics, p. 291.) The astonishing thing is that I should take this perspective for granted, and altogether miss its implications; my cardinal error is to imagine that the whole depth of it belongs to me, the man. Who looks out depends upon how far he looks. It was his failure to grasp this truth which led Fechner to say that, while we can have some direct knowledge of the Earth-soul, we cannot rise to its unity. "This experience we cannot have, nor ought we to require it, for this conclusion is away above ours; the whole soul of the earth must be ours if in us we were to have its unified conclusion, whereas in fact, like a small circle within the greater, we comprise only a part of its content" Lowrie, p. 156.

^o This is a peculiarly modern superstition, from which mediaeval thought was more or less free. Canto I of Dante's <u>Paradiso</u> is a notable declaration of the belief that the intellect and order and beauty that enter into our life are essentially heavenly.



The blink microscope is used for discovering, in a way that saves endless time and trouble, which stars out of a large number have moved relative to the rest, during a period of, say, 20 years. Two photographs, one taken 20 years after the other, of a small area of the heavens, are rapidly alternated by the instrument. Most of the stars appear to be still, but those that have shifted appreciably during the 20 years appear to 'blink' or vibrate.

 \oplus The light-gathering power of the new reflector at Palomar is that of about a

become lucid and deliberate and exact, we give it other names, such as optics, mechanical engineering, metallurgy, spectroscopy. I have briefed myself, in this chapter, to defend the galactic life against the indictment of common sense at the human level: but the defending counsel has turned prosecutor. It is not the vital functioning of the Sun or the Galaxy that is obscure or 'mystical' or speculative, but that of the man. Paradoxically, it is our knowledge of the first which convinces us of our ignorance, and our ignorance of the second which convinces us of our knowledge. We are often reminded how intimately the progress of pure science is connected with social needs, and in particular with the recurring demand for improved techniques and new instruments. * One of the chief underlying reasons for this connection is that science is at once participation in the experience of infrahuman and suprahuman individuals, and the means of furnishing them with the sensory equipment that makes that experience possible. Only at and around the human level are we able to register our environment without knowing how we do so, and without having contrived our own sense organs. The more remote the level, the greater the need for self-knowledge, and the more complete the assurance that what we know of the world depends on what we are. †

Galactic sense organs hide behind their obviousness and efficiency. Thus we come to look upon the lenses and mirrors and clocks and photographic plates, into which the sensory equipment of our celestial body may be analysed, as so many orthopaedic devices, as artificial makeshifts that we put in place of the genuine and natural organs that we lack. They are second-best equipment, helping us out, supplementing our poor senses. One half of the truth is, indeed, that the instrument extends the man; but the other (and unnoticed) half is that it extends him far beyond manhood. There is very little room for growth on the merely human plane: man's expansion is of necessity vertical rather than horizontal. "Art quickens nature," as Herrick says, + but it is galactic art that quickens galactic nature. And when we try to examine them without prejudice, the galactic sense organs are everything that can reasonably be expected of a spiral nebula: their dimensions, range, precision, economy of genesis and of functioning, are in every way appropriate. Nor is their position unfortunate. It is often unthinkingly assumed that we are somehow handicapped in our study of the universe, remote from our subject matter, awkwardly placed. The reverse is the case. What seem to be serious limitations have a way of proving inestimable advantages. Where should the spectroscopist investigate the particles of the sun's interior if not at a safe distance, where their radiation not only presents itself in a state suitable for study, but also endows the student with the means of life itself? Where should he keep his millions of laboratory furnaces \times -- each the scene of a gigantic and unique experiment -- if not at convenient sidereal distances, and where they go on fuelling themselves for millions of years without cost? Are these arrangements untoward, or, on the contrary, singularly neat? Or again, where should the nebulae be observed if not here, in the place where that is what they are? Here, on the spot, every grade of being awaits discovery.

(ix) <u>The argument from history</u>. Consider the historical fact that we have, on the whole, believed that heavenly bodies are alive, and indeed

million human eyes, and its range is of the order of 1000 million light years. The universe that it reveals has eight times the volume of the universe revealed by the 100 inch reflector. On account of the unsteadiness of the atmosphere, however, there are not many days in the year when the larger instrument has the advantage. But this is to be expected: at these levels, more time is spent on interpreting data than on collecting it.

Some biologists have recognized that technology and the evolution of machinery are capable of throwing valuable light upon the obscurer biological processes. See, e.g., Julian Huxley, <u>Essays of a Biologist</u>, p. 36, and Haldane & Huxley, <u>Animal Biology</u>, pp. 248 ff.

* Cf. Lancelot Hogben, <u>Science for the</u> <u>Citizen</u>, pp. 17 ff.

J. B. S. Haldane (<u>Possible Worlds</u>, pp. 281 ff.) has an interesting description of a 'mythical' creature who is sensitive to the whole range of waves. I say that if such a creature did not actually exist to register the waves, Professor Haldane would know nothing about them. If the instruments of science were not perfectly incorporated in, and natural to, a living organism, they would not be instruments at all.

† As Professor Herbert Dingle has often pointed out, modern physicists are giving up the idea of an independent nature which they investigate, and coming to see their function rather as the coordination of certain kinds of experience. Thus the 'exigencies of observation' are no longer irrelevant to the real nature of the object observed.

"I do think that many mysteries ascribed to our own invention," says Sir Thomas Browne, "have been the courteous revelations of spirits; for those noble essences in heaven bear a friendly regard unto their fellow creatures on earth." In a way, Browne is perfectly right. One mark of the high-grade creature is that its 'senseorgans' are deliberate responses to the stimulation of its companions; Palomar is a galactic reaction to extra-galactic influences. It is designed to further the social activity of which it is at once the product and the instrument; it is unearthly; its true address is galactic, and only incidentally solar and terrestrial. The star Arcturus switched on the lights of the Century of Progress Exposition at Chicago (light from the star was made to activate a photoelectric cell, which in turn controlled the switchgear), but first Arcturus, in common with the rest of the stars, called forth by the gentle influence of millenniums that science which made the whole Exposition possible.

+ 'Hesperides'

× And these laboratories give results. Spectroscopy, with its many technical and scientific applications, is very largely divine. ° Now this conviction would be of small consequence if it were only human --- men as such (particularly in prescientific ages) are plainly incompetent to form an intelligent opinion in the matter. In fact, I do not see how the belief could have arisen at all, or makes sense when it does arise, unless it is the belief of one heavenly body about others. But in that case it cannot be ignored. Here is a star, convinced (apart from relatively brief, and never unqualified, moods of scepticism) that he is surrounded by living and worshipful companions. It is, of course, possible for him to be wrong, but at least his conviction must be taken into account: it is a material part of the evidence. As for the objection that the Sun's high estimate of his fellows may be a flippant one, a pose perhaps, or a scarcely serious over-belief: I do not think that the facts support it. It was not a whimsical notion for which Bruno was prepared to die a cruel death.

> "Deem you that only you have thought and sense, While heaven and all its wonders, sun, and earth, Scorned in your dullness, lack intelligence? Fool! what produced you? These things gave you birth; So have they mind and God."

Tommaso Campanella, the author of these lines, is said to have suffered the severest tortures during his twenty-seven years' imprisonment, on account of his beliefs about the stars. If his beliefs were not only human, neither was his suffering. True social life, whether human or sidereal, is never painless.

(x) <u>The aesthetic argument</u>. There is a practical side to the question as to whether the Galaxy is the scene of widespread and varied life. Would not such a home be more beautiful, better worth living in, nearer our hearts' desire, than the defunct and miserable waste which we suppose ourselves to inhabit? Do we not on those occasions when we feel most alive and most ourselves, reject the dead world and assert the living? And, if this is so, is it not unscientific wholly to ignore what we -- who are our own samples of the universe -- feel in this matter? Since we can take no personal credit for our aesthetic preferences, since they are so obviously deep-rooted in life and the cosmos itself, it is absurd to say that they are no guide to the nature of the cosmos. And our verdict is unmistakable. "In how different a light", Fechner exclaims •, "the whole earth appears to us now when it is wakened and truly living! In how different a light heaven appears when it is filled with hosts of angels, instead of with a dead game of bowls! How different God appears to us now, how high and rich He appears who bears within Himself spiritual beings of every rank! How different our relation to God and to our neighbours when in the spirit over us, the angel of the earth, we have a spiritual mediator with God and a spiritual bond with our fellowmen!"

But the question (common sense is quick to point out) is not what we think should be, but what is ×; and in countless ways men have mistaken their desires for facts. True enough, but the now common opposite error -- that we should mistake our best desires for lies, and our worst fears for facts -- is even less defensible; and certainly this fearful thinking is ten times more disastrous, seeing that it promotes the behaviour which makes our fears come true. Moreover, it has yet to be shown that the deepest and most permanent of our desires (I mean, in particular, those which do not contradict themselves, and cancel out) are at all incompat-

the product of modern astronomy, just as mathematics and navigation were very largely the product of ancient astronomy.

° There are several imperfect versions of the doctrine: as for instance the belief that the stars are inanimate but inhabited; or impelled or animated by immaterial angels or other spirits; or alive but evil, and in some ways inferior to man. An instance of this third variety is the belief of the Gnostics, of whom Plotinus wrote, "Their own soul, the soul of the least of mankind, they declare deathless and divine; but the entire heavens and the stars within the heavens have had no communion with the Immortal Principle, though these are far purer and lovelier than their own souls." (Enneads, II. ix. 5.) The full doctrine is nowhere put better than in Meredith's 'Meditation under Stars': in this splendid poem, he finds the stars "not distant aliens, not senseless Powers," and doubts not that in them man is "the binder of his sheaves." It is not enough that the stars should live: we have to realize that their life is the same as ours --- "there with toil Life climbs the self-same Tree." The ancients put the same doctrine more crudely. Hadrian rediscovered his drowned Antinous as a new star; and in all ages men have seen the stars as the souls of men who have once lived on earth. Cf. Robert Eisler, The Royal Art of Astrology, pp. 55 ff. Even Wordsworth (Miscellaneous Sonnets, II. 25) supposes the stars to be the mansions where the spirits of the blest dwell.

In <u>Die Drei Motive</u>, Fechner adds to his <u>theoretical</u> arguments the <u>historical</u> argument (men have nearly always believed in the living stars), and the <u>practical</u> argument (such belief is beautiful and life-promoting). These three 'motives' mutually support one another, and to rely upon one of them would be like balancing a tripod on one leg. Here Fechner anticipates the pragmatism of William James, who (in <u>A Pluralistic Universe</u>, IV) acknowledges the debt.

• Lowrie, pp. 156, 157.

"When I hear modern people complain of being lonely, then I know what has happened. They have lost the cosmos. --- It is nothing human and personal that we are short of. What we lack is cosmic life, the sun in us" D. H. Lawrence, <u>Apocalypse</u>, p. 52.

Without angels, said Richard of St Victor, our universe would be acephalous, <u>quod</u> <u>est inconveniens</u>.

× Cf. T. H. Huxley's famous dictum that to believe what we have no reason to believe, because the belief is to our advantage, is "the lowest depth of immorality"; and W. K. Clifford: "Belief is desecrated when ible with the facts. We are far from knowing fully either the universe or what we want of it, and it is (to say the least) premature to declare that these two can never coincide. In their different ways the artist and the mystic do, it seems, glimpse the identity of the true and the beautiful. The direct vision is rare, and we must live by faith: let it then be a beautiful and magnanimous and heartening faith, rather than a mean and grovelling thing. If over-beliefs (as William James called them) are practically necessary, it is mere perversity to choose the life-denying alternative and the black faith of unreasoning despair. I suspect it is more often intellectual laziness than intellectual honesty (that over-advertised and under-stocked commodity) which chooses the easier path leading downwards, away from light and life. He who is determined to live in a dead Earth, and a dead Sun, and a dead Galaxy, is trebly suicidal.

(xi) The religious argument --- dying to live. Death must, nevertheless, be accepted --- not indeed as an end in itself, but as a means to more life. I pass through the same three stages in my assessment of my fellow planets and fellow stars, as I do in the assessment of my fellow men. First, the stage of primitive animism; when I treat my companions as alive and externally related to me; second, the stage of mechanism, when I treat them as things to be exploited or avoided, and analysed; third, the stage of enlightened animism, when I treat them as selves and co-equals, in a society with which I identify myself. In the second stage, I regard the stars as mere balls of fire, just as I regard men as chattels and means to an end, describing them as economic classes, labour, consumers, manpower and so on. Nor is this denial of life, this denial that others are ends in themselves or selves at all, nothing but lack of imagination and unfeeling egoism. On the contrary, it is an essential moment in that universal dialectic whereby life purifies and strengthens itself by means of death. Without this death-mood, science would never dare to get to grips with its material; art would never learn objectivity and innocence of eye; religion would never advance beyond crude polytheism. The inexorable law is that you cannot gradually refine the animated world of the primitive and the child: you can only kill it, and then raise it to a new and worthier life. We -- and this includes our universe -- must be born again. It was necessary that Earth, Sun, and stars should die, that we should commit murder on a galactic scale. At every level, the condition of life is the sacrifice of life; and the higher the level the greater the sacrifice. Even angels (if I may so call the stars and the galaxies) have to die, in order to live again more angelically. And this is only another way of saying that we ourselves -- whether as scientists or artists, as thinkers or worshippers -- must come to know and enact the rule that every upward step to life has, as its indispensable mirror-image, its downward step to death. The Galaxy, as one of the higher stages of this ascent, and one of the lower stages of this descent, is (in a manner which will become clearer as we go on) both much more alive and much more dead than a man. No more than science, does religion in its higher phases countenance the uncritical animism that sees life, and only life, everywhere: the mystic has to accept death on an ever-growing scale. In short, the common-sense assertion that the Galaxy is dead, contributes to the Galaxy's life.

given to unproved and unquestioned statements for the solace and private pleasure of the believer." William James does not deny this. His thesis is: "Our passional nature not only lawfully may, but must, decide an option between propositions, whenever it is a genuine option that cannot by its nature be decided on intellectual grounds; for to say, under such circumstances, "Do not decide, but leave the question open," is itself a passional decision, --- just like deciding yes or no, --- and is attended with the same risk of losing the truth." (The Will to Believe, p. 11.) But in the case of the proposition now under discussion (namely, that the Galaxy lives) I believe that decision has already been reached, over and, over again, on intellectual grounds; and our passional nature comes in, not, to decide the matter, but to add just one more item to the weight of the evidence.

It is symptomatic of our age that the rhyme about the wonderful and mysterious twinkling star becomes the rhyme about the bat: we no longer <u>wonder</u> what a star is, for we <u>know</u> that it is blinder and stupider than any bat. A star has no nervous system, therefore it cannot be aware --declares a stellar nervous system!

Neither science nor religion could advance very far till the universe and its immanent life had been parted. But the time has come to put them together again. Deity and the skies, so long dissociated, must merge. "The sky can," writes Thorkild Jacobsen, "at moments when man is in a singularly receptive mood, reveal itself in an almost terrifying experience. The vast sky encircling one on all sides may be felt as a presence at once overwhelming and awesome, forcing one to his knees merely by its sheer being. And this feeling which the sky inspires is definite and can be named: it is that inspired by majesty.... Though a feeling of distance, this feeling is not one of absolute separation; it has a strong element of sympathy and of the most unqualified acceptance.... This majesty and absolute authority which can be experienced in the sky the Mesopotamians called Anu. Anu was the overpowering personality of the sky, the 'Thou' which permeated it and could be felt through it. If the sky was considered apart from him, as it could be, it receded into the category of things and became a mere abode for the god." Before Philosophy, V. And our heavens are not so much as the abode of our gods: they are mere rubble, as if we had atom-bombed the universe.

Now these eleven arguments are of very unequal weight, and they

are not independent of one another: nevertheless their combined effect is considerable. Of course I cannot pretend to 'prove' that this galactic body is something more than a cosmic Catherine-wheel, any more than I can 'prove', that this human body is something more than an ingeniously constructed robot. But it seems to me that the grounds for accepting the life and mind of the Galaxy as a working belief are better than we had any right or reason to expect, and certainly very much better than the grounds upon which we base many of our most cherished convictions. I suggest that the only genuine alternative to the belief I have been defending is not a limited scepticism, but the absolute and universal scepticism of the solipsist. And, outside of lunatic asylums, there are no solipsists.

6. THE STRUCTURE AND FUNCTION OF THE GALAXY.

Common sense finds that the Galaxy's form and behaviour, both as to the details and as to the whole, fall short of what may reasonably be looked for in a high-grade individual. Some of my replies to this objection are already contained in earlier chapters: here I need only bring them together and apply them briefly to the specific problem of the Galaxy, adding certain new considerations.

(i) <u>Galactic rotation, and "thinking the same thoughts about the same things</u>."

What a group of mutual observers make of each other varies with their mutual range. If they are to retain approximately stable estimates of each other, yet escape the monotony of a single unchanging view and eternal motionlessness, then the only appropriate thing to do is to form a rotatory system. At the human level, erratic movement goes with erratic opinion: our assessments of one another are as variable as our motions with respect to one another. But to grow in wisdom is to come to hold a uniformly high opinion of our fellow man, looking past the accidents of his nature to its essential worth; and at the same time to put our own lives in order, dispensing with merely random and chaotic activities. Now nothing can transcend its own level, and men as men are incapable of such reform: a human being without his human shortcomings is no longer human. He is a celestial being. That is to say, the sidereal and galactic functioning which is the topic of this section is nothing else than a perfectly accessible and unmysterious aspect our own behaviour at its best, objectified and externalized by scientific procedure. Our traditional mode of speaking has always implied -- or rather boldly asserted -- as much. Thus, when we are filled with mutual love and see one another as vehicles of the divine, we are a heavenly family ° whose "conversation is in heaven" +, we have become "partakers of the heavenly calling" and "have tasted of the heavenly gift." × It is time to put the substance back into these phrases, which have for too long been an example of the rule that the surest way to render an uncomfortable truth perfectly innocuous is to interpret it 'spiritually'. Astronomy and religion were once happily united, but the marriage did not last: one went in for the mechanical, and the other for the spiritual. And this separation was necessary, in

A dead world is at once the condition and the product of science, but it is a mistake to suppose that science exercises reason in this matter instead of faith. Modern science, as Whitehead told us, was at the start and is still "predominantly an anti-rationalistic movement, based upon a naive faith. What reasoning it has wanted, has been borrowed from mathematics which is a surviving relic of Greek rationalism, following the deductive method. Science repudiates philosophy. In other words, it has never cared to justify its faith or to explain its meanings; and has remained blandly indifferent to its refutation by Hume. Of course the historical revolt was fully justified.... It was a very sensible reaction; but it was not a protest on behalf of reason." (Science and the Modern World, I.) When all is said and done the objections which modern man (who is saturated with the spirit of science) raises against the living universe cannot be removed by reason, for they are the product of a deep and unreasoning faith. There is more than a little of the religious fanatic in common sense. I do not say that this faith in an inanimate world is unnecessary or invalid, but only that it is time we gave up pretending it is nothing but sweet reasonableness.

Plato's stars and planets are divine living beings, each having "two motions: one uniform in the same place, as each always thinks the same thoughts about the same things: the other a forward motion as each is subjected to the revolution of the Same and uniform." Each, as set in "the intelligence of the supreme", shares in the rational motion of the World-Soul (i.e., in the daily rotation of the heaven); and, in addition, as having an intelligent soul of its own, it rotates on its own axis. <u>Timaeus</u>, 39, 40. Cf. <u>Epinomis</u>, 982 ff., and <u>Laws</u>, 898.

And the stars in their behaviour set us an example: "The god invented and gave us vision in order that we might observe the circuits of intelligence in the heavens and profit by them for the revolutions of our own thought, which are akin to them, though ours be troubled and they are unperturbed; and that, by learning to know them and acquiring the power to compute them rightly according to nature, we might reproduce the perfectly unerring revolutions of the god and reduce to settled order the wandering motions in ourselves." <u>Timaeus</u>, 47 B.C.

° <u>Eph</u>. III. 15.

^{+ &}lt;u>Phil</u>. III. 20.

^{× &}lt;u>Heb</u>. III. 1, & VI. 4.

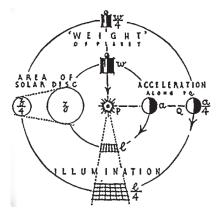
order that the eventual reunion might be the more fruitful. Meantime, few indeed suspect that the scientist's knowledge of the stars' rotation and the saint's unswerving love of his fellows, are in any way connected --- much less that they are two approaches to the same fact. When at last we rediscover the ancient truth that the physical and the spiritual heaven are not two but one, our civilization will be transformed.

(ii) Galactic rotation, and finding a "common centre". When there exists a large number of high-grade mutual observers constituting a society, it is not enough that individuals should circulate about individuals. There must be a comprehensive system of motions such that mutual distances and mutual status are served amongst the parts, and the whole maintains a permanent form. And this is likely to mean the establishment of a common centre. Speaking generally, it is a condition of the life of a cell and of a man, of a town and of a State, of a solar system and of a galaxy, that a nucleus (called the sun, or capital, or town hall, or brain, or cellular nucleus) shall be formed --- a centre about which activity is organized. At the sociological level, we say that certain common purposes or loyalties hold the unit together, that in so far as the common centre is ignored society disintegrates, that when failure to act with due regard to this centre takes flagrant forms, individuals are reckoned defective or criminal, and are restrained. The truth is that moral advance is, in one of its aspects, increasing loyalty ° to the community --- a loyalty which generally means some degree of conscious adherence to the communal nucleus or 'centre of gravity'. And, once more, it is impossible to advance very far without mounting above the human level: man <u>qua</u> man is irredeemably wayward. As his loyalty to the whole increases, so does the whole to which he is loyal increase, and so does he increase. In the long process of becoming an intelligent and self-abnegating member of society, the individual adds, to his membership of the lower societies, membership of the higher societies: his "conversation is in heaven". He does not therefore cease to be human. Indeed, he is an imperfect citizen of the earthly city in so far as forgets his heavenly citizenship, with its higher standards of loyalty and communal harmony.

(iii) <u>The 'regional' structure of the Galaxy</u>. The structure of the celestial units exemplifies in manifold ways the doctrine of regions and the law of elsewhereness. Let me mention, without going into detail, four instances. Consider a planet circulating about a sun. (1) Its 'weight' with respect to the sun (i.e. the 'gravitational pull' which the sun has for it); (2) its acceleration along the radius of its orbit (i.e. the acceleration which the sun has for it, along the radius of the sun's orbit, taking the planet as fixed); (3) the illumination of its surface by the sun (i.e. the brightness of the sun for it); (4) the area of the visible solar disc (i.e. the size of the sun for it) --- all four are inversely proportional to the square of the planet's distance from the sun. When the planet doubles its distance from the sun, all these -- weight, acceleration, illumination, and apparent size -are quartered. Now there are two points to note here. First, note that, at this level, it becomes particularly clear that the mutual range of objects determines (in a perfectly definite manner, and to an overwhelming degree) their physical characters, × the preservation of which requires a regular behaviour pattern -- a pattern which vividly exemplifies the reThe proposition that men are equal to one another (and to themselves at different times) is plainly fallacious as it stands. It is only as seen "under the species of eternity" that we are all of equal worth all the time. The more complete our knowledge of one another the higher we mount above the level of human inequalities, into the regions of stable valuations. Cf. Spinoza: "The more we understand individual things, the more we understand God." "The human mind in so far as it knows itself and its body under the species of eternity, thus far it necessarily has knowledge of God, and knows that it exists in God and is conceived through God." (Ethics, V. 24, 30.) I say that the solar and galactic levels, our knowledge of ourselves and of one another, are unavoidable stages on the road to this supreme knowledge.

"Tis the sublime of man, Our noontide Majesty, to know ourselves Parts and proportions of one wondrous whole! This fraternizes man, this constitutes Our charities and bearings Toy-bewitched, Made blind by lusts, disherited of soul, No common centre Man, no common sire Knoweth!" Coleridge, 'Religious Musings'.

by loyalty 1 mean neither blind obedience, nor vague cosmic allegiance in which quality is sacrificed to scope, nor anything otherworldly; but an intelligent and ungrudging appreciation of the 'infinite' bearings of common fact, as it exists here and now, and of my obligations in the matter. Cf. Josiah Royce's <u>Philosophy of</u> <u>Loyalty</u>.



<u>The effect of doubling the radius of the</u> <u>planet's orbit</u>. Electric and magnetic forces, like gravitational forces, obey the same inverse-square law.

× In his 'Song of the Open Road', Walt Whitman declares: "I do not want the constellations any nearer." To which might be replied, after the manner of Carlyle: by Gad, he'd better not. No constellation or star can ever escape from its regional cage. gional schema of this book. At the biological and human levels, on the other hand, though the regional schema of concentric circles holds good, it allows of much more variety of organization, and does not determine either behaviour or structure in very obvious ways. Second, note that, at the astronomical levels, the physical properties, preserved by rotation in circular orbits are bi-polar: it is impossible to describe them as in the planet alone or as in the sun alone. They are plainly shared. More than this, they are shared in a curious fashion: they are always elsewhere, neither here nor there, but here-from-there and there-from-here. Thus the four planetary characteristics which I have mentioned are not its own, but the sun's --- the sun's pull, acceleration, brightness, and area. Also the solar characteristics are, in the same way, referred beyond the sun to its neighbours. In other words it is no longer possible, when we come to this order of society, to go on pretending that the members are selfcontained: here, at last, we are forced to recognize that each mirrors the others, and a description of one is necessarily a description of others. And so we have in these circulatory systems -- whether they are atomic or solar or galactic, the principle is the same -- clear working models, or rather actual embodiments, of those fundamental procedures which in the realm of everyday existence are more or less hidden. * Once more, it is the heavens which lead the way to earthly knowledge. Browning's rather hackneyed line -- "On the earth the broken arcs; in the heaven, a perfect round" ° -- is literally true. As the hierarchy is ascended, so our structure and behaviour exhibit, more and more unambiguously, our essential nature. It is a profound lesson, and one that we are due to relearn, that we cannot know earth till we know heaven, that our suprahumanity is the key to our humanity, that our nature and destiny are, after all, more clearly written in our stars than anywhere in the sublunary world. •

The Galaxy is not unlike a game of snakes-and-ladders. It both there is an organization of space into regions carrying different values, × and a movement according to certain rules, of counters. What the counters do depends, not on what they are, but upon where they are. The board on which the Galaxy-game is played is divided into a series of concentric grooves, and a counter finding itself in one of these is obliged to behave according to the instructions marked on the groove, irrespective of the counter's own size, colour, mass, and so on. Like the period of the Earth's rotation about the sun, the period (some two or three hundred million times longer) of the Sun's rotation about the centre of gravity of the Galaxy is determined by his distance from the centre, and not by (what may loosely be called) his own physical characteristics. Behaviour is a question of position. The counter is a cipher, nothing in itself, deriving all its importance from its relationships with others. And this is what the doctrine of regions leads us to expect. The suprahuman clarifies the human: as a man I forget that I am nothing in myself, but as a planet and a star that fact is borne in upon me.

(iv) <u>The Galaxy's conscious and free behaviour</u>. We imagine that men are free and know the meaning of freedom, and that heavenly bodies are unfree and have no notion of their bondage. The reverse is the case. It is in our higher aspects that we are most free. To discover what we mean by freedom, to find it at its most lucid, we must turn to our heavenly

* In the realm of everyday life the same principle of elsewhereness applies, but we get along without allowing for it as we have to do in other realms. Thus we do not, for business purposes, need to know that when we weigh a sack of coal on a spring balance we are just as truly weighing the planet as the coal. But if we were to colonize the other planets, and open up our coal business there, we should no longer be able to ignore the principle. We should find that our 1 cwt sack weighed much more than this on Jupiter, and much less on Mercury. In fact, as we took our sack of coal from planet to planet, comparing its different weights, we should be weighing the planets rather more obviously than the coal.

° 'Abt Vogler'.

• Arnold's Empedocles says of the stars – "the radiant, rejoicing, intelligent Sons of Heaven" --

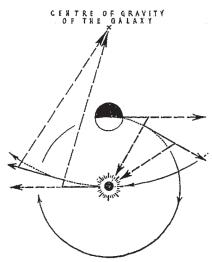
"Langour and death

They are with me, not you! ye are alive!" But he lacks Meredith's vision of the stellar life as our fulfilment.

× For modern physics, space is one of the players, rather than their stage. It is true that we still have far to go before concrete, fully structured, <u>hierarchical</u> space is real to us. Heaven is still, in Meredith's powerful phrase, "a space for winging tons"; but, for a start, we have come to recognize that the tons and the space are indivisible --gravitation, which is a physical property of matter, is determined by curvature, which is a geometrical property of space. behaviour. I have already explained at length that Earth moves as she likes, inasmuch as, in order to know exactly what she is doing, she contemplates herself doing otherwise: her tendency to stray from her path is the instrument of her knowledge of that path. It is not a case of making a duty of a necessity: she is not free because she is conscious, but rather conscious because she is free. More accurately, freedom for her means (1) a vague realization of what she is doing, (2) a realization of what she could do and tends to do, and (3) a realization of exactly what she does and why she does it ---- and if, for finite creatures, there is any other sort of freedom, I do not know what it can be. In so far as man has freedom, it is of this description, but as man he is necessarily less free than Earth: for (1) he does not know his own behaviour (past, present, and future) at the human level as thoroughly as he knows it at the telluric level; (2) he is not so clearly aware of his latent tendencies nor (3) of why they remain latent, and why he behaves as he does. I am free, but only at the higher levels of Earth and Sun and Galaxy am I built for freedom: here I come into my own. Here I am so organized that the three moments or stages of freedom are realizable. More generally, the body of a self-directing finite creature is a system of units revolving about a common centre, at speeds which decrease with their distance from the centre. °

(v) The Galaxy and 'metabolism'. From various observations, the size of the Sun's orbit in the Galaxy has been roughly determined. From this size, the astronomer is able to calculate the total weight of the stars which, contained within the Sun's orbit and acting as if from the galactic centre of gravity, are needed to keep the Sun in his place. The stars of the Galaxy that are outside the solar orbit are, of course, excluded from this estimate: in fact it may be said that the effective mass of the Galaxy for one of its own stars is the mass that the star can encircle. The dimensions of the Sun's orbit are a demonstration of what he makes of the Galaxy: and the curve of that orbit is compounded of his tendency to make more of the Galaxy by retiring from its centre, and his opposite tendency to make less of the Galaxy by falling to its centre. In other words, his path is 'metabolic': a union of the 'anabolic' (or upward and outward) movement whereby the higher levels are built, and of the 'katabolic' (or downward and inward) movement whereby they are destroyed. That universal 'metabolism' which, at the biological and human levels, is exceedingly involved and largely inscrutable here becomes beautifully plain, and capable of expression in lucid mathematical language. The solar behaviour is an announcement (so to say) of the fact that the Sun is only a stage on the upward and downward path, a 'horizontal' manifestation of twin 'vertical' forces which have a source and a goal elsewhere.

(vi) <u>The spiral form of the galaxies</u>. Why the spiral form of the typical galaxy, including (it is believed) our own? The astronomer attempts to explain how a vast rotating mass of nebulous material becomes a well-formed spiral of stars; but the question here is whether this curious shape really befits us at this superior level of our being. Note, first, that it is by virtue of the fact that nebulae take a number of forms that we are enabled tentatively to reconstruct their life-history and ours: thus it is supposed that the sequence of nebular types, ranging from a globular and then a lens-shaped nebulous mass to spirals whose diffuse matter



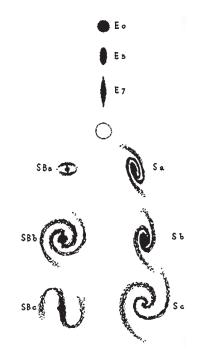
In calculating the path of the Earth, it is assumed that she goes her own tangential way for a brief time, and then falls towards the Sun for a brief time. Her path is regarded as having the shape of a ratchet --- whose teeth are in fact so small that the ratchet approximates to a circle. The Sun is similarly credited (or rather, credits himself) with the tendency to fly off at a tangent, and the tendency to fall into the centre of the Galaxy. And the methods of astronomical calculations are just as important as the results, for <u>the whole of</u> <u>astronomy is stellar psychology</u>; it is the way stars think.

Of course calculations are not enough. Snarley Bob has the last word: "You gets no forrader wi' lookin' at the figures in a book. You must thin yourself out, and make your body lighter than air, and stretch and stretch at yourself until you gets the sun and planets, floatin' like, in the middle o' your mind...You gives yourself a long line and gets out to the edge o' the world. Then you looks back, and you sees that the whole thing's alive." L. P. Jacks, <u>Mad Shepherds</u>, pp. 29, 38.

° I do not go so far as the author of Epinomis, who writes: "It is not possible that the earth and the heaven, the stars, and the masses as a whole which they comprise should, if they have no soul attached to each body or dwelling in each body, nevertheless accurately describe their orbits in the way they do, year by year, month by month, and day by day, and that all of us should receive all the blessings which actually come to us." (983) Or as Kepler, who in De Planeta Martis declared that the planets could not keep to their courses if they had no knowledge. For 'soul' or 'mind' is not parcelled out among bodies like so much material, and it is always subject to the law of elsewhereness in space and time.

is increasingly resolved into stars, represents the developmental stages through which most nebulae have to pass. And this development (as of a star into a solar system) is an unfolding as of a bud into a flower: the rotating globe flattens into a disc, which becomes an increasingly open spiral. Here, at last, is the perfected embodiment of our regional schema, in which the 'horizontal' (or circumferential) manifestation of the individual no longer cuts across the 'vertical' (or radial) processes which give rise to and maintain the individual: the 'horizontal' and the 'vertical' are united in a curve which does justice to them both. The unprogressive circle is cut and set free, without sacrificing the smoothness of its curve: the monotony and mutual exclusiveness of concentric circles are overcome in a unitary pattern. Here is a living body which merges regions without losing the necessary distinctions; which visibly shows forth the oneness of its members, and at the same time their inequality; which, as it grows to maturity and definition, becomes a living symbol of its own incompleteness. What is a spiral but the beginning of an infinite expansion, or a signpost to the Whole? 'Not here, but still further' are the words it seems to say to the celestial traveller.

(vii) The recession of the nebulae. Common sense suggests that I am reading more into the facts than they justify. And indeed this would be so if there were not a great deal of empirical evidence, all of which points to the same general conclusions. Thus what we find in the individual galaxy, we find, still more markedly, in the community of galaxies. Observation seemingly reveals that the extra-galactic nebulae are receding from us at speeds that are proportional to their distance from us: that is to say, the community is expanding, and the more comprehensive it is the faster it expands. It is the nature of galaxies to retire from one another, to achieve detachment, to make less of one another in order to make more of one another. "Retire from them", says Traherne of the saints, "that you may be the more precious." ° The expanding universe, or cosmic retreat, is neither an accident, nor a mere curiosity, nor a technical matter of interest to physicists and astronomers alone: on the contrary, it is exceedingly relevant to the life of every one of us. In truth, the necessity which impels galaxies to take an ever more distant view of their fellows, till they are lost to sight in the Whole, is none other than the necessity which impels the lover to adore his loved one as if from an immense distance, and the worshipper to place his deity in the remotest heaven. The poet, or saint, or mystic, who sees his fellow man as a theophany, is, in effect, despatching him through all the regions -- terrestrial, solar, and galactic -- so that the seen part culminates in the unseen All. × The Galaxy is certainly not the man writ large, nevertheless it is a stage in his self-realization; and in so far as he actualizes his suprahuman potentialities he is the Galaxy. What the scientist explores with his spectroscopes and reflectors, the mystic explores with his ascetic discipline, his all-embracing love, his non-attachment, his endeavour to see all things under the form of eternity. What the astronomer calls the red shift in the spectra of the nebulae is an abstract and partial version of an essential stage in the transfiguration of man. Wordsworth discovered the leech-gatherer, who had lately been talking at his side, "rapt to some far region" --- involved (as we may say) in Einstein's cosmical repulsion. Here, at the galactic level of the hierarchy, anabolic or expansive tendencies (which at lower levels are



A Sequence of Nebular Types (after Edwin Hubble, The Realm of the Nebulae, p. 45). On the left are barred spirals; on the right, normal spirals. Besides these well-defined types, there are irregular nebulae. In the diagram, E3 and E7 are seen edge-on, and Sa and Sb in perspective. This classification of Dr Hubble's (though he calls Sc and SBc 'late-type spirals') is actually made without regard to evolutionary considerations, nevertheless it does correspond to the theories of nebular development put forward by Jeans and others. It is worth noting here that the galaxies do not inhabit the same kind of space as men do: its geometry is different from their Euclidean geometry, just as this is, in turn, different from the geometry of the space inhabited by electrons. But the physicist knows how to make himself at home on all three planes: he, like his geometries, is hierarchically constituted. ° Centuries of Meditations, I. 60.

C. A. Richardson (<u>Happiness, Freedom.</u> <u>and God</u>, p. 181) also connects the expansion of the physical universe with evolutionary development. But for him this expansion signifies the culmination of "what would be experienced as the 'extinction' of the 'material' universe but, at the same time, the progressive development of the 'mental' universe."

 \times This recession is involved in the process of understanding or explaining anything: you must take in more and more in order to grasp why your object is what it is, and does what it does. Indeed, your knowledge is adequate only in so far as it is knowledge of the Whole. Similarly, you love a man well in so far as you love him as (or as in) the Whole. In a sense, there is only one object of knowledge and of love; for other objects, to the extent that they are known and loved, <u>are</u> this all-inclusive object. counteracted by katabolic or contractile tendencies) finally prevail and the nebulae explode Wholewards. + At lower levels the two tendencies more or less balance each other, and fairly stable societies are the result, but the community of the nebulae is essentially unstable in the direction of the Whole. It is possible -- indeed, all-too-possible -- to mistake earlier stages on the road for the end of the journey, but scarcely this stage.

It is as if I were a travelling observer contemplating a single object. Instead of the old common-sense story 'many objects presented to one mind' it is a case of 'one object presented to many minds', or rather, 'one object presented at many distances'. When (as I say) I look away from and beyond a man to a star, I am retiring from my object at fabulous speed. A spiral nebula is a man seen from afar, and a man is a spiral nebula on closer inspection. I know neither till I know both. My business is to make full use of my astonishing facilities for travel, so that I may break down all regional barriers and see things as they are, from every range. Above all, it is necessary to travel to that region where distance lends more than enchantment, and of which Plotinus says, "For all There is heaven; earth is heaven and sea heaven, and animal and plant and man; all There is heavenly. And the gods traverse that region and all space in peace."

(viii) <u>The perennial spiral</u>. There is one last common-sense objection: what of our human past, before modern telescopes had revealed the galaxies? If the galaxies belong to an exalted and important hierarchical plane, to which individuals have attained as often in the past as now, then it is strange that the discovery of the spiral nebulae should be left to modern man. Is he so much the superior of ancient and mediaeval man that he alone is fit to grasp the meaning of truths which before were scarcely apprehended at all? Rather the truth is the other way round. We have the astronomy, the mathematics, the physical embodiment; past ages had the inward technique. What we approach by the more external method of science, pre-scientific man already knows intuitively. Nor is the outward form concealed from him. Though the discovery of the spiral nebulae is recent, the discovery of the spiral, and its association with all that the galactic level means, is very ancient. It can hardly be a coincidence that of all traditional symbols the spiral (with its rectilinear forms, the swastika and the triscele) is probably the most widespread and persistent, playing "a prominent and even fundamental part in certain ancient religious systems". × Two classes of characters adhere to this symbol --- it is universally numinous, life-giving, sacred, lucky, magical; and in both the Old World and the New it is associated with the heavens in general, and the Great Bear in particular. There exist, of course, many valid levels of interpretation and explanation, of which that offered here is only one. Moreover nature is full of spiral forms -- in flowers and leafwhorls, shells, the human ear, the coiled snake -- which could hardly fail to find their way into primitive art. But there remains to be accounted for the remarkable fact that man should, in the words of an authority on the subject (and he is referring chiefly to the spiral) "ignore many forms of natural beauty, and remain instead content to draw constant refreshment from an exceedingly limited stock of sterile and arbitrary

+ According to Eddington's theory of the expanding universe "only the intergalactic distances expand. The galaxies themselves are unaffected; and all lesser systems -star clusters, stars, human observers and their apparatus, atoms, -- are entirely free from expansion. Although the cosmical repulsion or expansive tendency is present in all these smaller systems, it is checked by much larger forces and no expansion occurs." The Expanding Universe, III. 5. A number of mystics have recorded their experience of ecstasy and rapture, when the soul is 'transported' or 'carried away'. In the case of St Teresa, "There remains the power of seeing and hearing; but it is as if the things heard and seen were at a great distance far away." Vida, XX. 23. Blake's celestial travels were excessively odd, but in principle the following lines of his are profoundly true ---"Cloud, Meteor and Star,

Are Men seen Afar."

"Cities

Are Men, fathers of multitudes, and Rivers and Mountains

Are also Men; every thing is Human,

mighty! sublime!

In every bosom a Universe expands.." "All the Sons of Albion appear'd distant stars"

"All are Men in Eternity, Rivers, Mountains, Cities, Villages,

All are Human, and when you enter into their Bosoms you walk

In Heavens and Earths..."

(Letter to Thomas Butts, Oct. 2nd 1800; Jerusalem, II, III. (Keynes, pp. 1052, 621, 646, 692.))



The great monad, or Chinese Taigitusign (the upper part representing the bright and starry Yang, the lower the dark and earthy Yin) stands for the universe itself in its dual nature.

× Donald A. Mackenzie, <u>The Migration of</u> <u>Symbols</u>, p. xii. It is significant that, by far the greater part of this book about symbols in general is devoted to the spiral and its variations. Of the wealth of examples cited by Mr Mackenzie, I can only give one or two. After describing the role of the spiral in Buddhist lore, he writes, "In short, the spiral as the 'Heart' is the life-sustaining symbol of the Universe --- the source of energy, law, fruitfulness and all blessings, and therefore in Buddhism of all that is good and perfect." (p. 118)

Very similar are the Scandinavian World Mill, and the ancient Egyptian cult of the northern stars, which became the rowers of the Sun-god's boat. Cf. G. Elliot Smith, <u>The Evolution of the Dragon</u>, pp. 173 ff., and <u>Elephants and Ethnologists</u>, pp. 83 ff.; designs".* I say that his choice is not arbitrary, and the symbol chosen is far from sterile: it opens a window on an aspect of his nature that would otherwise be shut to him. The spiral, in short, is a perennial symbol because it is so much more than a symbol: it is the form he is capable of taking, and indeed his present pattern. There are several roads to the realm of the nebulae. Humason and Hubble, in the twentieth century, take one of them; the monk who, in the twelfth century, represented the wheel of one of the four 'Beasts' of the Apocalypse (i.e., the angelic intelligences nearest to God) as a swastika revolving amongst the stars, takes another and more ancient road. ° In very early times the belief arose "that life was in the sky -- that the 'heart' of the Universe was pulsating somewhere in the firmament, and that, further, the 'water of life' and the 'air of life' had their sources in the sky.....Life in the sky emanated from what the Hindus know as 'Divine Cosmic Energy', symbolized by Kundalini, the coiled serpent --- a spiral." + This is not a phantasy we have outgrown. The spiral as our heavenly life-source, as expressing an advanced (and possibly the penultimate) stage in the realization of what we are, belongs permanently to our nature. Thus the spiral frequently figures in mandala patterns --- those spontaneous symmetrical designs which (according to the Jungian school of Analytical Psychology) both express and assist the patient's deeper efforts towards complete integration of the personality. For example, Dr Jolan Jacobi reproduces a mandala consisting of a rotating spiral of peacock's feathers. • In mediaeval art, cherubim are sometimes given wings of peacock's feathers, as at Cirencester and St Michael's, Coventry; × in India, the peacock is noted for its spiral dance, which is supposed to presage thunder and rain; \oplus the alchemists regarded the appearance of the cauda pavonis, the peacock's tail, as an indication that their work of transmutation (for some of them, it was a spiritual transformation) was nearing completion. ϕ These links are not, I think, merely coincidental. My thesis is that the highest ranks of the angelic hierarchy, and the realm of the nebulae, and the experience of the artist and thinker and mystic nearing its best, and ourselves approaching physical and psychical wholeness, are complementary aspects of one and the same hierarchical order, which I call the galactic. In so far as we neglect one or the other aspect of this high order of reality, it falls short of what it could and should mean to us: for our 'conscious' minds, it is generally little more than a formula, a vague abstraction. And those for whom it is real detach it from the physical world, to the great loss of the spiritual world. Mysticism without science has more content than order; science without religion has more order than content. The task of science is to give religion a head; of religion to give science a heart; of philosophy to hold them together in one body. And that body, in one of its highest metamorphoses, is the Galaxy.

also Count Goblet D'Alviella, <u>The Migra-</u> <u>tion of Symbols</u>, pp. 39 ff.

* Mackenzie, <u>Op. cit</u>., p. x.



° One of the wheels of the four 'Beasts', showing a swastika revolving among star symbols: from a 12th century MS. in the British Museum (Add. II, 695). After Mackenzie, <u>Op. cit</u>.

+ Mackenzie, <u>Op. cit</u>., p. 69.

Whether Ezekiel's wheels amount to a vision of the Galaxy I hesitate to say, particularly in view of the fact that they have recently been described as "suspiciously like a <u>dynamo</u>". See C. S. Lewis, <u>Miracles</u>, p. 139; D. H. Lawrence, <u>Apocalypse</u>, pp. 64-5.

In van Gogh's picture 'Starry Night' (1889, Museum of Modern Art, N.Y.) the sky is full of giant spirals.

• <u>The Psychology of C. G. Jung</u>, Plate H. Cf. Jung, <u>The Integration of the Personal-</u> <u>ity</u>, Plate V.

× See Jameson, <u>Sacred and Legendary Art</u>, p. 57.

⊕ Mackenzie; <u>Op. cit.</u>, pp. 62, 63.

φ Jung, <u>Op. cit.</u>, p. 48.



Fiery Cherub (Raphael)

Dante's vision, avoiding the one-sidedness of mere naturalism and of mere supernaturalism, comes near to the ideal of concrete fulness. His angelic intelligences are wheeling circles of heavenly fire, yet divinely intelligent and loving; they mark off the degrees of the mystic's progress, yet they have their places in the physical universe. And it is Beatrice who leads the way to them --- human love idealized, sanctified, at its best, is angelic. Or (as I would say) what we love deeply enough, and understand thoroughly enough, is galactic, no matter what we call it. It was the change in Beatrice which showed Dante that he had come to the Third Heaven ----"the new loveliness,

That graced my lady, gave me ample proof That we had enter'd there."

CHAPTER XII

THE WHOLE

The fourteen centuries fall away Between us and the Afric Saint, And at his side we urge, today, The immemorial quest and old complaint.

No outward sign to us is given, From sea or earth comes no reply; Hushed, as the warm Numidian heaven He vainly questioned, bends our frozen sky.

Whittier, 'The Shadow and the Light'.

St Augustine, Confessions, X. 27, 28.

You lie directly on the bosom of the infinite world. In that moment you are its soul. Through one part of your nature you feel, as your own, all its powers and its endless life. In that moment it is your body.

Schleiermacher on Religion, (trans. Oman) p. 43.

Just as throughout our bodily organization there is a principle of relation by virtue of which we can call the entire body our own, and can use it as such, so all through the universe there is that principle of uninterrupted relation by virtue of which we can call the whole world our extended body and use it accordingly.

Tagore, Sadhana, 'The Problem of Evil'.

To know..... what anything really is you must know the whole. And that means, in other words, that nothing is ultimately real except the whole..... If anything could be called intrinsically unknowable, it is man. What is complete might, at least by itself, be known completely: but it is the essence of man to be incomplete..... Man is not, he becomes: he is neither limited being nor unlimited, but the passage of limited being into unlimited; a search for his own perfection, which lies beyond him and is not himself but God.

A. C. Bradley, Ideals of Religion, pp. 222, 250, 251.

He is not far from every one of us: for in him we live, and move, and have our being.

<u>Acts</u>, XVII. 27, 28.

Oh, sir! would you know the blessing of all blessings, it is this God of love dwelling in your soul. William Law, <u>The Spirit of Love</u>.

There is no other seer but he, there is no other hearer but he, there is no other perceiver but he, there is no other knower but he. This is thy Self, the ruler within, the immortal.

Brihadaranyaka Upanishad, III. vii. 23.

The Godhead has really no place to work in, but ground where all has been annihilated..... If a man is to be thus clothed upon with this Being, all the forms must of necessity be done away that were ever received by him in all his powers --- of perception, knowledge, will, work, of subjection, sensibility and self-seeking. When St Paul saw nothing, he saw God..... When all forms have ceased to exist, in the twinkling of an eye the man is transformed.

Tauler, The Inner Way, pp. 204 ff.

Free from thought of an <u>I</u>, from force, pride, desire, wrath, and possession, without thought of a <u>Mine</u>, and at peace, one becomes fit for Brahmahood.

Bhagavad-gita, XVIII. 53.

He who penetrates into himself, and so transcends himself, ascends truly to God.

Albertus Magnus, De Adhaerendo Deo, I.

He, the Wisdom of God, holds the universe like a lute, and keeps all things in earth and air and heaven in tune together. He it is Who, binding all with each, and ordering all things by His will and pleasure, produces the perfect unity of nature, and the harmonious reign of law.

St Athanasius, Contra Gentes, 42.

1. THE UPPER AND LOWER LIMITS OF THE VIEW IN.

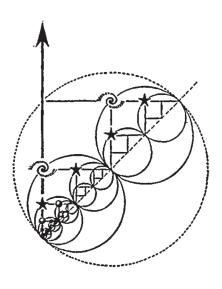
My travelling observer, himself involved in the 'cosmical repulsion', is rapidly receding from me. He sees the Galaxy give place to a group of galaxies, including first the relatively small and close Magellanic Clouds, and then a number of larger nebulae, whose distances apart are of the order of a million light years. And he sees this cluster of nebulae shrinking, both as to the whole and as to the parts, till nothing is left at all.

Is this vanishing, once more, only a making way for some new and more comprehensive unit --- a galaxy of galaxies, or a super-spiral --- to appear? Is there, between the galactic level and the level of the Whole, any intermediate grade of being that has integral status? Or are there, perhaps, several such grades?

Modern physical science is prolific of cosmologies (associated with such names as Einstein, de Sitter, Milne, Lemaître, and Eddington), and in this field of research almost anything may happen. All that I can say here is bound to be provisional and in some degree misleading. But for the purpose of this inquiry it will do to note a tendency amongst physicists to believe (a) that it is the nature of space to 'bend back upon itself' in such a way that the universe is finite * but unbounded (i.e., its volume is analogous to the Earth's surface, where the traveller who follows his nose eventually finds himself back at the place he started from); (b) that this finite universe is expanding; (c) that beyond the range of our present telescopes there is probably room for thousands of millions of undiscovered nebulae; and (d) that nevertheless science does seem to be approaching the limits of the physical world, and the final stage of physical integration. $^{\circ}$

Of course it is quite possible that the finite but unbounded universe of the physicists (the universe whose diameter has been measured, whose matter has been weighed, whose very electrons have been numbered --provisionally) is only one of a great multitude, and that between itself and the Whole there exists a series of hierarchical grades unknown to us. + The problem is matched at the other end of the scale: there may be any number of intermediate levels between the electron (with its fellowparticles) and the base of the hierarchy. (Pascal, for instance, imagines the "smallest point in nature" to contain "an infinity of universes, each of which has its own firmament, its planets, its earth". ×) There is no way of knowing whether, in Rilke's words, "the stratification of our nature is inexhaustible". All I can do is to record the possibility and then ignore it. In any case the point is not important for this inquiry. I am not obliged to decide whether to regard the physicist's universe as the totality of physical things, or as only a fragment of the totality. What I do need to posit, in order to complete the hierarchical series (which begins, for science, with electrons and ends with galaxies) are the levels of the all-inclusive unit and of the all-exclusive units, or of what I call the Whole and the Centre.

But it is already clear that the Whole is in important respects unlike its subordinate units. For one thing, my observer, having seen me develop stage by stage from a particle into a man, and from a man into a spiral



* There has recently, it is true, been some revival of the view that the universe is infinite in space and in time. But even so there are for me --- for this observer's Centre -- strict limits to the universe: when a galaxy is so distant that its velocity of recession exceeds the velocity of light, it is not merely beyond my horizon. I doubt whether I can properly say it exists.

° Thus Eddington suggests that "perhaps this time the summit of the hierarchy has been reached, and that the system of the spirals is actually the whole world." <u>The</u> <u>Nature of the Physical World</u>, p. 166.

+ The point is that it comes <u>naturally</u> to us to make the jump (whatever it is we leap over) from the region of the part to the region of the Whole. (For example, Denis Saurat (Death and the Dreamer, pp. 104 ff.) describes a dream in which the soul is spread out in zones, beginning with those which are the scene of forgetfulness and sex and the body, going on to more comprehensive regions, and ending in God.) Much more sophisticated and difficult is the view of Nägeli: "We are obliged to presuppose an endless combination of matter into ever larger individual groups." (Quoted in Paulsen, Introduction to Philosophy, p. 239.)

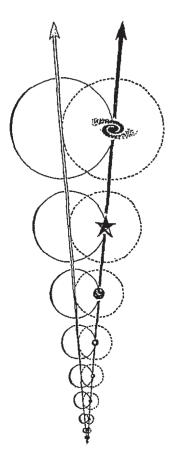
× <u>Pensées</u>, 72.

nebula, does not and cannot see me become the Whole: on the contrary, he sees me vanish altogether. Instead of that grand climax to my development which might have been expected, there occurs the most violent anticlimax conceivable: the long and cumulative progress which the previous chapters have recorded ends in what looks like absolute failure. I become more and more inclusive up to the point of embracing several nebulae, and then -- so near, as it would seem, to the final metamorphosis which the entire process presupposes and takes for its goal -- every gain is lost. And lost, not to be regained later on, but finally. The further my observer retreats the more impossible it becomes that he will see me as the totality which includes himself. Evidently there is no place where the part is transformed into the Whole. The end of growth is annihilation.

2. FROM SELF-CONSCIOUSNESS TO OTHER-CONSCIOUSNESS.

Now let my observer approach me again, either by changing direction, or (if space is curved as physics supposes) by going on in the same direction till he comes back to his starting-point. My metamorphoses are now reversed: the Galaxy is reduced by stages to a man, the man to a microscopic particle, the particle to nothing at all. For the second time, the view in is a blank. "Nature has neither kernel nor shell", said Goethe, ° and I seem to be all too natural. But there is a good reason for the absence of a kernel. My observer's journey to the Centre has meant the progressive discovery and rejection of my content, until I am utterly emptied: the nothingness that confronts him as he comes to his goal is therefore no matter for surprise. The surprise occurs when, having arrived, and looking with me instead of at me, he discovers that the nothing is all things, that his journey has, after all, been an emptying of the receptacle in order that it might be filled with that which is other than itself. In brief, he finds that I <u>contain</u> the Whole that I cannot <u>be</u>.

When I claim nothing, then all is freely given. And indeed it is obvious that, just so long as I reserve any part of the Whole to myself, I can never enjoy the Whole. * In other words, while I am divided into a circumferential observer and a central observed I must always fall short of the Whole, if only for the simple reason that when a unit destroys its wholeness to view itself it is no longer a whole --- not to mention the Whole. The truth is that self-knowledge always involves a self-division which reduces the knower's hierarchical status: to be at one level is to see at a lower level, and therefore (in one sense) to be at the lower level. Whether it is a question of knowing myself to be a man or a star or a cell, the principle is the same --- I can never really take my own measure, and self-consciousness is an enterprise doomed from the start. At the highest level, this fact, which was before partially hidden, becomes at last inescapable. Like the snail in the famous problem, who climbs three feet up the pole every day and slips back two every night, my achievement is incurably ambiguous. But it is at the top that the ambiguity prevents the achievement: unlike the snail, I can never climb to the top, since to get there I should have to climb still higher. Putting the matter another way,



° Gott und Welt.

"There are two ways of finding the heavens. One is to journey upwards and upwards in quest of an ever-receding firmament; the other is to realize that here on earth you are already in the heavens and that our planet is in fact one of the company of celestial bodies..... In the midst of the soul's dark night of despair at the frustration of eros, there dawns the agape of God --- the realization that although the soul is powerless to attain union with God, God out of unchangeable and infinite love has given union with himself to the soul." Alan W. Watts, Behold the Spirit, pp. 77, 79. Cf. William Law: "To find or know God in reality by any outward proofs, or by anything but by God Himself made manifest and self-evident in you, will never be your case either here or hereafter."

* Dark is the world to thee: thyself art the reason why; For is He not all but thou, that hast power to feel 'I am I'?" Tennyson, 'The Higher Pantheism'.

There is a story of Bayazid Bistami, the Sufi, which illustrates the principle of the divine 'elsewhereness'. He thought he had come to the very Throne of God; and he said, "O Throne, they tell us that God rests upon thee". "O Bayazid," replied the Throne, "we are told here that He dwells in a humble heart." (Margaret Smith, <u>Studies</u> in Early Mysticism, p.239). to see myself as the Whole would be to duplicate the Whole, thereby destroying its Wholeness, and making a still further retreat necessary; and so on, in an infinite regress.

There is only one remedy, and that is to change direction altogether. Abandoning my hopeless (but nevertheless essential) quest of self-consciousness, I must in the end accept other-consciousness. ° And as soon as I do this, as soon as I am content to shrink to the limit instead of expanding to the limit, to empty myself of all that I have absorbed, to turn from the self to the not-self, then all I hoped for but failed to get from self-consciousness I may gain from other-consciousness. When there remains at last no view in whatever, then the view out is completed. The request ---

"My God, my God! let me for once look on thee As tho' nought else existed: we alone. " \times

--- is self-contradicting, and cannot be granted till "we alone" becomes "thou alone". +

Here, then, is a new and startling variation on the theme of elsewhereness: growth to the Whole ends in a sudden contraction to Nothing, and contraction to Nothing in a sudden expansion to the Whole. These two hierarchical extremities have a way of changing places. Indeed (as will gradually become clearer) it is not too much to say that the Whole and the Centre are inseparable modes of one reality. * The instability of the lower in the direction of the higher becomes the instability of the highest in the direction of the lowest; and the instability of the higher in the direction of the lower becomes the instability of the lowest in the direction of the highest. The upward and downward processes come full circle. As in the famous snake-symbol of eternity, the cosmic extremes meet, and the hierarchy is completed. The Jack-in-the-innermost-box springs out as the whole nest.

3. THE VIEW OUT AS THE WHOLE.

The law of equality has to give way, in the end, to the law of contrast. Up to the level of the Whole, knower and known grow <u>pari passu</u>, but at that level the knower claims everything and finds nothing. Again, down to the level of the Centre, knower and known diminish <u>pari passu</u>, but at that level the knower claims nothing and finds everything.

The common-sense objection is that, in fact, the view out from the Centre is not a view of the Whole, but of an immense collection of objects of every grade, all of them falling far short of the Whole. I find myself entertaining here not one guest, or <u>the</u> Guest, but myriads. I am accommodation, not for a universe, but for a multiverse.

And this is, of course, the case --- at least on first inspection. The Whole, like the Centre, but unlike the intermediate units, can never be an object of sense experience. The reason is that it is more real for me, and not less real, than they are. Every object (as I shall try to show) is re-

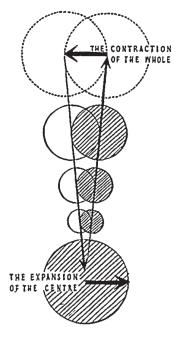
The Whole imposes unique conditions upon its knower: one circle here takes the place of a pair of intersecting circles. As Browne says, "there is no thing that can be said to be alone and by itself, but God, Who is His own circle, and can subsist by Himself all others do transcend an unity, and so by consequence are many." <u>Religio Medici</u>, II. 10.

° Hegel distinguishes three stages in the evolution of consciousness: (i) consciousness of the object as other; (ii) self-consciousness of an abstract ego; (iii) the unity of consciousness and selfconsciousness, where the mind sees itself as embodied in the object. (Encyclopaedia, 417) But this development (I would add) is only completed when the self, having exhausted the possibilities of (iii), passes to a higher version of (i), and has eyes only for the not-self.

× Browning, 'Pauline'.

+ Yet how easy it is to pass from the contemplation of the Whole for its own sake, to the contemplation of the receptacle for its own sake, or at any rate to the contemplation of the Whole for the sake of the receptacle. Eckhart seems to do this when he says: "I do not find God outside myself nor conceive him excepting as my own and in me." <u>Works</u> (trans. Evans), i. p. 163.

* Most of the great mystical writers have sought means of expressing this dual nature of reality. For example: God is great, says Dionysius, "both in the great firmament and also in the thin air whose subtlety reveals the Divine Smallness..... This Smallness is without Quantity or Quality; It is Irrepressible, Infinite, Unlimited, and, while comprehending all things, is Itself Incomprehensible." <u>The Divine</u> <u>Names</u>, IX. 1, 3.



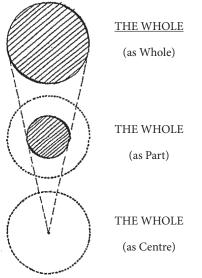
ally an aspect of the Whole, and is implicitly recognized to be such in our experience of that object. In a manner of speaking, we can never know anything else than the Whole: our knowledge of other things, in so far as it is adequate, is knowledge of the Whole, and even its least adequate elements are nothing without the Whole. Ultimately, the only knower is the Centre, and the only known is the Whole. To put the matter, with Ruysbroeck, in theological terms, "The image of God is found essentially and personally in all mankind. Each possesses it whole, entire, and undivided, and all together not more than one alone." The Whole is omnipresent, and complete in every Centre. But, as St Bernard points out, "God who, in his simple substance, is all everywhere equally, nevertheless, in efficacy, is in rational creatures in another way than in irrational, and in good rational creatures in another way than in the bad. He is in irrational creatures in such a way as not to be comprehended by them; by all rational ones, however, he can be comprehended through knowledge; but only by the good is he to be comprehended also through love."

Everything, rightly seen, is the Whole. How, then, do we distinguish particular objects? We find that each, without really dividing the Whole, draws a line through it in a different place, labelling whatever lies on one side of the line 'inner' or 'mine', and whatever lies on the other side 'outer' or 'not-mine'. The Centre may thus be described as the Whole labelled 'outer'; the Whole as the Whole labelled 'inner'; and a man as the Whole labelled 'inner' on one side and 'outer' on the other. The important point is that in every case, wherever the boundary line is drawn, the Whole is the total object.

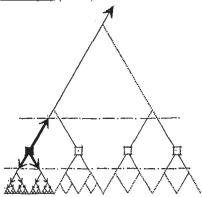
But I anticipate. My task, in the remainder of this chapter, is to show how the main lines of the present inquiry converge upon, and require, and have all along implied, this ultimate Individual, who alone gives existence and meaning to individuals of every grade. And in the course of this exposition it will, I hope, become clear what I mean by the Whole, and what my relation to the Whole is, and what the connection is (for me) between the Whole and the God of the Christian religion.

4. THE WHOLE AS THE ULTIMATE EXPLANATION.

When I ask for the explanation of an event, I ask for <u>two</u> pieces of information. * I want to know by what steps the event proceeds from its subordinate events, and by what steps it proceeds from the event to which it is subordinate. For example, suppose I choose for study a man riding a bicycle. A full explanation of this event would include, on the one hand, a description of extremely complicated occurrences in a nervous system and a muscular-skeletal system, and, on the other, a description of a social organization in its economic, and technological, and scientific aspects. And just as the first description could not stop short at the physiological level, but would proceed downwards to the chemical and physical levels; so the second could not stop short with an account of the local community of the cyclist, or of the national community, or of Humanity itself, but would need to go on till no part of the universe was left To see the object, as it is given at this moment, in the Whole, is the only way to meet the requirements of head and heart alike. If, says Lossky, we can realize that everything is an aspect of the Whole, then all "our usual ideas about the world, suggested by the atomistic and mechanical way of looking at it, are ... reversed, everything begins to appear in a new light, and many characteristics of the universe that had seemed enigmatic become perfectly clear." (The World as an Organic Whole, p. 18.) This is one half of the story: the other is suggested by the words of De Caussade: "If we knew how to greet each moment as the manifestation of the divine will, we would find in it all the heart could desire..... The present moment is always filled with infinite treasures." (Abandonment to the Divine Providence, I. ii. 3.)



* Cf. Schopenhauer's doctrine (in <u>The</u> <u>Fourfold Root</u>) that knowledge is subject to the two laws of homogeneity and of specification. The first requires that we discover likenesses, and bring species together as genera till the all-embracing concept is attained; the second requires that we overlook no species. Also W. E. Hocking: "The false assumption in the theory of analysis is that simplicity is to be found <u>in one direction only</u>, the direction of the microscope. The simplicities of the world are presumably bipolar." (<u>Types of</u> <u>Philosophy</u>, p. 370.)



out of consideration. In short, nothing is really explained till it is referred (by the proper stages, in accordance with hierarchical procedure) down to the Centre and up to the Whole. It is our nature not to rest content till events are traced both to the 'underlying' reality and to the 'transcendent' reality: that, at any rate, is the double standard against which we measure the partial explanations that are offered. Ideally, the object is taken to pieces step by step, in order 'to see what makes it go' --- until there is nothing left; and its missing pieces are restored step by step, in order 'to see what it is like when it is all there' --- until it is the Whole. That is to say, we are convinced that the truth about the thing is not simply 'horizontal' but 'vertical'; and not simply 'up' (or synthetic); or simply 'down' (or analytic), but both at once. + Our demand for thorough explanations is, it would seem, a veiled assertion that anything which is at once less than the Whole and more than the Centre is an appearance, something that is as yet parted from its reality.

5. THE WHOLE AS THE ULTIMATE MYSTERY.

At once a formidable common-sense objection arises. It is that the ultimate explanation is really no explanation at all, seeing that the Whole (with its counterpart the Centre) is at least as much in need of explanation as anything else, and is by no means self-elucidating. Whether it is true or not that, as St Thomas ° says, "This proposition 'God exists', of itself is self-evident", it is certainly a fact that (as he goes on to say) "the proposition is not self-evident to us". × Surely a First Cause, a Being that is necessary and not contingent, or an Aristotelian "unmoved mover" to whose presence the entire process of cosmic development is the response, or an all-inclusive Gestalt, or an Absolute Reality of which all things are partial appearances, or any other version of the supreme hierarchical unit, is so difficult to conceive, so unlike any part of our normal experience, so mysterious (if, indeed, it has any genuine meaning at all) that to posit such a Being creates more problems than it solves. "Him who is Indra they call indeed Indra mysteriously, for the gods love what is mysterious, and dislike what is evident." * The 2,500 years that have gone by since these words were written have only seen them confirmed.

I have no wish to take away from the force of this objection, but rather to add to it. For if the ultimate levels are the goal or climax of all our knowledge, they are also the goal or climax of all our ignorance; and these two cannot be separated. The emptiness and nescience of the Centre are the ground of the fulness and perfect knowledge of the Whole, and this blend of knowing and unknowing may fitly be called mystery. Common sense is right: the ultimate units are extremely baffling. In fact, they are much more mysterious than common sense has any idea of. But the question is: what, precisely, do we want if not this kind of mystery? What else but this tremendous Fact, capable of evoking in us a unique experience which (though strictly indescribable) may be loosely described as mingled wonder, delight, awe, and utter self-humbling, could conceivably satisfy us, or provide the goal of our endeavour? \otimes "Man sees more of the things themselves when he sees more of their origin; for their origin is a part of them and indeed the most important part of them. Thus they become more extraordinary by being explained. He has more wonder at them and less fear of them; for a thing is really wonderful when it is significant and not when it is insignificant." Chesterton, <u>St</u> <u>Francis of Assisi</u>.

+ If to know one thing is to know all things, how is the knowledge of particular things possible? The answer is that, since lower units arise out of their imperfect knowledge of one another, that knowledge is true at their level, and as far as it goes. Cannot science, by the method of isolating its problems, attain to perfect (though abstract) knowledge of imperfect things? (Thus Newton's laws of motion deal with bodies behaving under unrealizable conditions, with ideal, artificially insulated systems.) The answer is that this method (in so far as it succeeds) is really the elevation of the part to the level of the Whole, where perfect knowledge belongs.

° <u>Summa Theologica</u> I. ii. 1.

× It is largely a question of mood. For most of the time, the Whole is hidden from us. But there are moments when the reality, not of the Whole, but of the parts, seems doubtful. Then we can say, with Alan W. Watts, "God is the most obvious thing in the world. He is absolutely self-evident --- the simplest, clearest, and closest reality of life and consciousness. We are only unaware of him because we are too complicated." <u>Behold the Spirit</u>, p. 95.

* Brihadaranyaka Upanishad IV. ii. 2.

"Though One, Brahman is the cause of the many. There is no other cause. And yet Brahman is independent of the law of causation. Such is Brahman, and 'thou art That'. Meditate upon this." Sankara, <u>Viveka-Chudamani</u>. The difference between the mere empty mystery of the uncaused cause, and that same mystery when it is the object of meditation, is fundamental.

 \otimes Cf. the Egyptian Father, John of Lycopolis: "When the soul is purified and made serene, and the knowledge of Christ the Lord dawns upon it, its mind ascends and beholds the Majesty of God, and sees Him to be incomprehensible.... When the mind floats on the sea of the Majesty of God and His incomprehensibility, it is amazed and lost in wonder at the serene Majesty of God. And forthwith the soul becomes humble..." (Margaret Smith, <u>Studies in Early Mysticism</u>, p. 91.)

Does common sense seriously suppose that we could ever rest content with some final Law, stated with complete mathematical lucidity --- a Law from which all the subordinate laws of science were seen to be derived? Would not such a grand climax prove, in practice, a heart-rending and soul-destroying anticlimax, the final exposure of the cosmic fraud? Or would common sense prefer an irreducible multiplicity of hard facts which, though capable of being perfectly known seriatim, were incapable of further analysis? Or perhaps an infinite regress, in which there was no room for insoluble mystery or finality --- or real progress either?

The truth is that, when we take the trouble to inquire what it is we ask of the ultimate levels of the hierarchy, we find that our expectations and desires are fully met. Paradoxically, the only satisfying end of knowledge is --- not, indeed, perfect ignorance, but that very different thing --- perfect knowledge of perfect ignorance. In a very real sense, the final mystery is the final explanation, and the only explanation that could ever serve as the terminus of our searchings. For common sense, to explain is to render the mysterious commonplace, and this effort may not be relaxed. But the deeper function of explanation is to render the commonplace mysterious. And even common sense is not altogether unaware of this truth: it is obvious that the universe is more mysterious to Eddington than to his public, and that a lifetime of study is needed to reveal to the student his profound ignorance of nature.

The contradiction is complete. On the one hand we have such statements as this --- "For of all other creatures and their works, yea, and of the works of God's self may a man through grace have fulhead of knowledge, and well he can think of them; but of God Himself can no man think." ° On the other hand, not only the great mystics, but also such philosophers as Descartes, Spinoza, Locke, and Hegel, declare that God is the supreme certitude, and the ground of all reality and knowledge: only He (many have said) can be known perfectly. In fact, both doctrines are true. "By a rejection of all knowledge he possesses a knowledge that exceeds his understanding", says Dionysius of "the true initiate into the Darkness of Unknowing". + Once the screen of 'information' which hides reality from our sight is pushed aside, and the ineffable mystery of all things is accepted and enjoyed, then only are they really known. For (to take the obvious point first) when we say that no man can think of God, we are already thinking of God, and have such a vivid and adequate knowledge of Him that we are able to pronounce Him unthinkable. Mysteries --- what may be called the joyful mysteries of love --- are not something we do not know, but something we do know, and know better as they grow more mysterious. "One of the greatest favours bestowed on the soul transiently in this life is to enable it to see so distinctly and to feel so profoundly that it cannot comprehend God at all. These souls are herein somewhat like the saints in heaven, where they who know Him most perfectly perceive most clearly that He is infinitely incomprehensible; for those who have the less clear vision do not perceive so clearly as do these others how greatly He transcends their vision." So writes the great Spanish poet-mystic, * and our own touches on the same theme --- "O world unknowable, we know thee". × Awareness of mystery approaches, as its ideal, the perfect knowledge of the Whole

"In ultimate analysis everything is incomprehensible," says T. H. Huxley, "and the whole object of science is simply to reduce the fundamental incomprehensibilities to the smallest possible number." (cf. Spencer, <u>First Principles</u>, I. iv. 23) See William James' <u>The Will to Believe</u>, pp. 71 ff., for his rejection of Bain's view that where the widest generality is reached "there explanation is finished; mystery ends, and perfect vision is granted". Here, says James, there is, on the contrary, absolute mystery.

Herbert Spencer, though ridiculed by many of his contemporaries (cf. John Caird, Introduction to the Philosophy of Religion, I; Ward, Naturalism and Agnosticism, pp. 557 ff.) for his doctrine of the unknowable, did grasp a most important truth which they were apt to neglect. He writes of "this deepest, widest, and most certain of all facts - that the Power which the Universe manifests to us is inscrutable." (First Principles, I. ii. 14) What he did not appreciate was that a strong conviction of the inscrutability of the Whole is itself knowledge of the Whole as it really is, in its objectivity. Spencer perhaps came nearer to the mysterium tremendum, the numinous Other, than the Hegelians ever did, for all their insistence on the religious consciousness. (Cf. Archbishop Otto, The Idea of the Holy.) I doubt whether even our own logical positivists, who say that all propositions about God are meaningless, are such strangers to the spirit of religion as the metaphysician who talks as though he has the Absolute in his pocket. (Nor are all the logical positivists unaware of the link between their doctrines and those of mystical theology: see, for instance, A. J. Ayer, Language, Truth and Logic.)

° The Cloud of Unknowing, VI.

+ <u>The Mystical Theology</u>, I.
The term <u>mysticism</u> (derived from the Greek <u>muo</u> -- close lips or eyes) is not, after all, the misnomer it would seem to be. In one sense, mysticism is mystification - with a view to deeper knowledge.
"Mystery, <u>docta ignorantia</u> have a profound significance. The whole meaning, importance and value of life are determined by the mystery behind it." (Berdyaev, <u>The Destiny of Man</u>, p.33.)

* See also the poem with the refrain "<u>Toda</u> <u>sciencia trascendiendo</u>" by St John of the Cross (E. Allison Peers, <u>The Poems of St</u> <u>John of the Cross</u>, pp. 22 ff.) on the perfect knowledge which comes by knowing nothing.

 \times Francis Thompson, 'The Kingdom of God'.

united to the perfect ignorance of the Centre. The first is unattainable without the second. $^\circ$

Knowledge that is only knowledge is the very depth of ignorance. And our unknowing, just as much as our knowing, is not an accident of the object, but part of its essence. The mystery of the ultimate reality is not due to a kind of astigmatism, or subjective distortion, or clouds of mist that envelop the object. On the contrary, it belongs to the object itself, and is moreover a property that we are fully able to register. It is ontological rather than epistemological. • "Brahma is knowledge of Brahma." The Whole is not other than experience of the Whole. In earlier chapters I have spent much time showing that our experience of individuals, whatever their grade, is direct participation in their 'social' life. Thus, for instances of the way planets think, we are justified in going to Meredith and Lowell, and for the data of stellar psychology to Rainer Maria Rilke and H. N. Russell. The rule does not cease to hold good at the ultimate levels. Not only the great mystics, but all of us, have (potentially, at least) direct insight into the life of the Whole. And here, just as at lower levels, our knowledge is immediate, not a copy of the real thing, or information about it, but a sharing in its inmost nature. The subject, having been reduced to the nescience of the Centre, comes to objective knowledge of the Whole --- knowledge which is not attributable to any merit or effort of the knower, but to the presence of the known. ϕ Here knowledge and being reach identity.

6. THE WHOLE AS THE PERFECT INDIVIDUAL.

In selecting, from the many candidates, those units which could be said to qualify for integral status in the hierarchy, and to rank as more than mere aggregates or as mesoforms, I have in general had before me an ideal pattern of individuality. \times I have taken a true individual to be a psycho-physical system which is (a) indivisible without loss of specific characters; (b) independent of the environment for the maintenance of these characters, self-sufficient, complete; (c) not subject to accidents, but self-moving, having its own internal principle of development; (d) inclusive, embracing great richness and complexity of detail; (e) unified, so that its diversity of parts is harmoniously ordered, and there is no tendency to the division of the whole; (f) <u>sui generis</u>, unique, inimitable, indescribable; (g) self-preserving: persistent, without loss of specific characters, through time. More briefly, my ideal individual would be indivisible, independent, free, all-embracing, one, unique, and permanent.

Now I think it is plain, first, that no member of the hierarchy, apart from the ultimate members, approaches this ideal of individuality; and, second, that the criteria I have just listed will serve, with few changes, as a description of the Whole. For the Whole is (a) indivisible, by definition --- a single errant atom, detached from the rest, would be enough to establish a duality, and so to destroy the Whole as such; (b) independent, for it has no environment upon which to draw; (c) free, inasmuch as any limitation must spring from what is internal to itself; (d) all-inclusive, by ° The language of the Fathers is uncompromising. Clement (<u>Strom</u>. VI. 14; CXIII. 3) says the soul studies to be god, receiving the Lord's power; Origen (<u>On St John</u> II. 3; 19) that many become gods by participation in God; Athanasius (<u>Contra Arianos</u>, III. 25) that we become "Sons and gods by reason of the Word within us". Basil and Gregory of Nazianzus have similar passages. See G. L. Prestige, <u>God in Patristic</u> <u>Thought</u>, pp. 73-4. Without their counterpart -- man's descent to the worthlessness and ignorance of the Centre -- such doctrines are dangerously untrue.

• There seems to be a marked discrepancy between (1) the unmistakable ontologism of many passages of the New Testament (e.g., John, XIV. 20, 23; I. 9; Gal. II. 20; II Pet. I. 4) and of non-heretical mystics (e.g. St Bonaventura and other Franciscans) on the one hand, and (2) the anti-ontologism of St Thomas and the Dominican tradition, of the Council of Trent, and the Papal Decree of Dec. 18, 1861, condemning seven ontologist propositions, on the other hand. I think the two attitudes are not irreconcilable, and can be shown to be complementary.

 ϕ "The really perfect man is wont to be so dead to self, so lost in God to his own form and so transformed in the will of God that his entire happiness consists, I swear, in knowing self and all for naught; in knowing God and God alone and, all unwitting of any will or choice except God's choice and will, in 'knowing God', to quote St Paul, 'even as he is known'. God is doing all his knowing, doing all his willing, doing all his loving in himself. Our Lord says that eternal life is simply knowing Just think what an amazing life a man like this must lead on earth, life as it is in heaven, in God himself!" Eckhart, Works (trans. Evans), ii. pp. 52, 53.

× See Plato, <u>Republic</u>, 380, 381, for a discussion of God's nature. He is <u>inter alia</u> undisturbed by outside influences, and the sole author of any change in himself. But since a perfect being could only change for the worse, he is changeless.

"The living body has been separated and closed off by Nature herself. It is composed of unlike parts that complete each other. It performs diverse functions that involve each other. It is an <u>individual</u>..... definition; (e) unified † if the intuitions of the mystic, and the presuppositions and achievements of science (and indeed of thought itself) may be taken as a safe guide; (f) unique, in ways which I have yet to discuss; (g) permanent, or (at the least) less impermanent than any of its parts. No doubt there are several difficult questions (of which the problem of evil is the most important) to be answered, before it can be said with any assurance that the individuality of the Whole is altogether ideal; but at any rate it is abundantly clear that the Whole is the only unit which has any real claim to individuality as I have defined it, and that the individuality of the part is no more than a courtesy title. "In the ultimate sense there can be only one Individual." ° It seems that, all along, I have been dimly aware of this Individual, by virtue of whose existence I have been able to recognize and assess such attempts at individuality as may be found at lower levels. I have seen the lesser members of the hierarchy as distorted images or prototypes of the crowning member. In a way, it was the Whole that I sought in them all, and the Whole which enabled me to seek it.

Most of all, individuality is manifested in the life of the great saint ---in one whose sympathy takes in all creatures, whose will is God's will, ϕ whose personality is wholly integrated because due recognition is given to every aspect and level, whose life is free and beyond the reach of accident because all that happens to it is made intentional and internal. × But this, again, is only to confirm the suggestion that we are individuals in so far as we live the life of the Whole --- or rather, in so far as that life is lived in us.

"From the fact that they acquire the divine goodness," says St Thomas, "creatures are made like unto God." × And St Paul: "For the invisible things of him from the creation of the world are clearly seen, being understood by the things that are made." + To extrapolate the curve of the parts towards the Whole is permissible and of great value --- so long as we recognize that the method is bound to fail us in the end. * In the scholastic phrase, nothing can be predicated univocally of God and at the same time of other things. It is true that we find in the Whole, completed and at their best, many characters which transiently and confusedly appear at the lower levels: the Whole might well seem, in that case, to be the last step of a long climb, the culmination of a steady ascent to the summit of reality. But this is not so. Between the "one far-off divine event" and the creation which moves towards it, there is a great gulf fixed. There exists no direct way up (that is, one which does not include a steep descent) from the suprahuman to the divine, from the galactic level to the Whole. It is not by the part that we know the Whole, but rather by the Whole that we know the part. For while the part, at its most individual, has nothing that is not more perfectly seen in the Whole, the Whole has unique characters (notably, self-existence) that are not to be found in any part of itself, and which extrapolation from below must fail to reveal. The individuality of the Whole, on account of its very excellence, cannot properly be called individuality at all: for it is, in addition to the fulfilment of individuality, the contradiction or supplanting of it.

As a striking instance of how all things are changed at the level of the Whole, we have only to consider the parallel development of the No doubt, it is hard to decide, even in the organized world, what is individual and what is not. The difficulty is great, even in the animal kingdom; with plants it is almost insurmountable..... Individuality admits of any number of degrees, and ... is not fully realized anywhere, even in man." Bergson, <u>Creative Evolution</u>, p. 13. Indeed, according to the early Sufis and Eckhart, none but God has the right to say "I". † One aspect of this unity is suggested by the lines (taken from Francis Thompson's "The Mistress of Vision') ---

"All things by immortal power, Near or far,

Hiddenly

To each other linked are,

That thou canst not stir a flower

Without troubling of a star."

McTaggart has another way of putting it: "If anything changes, then all other things change with it. For its change must change some of their relations to it, and so their relational qualities. The fall of a sandcastle on the English coast changes the nature of the Great Pyramid." <u>The Nature of Existence</u>, 309.

° Bosanquet, The Principle of Individuality and Value, p. 72. Cf. the well-known doctrine of Lotze (Microcosmus, E.T., ii. p. 688): "Perfect Personality is in God only." And Clement C. J. Webb's development of this theme in God and Personality. Personality and individuality are not, of course, the same thing: the former, for instance, emphasizes moral and social factors which the latter does not. But for me here, personality is not other than individuality in its superior hierarchical manifestations. ϕ "Sanctity, then, consists in willing all that God wills for us. Yes! sanctity of heart is a simple 'fiat', a conformity of will with the will of God." De Caussade, Abandonment to the Divine Providence, I. i. 9. × Summa Contra Gentiles, I. 14.

+ <u>Rom</u>. I. 20.

* The limitations of the part are perhaps insufficiently recognized In such passages as this --- "The place of a finite existence in the scale depends on the question how partial it is; how much of the infinite appears in it; how much of the whole is ignored when you consider it by itself; how much it would have to be filled out, and therefore changed, in order to express the infinite fully; how near it comes to being a self-dependent harmonious whole; how much it contradicts itself." A. C. Bradley, Ideals of Religion, p. 227. No doubt it is true to say, with this writer, that the whole of a thing is the Whole; and, with Lotze (for instance) that in God intelligence, will, and goodness are perfectly realized. But it is necessary to add that the highest level transcends what it perfects. For a classic attempt to show in what respects creatures are like God, and unlike God, see Summa Contra Gentiles, I. 14-34.

organism and its environment. Ascending the hierarchical scale, the organism (I use the word in the broadest sense) grows at the expense of a diminishing <u>total</u> environment; while its <u>effective</u> environment, or the scene of its social activities, grows as it grows, till for the Galaxy it is truly world-wide. But at the level of the Whole everything is reversed: the environment, after its long and steady expansion, suddenly collapses to nothing. +

7. <u>THE OMNIPRESENCE OF THE WHOLE</u>.

Let me suggest, rather in the form of a parable or diagram than with any pretence at exactness, the importance of this duality. \times

The highest is too generous in its sympathies to leave anything out, and the lowest too narrow in its sympathies to embrace anything; but the result is the same --- neither has an environment or other, and accordingly neither, taken separately, can be called a self. Are they, then, fictions, or (at best) mere potentialities? On the contrary, whatever may be said of them as apart, they are, together, reality itself. Not only do the hierarchical extremes meet, but everything depends upon their meeting, and upon their indissoluble union. The Whole, deprived (so to speak) of all social life by its very success in that field, deprived (that is to say) of the conditions in which intellectual and moral and aesthetic activity is possible, reverts to its alter ego, the Centre, where it takes on the guise of the other or not-self, and never of the self. * Here the one true individual is enshrined, not as the 'I' or subject, but as the 'Thou' or object. Thus the Whole that vanished on completion is now completed on vanishing: it lives to die, and dies to live --- in another. It is reborn, complete and perfect, everywhere, in every Centre. "If thou conceivest a small minute circle," says Boehme, "as small as a grain of mustard seed, yet the Heart of God is wholly and perfectly therein." ° Total loss becomes total gain. For here at last, where the law of equality is abolished, where the known is all and the knower is nothing, perfect knowledge is to be had; because no fragment of the Whole is held back for the self, nothing remains subjective and undisclosed. Here, again, is realized that unqualified selflessness which is the indispensable condition of ideal love, and goodness, and beauty. Whereas the law of equality is abrogated, the law of elsewhereness is here made absolute: only the not-self is knowable, good, and beautiful; and only the total not-self (that is, the Whole) is wholly knowable, perfectly good, and altogether beautiful. Selfishness, the self that is anything, is incompatible with any kind of perfection, and a stranger to the Whole, if only for the reason that it divides the Whole and its perfection. The Whole is the Whole because it is for ever and selflessly the Centre, which is nothing. If the Whole has all perfections pre-eminently, that is because the Whole is all-excluding as well as allabsorbing, everywhere as well as nowhere, the most social as well the least social of beings. Claiming nothing, it owns everything; knowing nothing, it is all-wise; loving all, it alone is infinitely lovable; sensitive to every beauty, it is itself the crown of beauty. Such is the real, and such must the seeker after reality become. Anything more than the Centre is Page 288

+ The universe is more like an apple, whose pips and rind are very different from the rest, than a billiard ball, which is the same all through. Thus Plato's world in the <u>Timaeus</u> (34 B) has a soul at the centre, and is wrapped round with soul on the outside. Thus also Jeans suggested that the innermost structure of the atom, and the cosmos itself, are of the nature of pure thought.

× <u>Atum</u>, which is the name of the Egyptian creator god, means 'everything' and 'nothing', all-inclusiveness and emptiness. John A. Wilson, <u>Before Philosophy</u>, p. 62.

* "Simple unity", says Royce (<u>The World</u> and the Individual) "is a mere impossibility. God cannot be One except by being many. Nor can we various selves be many unless in Him we are One."

What may be called the fugitive character of the Whole is well described by Eckhart thus: "The more God is in all things, the more He is outside them. The more He is within, the more without."

° The Threefold Life of Man, VI. 71. Cf. Plotinus: "God is not_external to anyone, but is present with all things, though they are ignorant that He is so." Enneads, VI. 9. And St Augustine, "The same God is wholly everywhere, contained by no space, bound by no bounds, divisible into no parts, mutable in no part of His being, filling heaven and earth by the presence of His power. Though nothing can exist without Him, yet nothing is what He is." The City of God, VII. 30. The same thought is expressed in the well known Oxyrhynchus logion: "Raise the stone and thou shalt find Me; cleave the wood and I am there." But the earliest, as well as one of the most lucid statements of the doctrine of the omnipresence of the Whole, is probably Indian: see, for instance, Chhandogya Upanishad, III. 14. "He is my self within the heart, smaller than a corn of rice greater than heaven, greater than all these worlds." And Brihadaranyaka Upanishad, III. Cf. Mat. XIII. 31 ff.

too big to contain the Whole.

And so the supreme hierarchical unit is like the others in this respect, that immediate insight into its nature is presented here and now --- presented, moreover, in two ways. ° Firstly, the Whole, just like my companions the spiral nebula or the star, the man or the cell, is not itself over there in the distance, impaled like a butterfly upon its own Centre: in and for itself it is nothing, in and for others it is everything. The Whole is itself here, where I am nothing: this is the place where the star and the galaxy, the cell and the man, and the Whole itself, arrive at the status which I find them to have. × Here they are altogether at home, in their proper places, and no strangers. I could not get rid of the Whole, even if I wanted to do so. Secondly, this place is not only circumferential to others' Centres, but also central to its own circumferences. In plainer language, the place I call here is the here of a cell and a man, of a star and a spiral nebula, and of the Whole. Here the Sun, to accommodate other stars, empties itself; here the Galaxy, making way for its fellows, reduces still more of the universe to mere capacity; and here the Whole, completing the process of self-naughting by the reduction of all things to nothing, becomes the Centre. And it is because I am where the Whole as self is nothing, that I am where the Whole as not-self is all things. Dimly and rarely though I realize the tremendous fact, the life of the Whole, in both its aspects, is lived here in me. And I live just in so far as I come to acknowledge that life.

Life of every grade is being lived here, in accordance with a number of fundamental social rules; but the life of the Whole has certain peculiarities which must now be noted. Whereas I project every intermediate grade of unit from its place here to its place over there at its own Centre, I am unable so to project the Whole. For evidently it has no one Centre, and must be universally projected if at all. Every Centre belongs to it, though some invite projection more than others. Thus my system of regions is completed in a revolutionary and summary fashion --- there is no spot in the universe which does not lie at the Centre of my outermost zone, and in that zone itself. In the language of St Augustine's theology, God is a circle whose circumference is nowhere and whose centre is everywhere; in the language of Milne's science, there is a Cosmological Principle according to which any point that the observer cares to take up is the real centre of the physical universe, which universe is always (apart from details) symmetrically disposed about him. Wherever I go, I am always in the presence of the ultimate levels of reality. <u>Here</u> is the Centre, and the Whole, and the Centre of the Whole. And there, everywhere, is the Centre, and the Whole, and the Centre of the Whole. At this level projection is universal, and the law which makes status proportional to range no longer holds good. Rightly seen, all things are theophanies.

Every unit of integral status, every attempt at individuality, is an essay in omnipresence. As man, I am omnipresent throughout my human body --- normally, all of it is <u>here</u>: thus when any part of it is hurt, it is <u>I</u> who am hurt. When my solar body is in question, all of it is present: every one of its Centres becomes this Centre: they all amalgamate here. The ascent of the hierarchy, then, is the unification of its lowest members, and the Whole is that unit which finally overcomes the plurality of Centres "Peace I have from the core of the atom, from the core of space,

and grace, if I don't lose it, from the same place." D. H. Lawrence, 'Wealth' (<u>Pansies</u>, p. 89.)

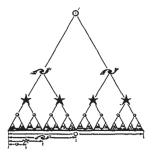
° And to both of them the words of the Mundaka Upanishad apply: "The only proof of His existence is union with Him."

 \times "Behold I am with thee I will not leave thee ... " God says to Jacob. And Jacob exclaims, "Surely the Lord is in this place; and I knew it not How dreadful is this place! this is none other but the house of God, and this is the gate of heaven." Gen, XXVIII. 15 ff. Psalm 139 has perhaps the finest biblical passage on the theme of the divine presence --- "Whither shall I go from thy spirit? or whither shall I flee from thy presence? If I ascend up into heaven, thou art there: if I make my bed in hell, behold, thou art there. If I take the wings of the morning, and dwell in the uttermost parts of the sea; even there shall thy hand lead me, and thy right hand shall hold me." Cf. Jer. XXIII. 23: "Am I a God at hand, saith the Lord, and not a God afar off? Can any hide himself in secret places that I shall not see him? saith the Lord. Do I not fill heaven and earth?" In other words, the Whole is not subject to the regional laws that govern the parts.

"For central to the love of Heaven Is each child as each star to space." Coventry Patmore, <u>The Victories of Love</u>, II. 8.

"That Dust itself which is scattered so rare in Heaven, whereof all worlds, and the bodies that are not worlds, are made, is at the centre. It is farthest from Him of all things, for it has no life, nor sense, nor reason; it is nearest to Him of all things for without intervening soul, as sparks fly out of fire, He utters in each grain of it the unmixed image of His energy. Each grain, if it spoke, would say, I am at the centre... He is in every place: Not some of Him in one place and some in another, but in each place the whole..." C. S. Lewis, <u>Perelandra</u>, p. 249.

The God of Xenophanes "sees all over, thinks all over, and hears all over", but He is altogether unlike mortal men. It is another thing to realize that all this experience is potentially ours because of our union with Him.



--- for this reason I can say that the Whole has only one Centre, which is mine and here. But once more it is necessary to add the all-important proviso: there is no real progress from the part to the Whole. The growth of my presence is offset by the growth of my absence; the expanding self requires for living space and contrast the expanding not-self, with the result that the higher unit is, in effect, no nearer to the universal omnipresence of the Whole. In the end, the way up to one-Centred omnipresence is the way down to many-Centred omniabsence. $^{\circ}$

8. THE WHOLE AS SPACELESS AND BODILESS.

It follows from the foregoing that the Whole is free of space, in a way in which lesser individuals are not free, and without a body --- in any meaningful (or at any rate, in any accepted) sense of the word.

At first sight, this is not so, and we must say that, on the contrary, we have here the one Body of which all other bodies are only the members. \times Here at last, it would seem, all space-wounds are healed, and every amputated organ is restored to the total physique which alone truly lives. Here is the <u>only</u> organism --- that is to say, that organism which invariably appears once you supply to any pseudo-organism the parts which are missing. Here is the life-source whose vitality we divert and divide into myriads of streamlets: the body whose life-blood is drained with each incision that we make upon it. Or, to reverse our description, here is the crowning achievement of that long process of spatial integration, whereby each hierarchical grade of individual comprises in a single volume the lesser volumes of its subordinates. The higher the body the more voluminous, and the highest body of all is precisely the one which disclaims no space whatever.

This is almost true --- yet far from the truth. It would be altogether true if it were not for the law that the moment of the Whole's completion in space is the moment of its translation out of space, of its collapse to the Centre. The unification of space and the perfecting of the physical order are the signal for the total atomization of space and the superseding of the physical. The exemplary body and ideal type of physical organization, towards which the hierarchy strives unceasingly, proves to be no body at all. Nor should this surprise us: it is plain that a body that can neither be viewed, nor active towards others, nor acted upon, is a self-contradiction. "Space, to be space, must have space outside itself", + says F. H. Bradley: in other words, all space is no space. The Whole is not content to do perfectly what the part does imperfectly: it perfects and annuls in one act. The Whole is not simply the apotheosis of such virtues as the parts can show, our great archetype and ideal: for it renounces the ideal at the moment of its realization. • And so Leibniz says truly that "God alone is entirely detached from body". ⊕ The ultimate reality, at once expanding to physical completeness and contracting to physical nothingness, is freed from the limitations of the physical order. The Spirit, as World Substance, Lossky ° tells us, "has no material body, since a material body can only exist in contra-position to some other mate"I but open my eyes, --- and perfection, no more and no less,

In the kind I imagined, full-fronts me, and God is seen God

In the star, in the stone, in the flesh, in the soul and the clod.

And thus looking within and around me, I ever renew

(With that stoop of the soul which in bending upraises it too)

The submission of Man's nothing – perfect to God's All-complete,

As by each new obeisance in spirit, I climb to His feet!"

'Saul', XVII.

× The Stoics amongst philosophers, and Marcus Aurelius amongst the Stoics, had the most lively awareness of the Whole as the world-body and the world-soul. "Ever consider and think upon the world", says the Emperor, "as being but one living substance, and having but one soul, and how all things in the world, are terminated into one sensitive power; and are done by one general motion as it were, and deliberation of that one soul." Meditations, IV. 33. But the trouble comes when the world-body is described as a whole, ab extra --- witness Plato's curious description of the cosmos: "It had no need of eyes, for nothing visible was left outside; nor of hearing, for there was nothing outside to be heard. There was no surrounding air to require breathing It was designed to feed itself on its own waste and to act and be acted upon entirely by itself and within itself." Timaeus, 33.

For the arguments of St Thomas in support of the doctrines that in God there are neither parts nor composition, and that God is not a body, see <u>Summa Contra</u> <u>Gentiles</u>, I. The patristic doctrine is similar: cf. Clement of Alexandria, <u>Strom</u>. VII. 6, XXX. l; and Prestige, <u>God in Patristic</u> <u>Thought</u>, p. 13.

+ <u>Appearance and Reality</u>, p. 38. Similarly, all body is no body: body is for another, and there is no other. Yet this abolition of the physical is its perfecting, for it leaves no part of the universe lifeless or mindless.

• Cf. Empedocles' account of God: "For he is not furnished with a human head on his body, two branches do not sprout from his shoulders, he has no feet, no swift knees, nor hairy parts; but he is only a sacred and unutterable mind flashing through the whole world with rapid thoughts." Burnet, <u>Early Greek Philosophy</u>, p. 225.

⊕ Monadology, 72.

° The World as an Organic Whole, p. 121.

rial body (in the acts of repulsion), but outside the world-whole there is no body which it could oppose to itself. Material bodies can only exist within the world, that is, only in relation to one another. The totality of material bodies, having nothing outside itself in relation to which it can express itself by repulsion and impenetrability, is not a material body, and therefore cannot reduce the Spirit which stands at the head of it to the level of a Soul." But, after all, this is not so mysterious as it sounds. Just as a man is one who has removed a human body from the physical realm, emptying it of all corporeality, so the Whole is one who has removed the total Body from the physical realm, and turned it into that capacity for others which is the Centre.

Also we have here the key to a puzzling and fundamental contradiction in our nature. Corresponding to the anabolic physiological process is our insatiable urge to expand, to become all things, to take on more and more life and power, to overpass all our limitations; and corresponding to the katabolic physiological processes is our equally insatiable urge to contract, to withdraw, to detach ourselves from all things. In Freudian terms, we are all born with a life-instinct and a death-instinct, eros and thanatos. ϕ To try to deny both tendencies is to live as little as possible; to give way to one or the other is to invite various kinds of disaster. The real way to resolve the contradiction is to push it to its limits, to go in for total expansion and total contraction at once. For the attainment of the first is the Whole, and of the second the Centre --- which is the same as saying that they meet in the end, that each issues in the other, and that their goal and fulfilment is to come thus to unity. The bifurcation of our nature proceeds from the bifurcation of ultimate reality: we are drawn up to the Whole and down to the Centre. * And only ultimate reality can at once satisfy and reconcile these contradictory trends, because only there, on the highest and lowest levels, do they become one.

9. THE WHOLE AS TIMELESS.

What I have said of the Whole and space is true, with only minor changes, of the Whole and time. To ascend the hierarchy is for one's timespan, as well as one's space-span, to increase: and this is so whether the view out (or 'mind') or the view in (or 'body') is being considered. Every individual is a history, and the more exalted the individual the longer the history. It takes a long while for the higher units to be themselves: their minimum time (short of which they cannot exist) is proportional to their status. A man is not a man in a minute's time, any more than in a cubic inch's volume.

What, then, is the culmination of this time-grasping tendency? It is the Whole as the History which includes all histories, as the Event which (to be itself) must embrace and transmute every event. No actual occasion can be absent from this supreme Occasion -- whether absent by way of futurity or pastness -- but all must be present in a timeless now, otherwise the Whole would suffer a division which would destroy its essential character. ° Here is no merely formal consolidation of time, no abstract Kant's mistake was to jump to the conclusion that the contradictions contained in his antinomies of pure reason arose out of the incompetence of the knower, and not out of the nature of the known. He took it for granted that the Whole could not be 'self-contradictory' in any sense: or rather that the Whole (e.g. in the matter of its space and time and self-causation) was necessarily subject to the same criteria of consistency as lesser objects. His Copernican revolution stopped short just where it should have gone on --- gone on to assert that, just as it is here in us (or in the mind) that lesser things come to themselves, so is the Whole realized (or realizable) in us. The very reasons he found for doubting this fact only underline its truth. For the famous 'contradictions' are ontological --- revelations of the twofold, ambivalent nature of reality as the Whole and the Centre.

 ϕ <u>Beyond the Pleasure Principle</u> (1922) In this work, Freud maintained that there is in all life an irreducible inertia, an instinctive tendency to return to the inorganic state. He links the 'death-instincts' with the somatic cells, the opposing 'life-instincts' with the sexual cells.

* The works of the mystics furnish innumerable examples of this bifurcation. Thus Ruysbroeck sometimes speaks of "the spiritual life-process in terms of upward growth toward transcendent levels; sometimes in terms of recollection, the steadfast pressing inwards of consciousness towards that bare ground of the soul where it unites with immanent Reality, and finds the Divine Life surging up like a 'living fountain' from the deeps." Surely Evelyn Underhill, whose words I quote (<u>Ruysbroeck</u>, p. 81), need not have found this ambiguity 'puzzling'.

God, says St Thomas, "is without beginning and end, and has all His being simultaneously; and in this consists the notion of eternity." <u>Summa Contra Gentiles</u>, I.

° The past is the realm of what no longer exists: but the Whole <u>is</u> and the Whole is all existence, and it cannot be said of anything that it <u>was</u> in the Whole. Again, the future is the realm of the potential: but in the Whole all potentiality is already realized. Cf. St Thomas: "A thing is perfect in so far as it is in act, and imperfect in so far as it is in potentiality and void of act. Wherefore that which is nowise in potentiality but is pure act, must needs be most perfect. Now such is God." <u>Op. cit.</u> I. schema or time-table in which scattered events take up their places, but an intensely alive specious present, containing that total Experience of which all our temporal experiences are incidents. And the evidence for the existence of this Experience is like the evidence for experience at (say) the terrestrial and sidereal levels --- we ourselves enjoy it, however fragmentary and rare that enjoyment may be. Just as infrahuman and human and suprahuman grades of experience are entirely natural to us, our very own, just as the vastly different spatial and temporal capacities of atom and star come to us effortlessly, so the totality of time (held together in a single specious present) is wholly accessible to us. If its concrete richness nearly always escapes us, that is because we do not (and not because we cannot) realize our capacity. In fact, the timeless Whole of time is implied in the very notion of time, and in our division of time into past and present and future. For the entire time-sequence, before it can be so described, must be taken as one, as a present unit. As we ascend the hierarchy, our increasing specious present (in which succession or temporal order remains, but past and future are abolished) prefigures the ideal specious present of the Whole. More than this, we set our growing specious present of sense experience in the middle of a total 'specious present' of universal history -- future as well as past -which in its unity and completeness is the Whole.

But again, there is a gulf between the Whole and the part. The finite individual (as such), no matter how many worlds he may call here or how many million years he may call now, is always placed in a spatial and temporal environment, * in a there and a then; and without such a background his life is unthinkable. × Pastness and futurity are essential to the exercise of his proper functions: make them present, and what action or motives for action, what duty, or freedom, or moral distinctions, can survive? It is a condition of all that we value that the present time shall not be all time. Indeed time itself cannot outlive its own perfection: when it is wholly <u>now</u> it is timeless. As with explanation and causation and space, so with time --- the Whole supersedes what it completes. We have seen that the full explanation is inexplicable, that the only true individual abolishes individuality, that all space is no space. And now we see that the timefull is the timeless. The perfecting of time is time's undoing: all time is no time. Here, in other words, is one more aspect of the sudden descent from the apex of the pyramid to the base, of the refusal of the Whole to remain the Whole, of the unity of the ultimate levels. It may be said that ultimate reality is doubly timeless --- as the Whole, timeless by way of the inclusion of time; as the Centre, timeless by way of the exclusion of time. The Centre is the instantaneous receptacle of the Whole of time, just as it is also the unextended receptacle of the Whole of space. And if this were not the case, if the Whole were not also the Centre, it could never be the contemporary of its parts; and certainly it would be non-existent now. It would remain unmade till the end of time.

But in fact the Whole is complete at every instant of the time-series: it is contained in this Centre of mine and in all other Centres. Because my <u>here-now</u> is non-spatial and non-temporal (and so subtracts no space and time from the Whole), it qualifies as the receptacle of the Whole. So

* But these spatio-temporal regions have an 'envelope' of a different order -- a spaceless and timeless 'region' which is not altogether beyond the cognizance of a physical science that speculates concerning a belt of nebulae retreating from us at the speed of light: nebulae whose clocks all come to a stop for us, and whose metre rods shrink to nothing.

× In fact, just as our growth in space is more than matched by the expansion of our spatial environment, so our growth in time is more than matched by the expansion of our temporal environment --- with the result that we become more and not less time-ridden. We progress away from, rather than towards, the timeless Whole. The remedy is that we seek the timeexcluding Centre as well as the time-including Whole, for they do not exist apart. Only those of us who take no thought for the morrow can take thought for eternity; only those who know how to live in the moment know how to live out of time and in the Whole.

• The 'cosmological principle' of the observer's centrality is as true of time as it is of space --- the Centre lies in the middle of history, just as it always lies in the middle of the physical universe. But this law of temporal symmetry (and indeed all that I have said in this section) really belongs to Part IV, where the full arguments are presented. long as, Ananias-like, I reserve the tiniest fraction of space for myself, I destroy its totality; and so long as I claim to have the briefest history of my own, I can never enjoy the history of the other. That is to say, the absolute mortality of the self or Centre is the condition of the absolute immortality of the not-self or Whole.

10. THE WHOLE AND TRUTH.

The course of this inquiry so far is an illustration of the law that to seek the truth about anything is to seek the Whole. ϕ "The more we understand individual things", says Spinoza, "the more we understand God." \times Whatever the thing may be, the whole truth about it <u>is</u> the Whole. (Or, in Bradley's terms, every statement is a statement about the Whole, implying the form: 'The Whole is such that \dots ' +) The whole meaning of the part involves the whole context of the part, which is the Whole. Ø It is true that we begin by taking things to be self-existent and isolated, but research (whether it takes the form of physical science, or logic, or psychology) shows that they are nothing of the sort, and that they are constituted by their relations to all other things. The lower hierarchical units are known by putting them in their place, and this act is nothing else than the ascent of the hierarchy. "Ye are complete in Him." * In the last resort, only the Whole is quite real, seeing that the full specification of anything else is the Whole. (For it is not only necessary to specify how the thing stands to other things, but also how it does not stand to them: I cannot say all that the object is without dragging in all that it is not: what limits or negates it is nevertheless necessary to it. †)

Ultimately, there exists only the Whole, taken from this point of view or that point of view. There are many ways of showing this to be so, but in any case it is implied in the schema of regions and the law of elsewhereness. Primarily, every hierarchical unit is located everywhere --- except at its own Centre. It inhabits all its regions, in guises conformable to them; but it is projected back upon the Centre. Thus every such unit is world-wide, and at the same time nuclear, or centralized. It is ultimate reality in both its aspects, the Whole which, taken concretely, is the entire interlocking system of regions and Centres, and the great arena in which the game of hide-and-seek (or elsewhereness) is played. Alternatively, it may be described as the great Society of all societies of mutual observers, whose observations at once furnish the content (or raw material) of the Whole and bind it together with unbreakable and far-reaching and innumerable bonds. If you could tear an object from its place in this complex you would find, not Bradley's famous jagged edges, but no edges at all because no object at all. In itself, it is nothing; in the company of its equals, it reaches that degree of coherence and reality which is proper to its level; in the Whole, it is the Whole, entirely real and entirely coherent. °

Whereas man as such can never be the object of perfect knowledge, the Whole as such can never be the object of imperfect knowledge. For when I know man more fully I know him to be more than himself, and ϕ Mr. C. S. Lewis has finely said that we can pursue knowledge as such, "in the sure confidence that by so doing we are either advancing to the vision of God ourselves or indirectly helping others to do so." <u>Transposition</u>, p. 50.

- × <u>Ethics</u>, V. 24.
- + The Principles of Logic.

Ø Whereas it is more or less true to say that there is on Earth only one human being, who is Humanity; and only one living creature, who is Life; it is wholly true to say that there is in the Universe only one whole, who is the Whole.

* <u>Col</u>. II. 10.

The 'axiom of internal relations', which was so clear to the neo-Hegelians, has been the butt of many recent opponents of objective idealism. It is said, for example, that a distinction must be made between the relations that are necessary to the thing, and those which are accidental. For a full criticism see A. C. Ewing, Idealism, IV, also The New Realism, by E. B. Holt and others. My own view is that the objective idealists are right inasmuch as they treat of the level of the Whole, and the realists are right inasmuch as they treat of the level of the part --- the part whose relations are necessarily external, otherwise it would no longer appear as a part. The solution (as of most, if not all, metaphysical problems) is cosmological, a question of clearly distinguishing hierarchical levels.

† This essentially Hegelian doctrine was independently arrived at by Whitehead, who states it in his well-known principle of 'negative prehensions'.

° And so monism and pluralism are complementary and not incompatible. Thus, to take one of the most extreme examples of monism, Dionysius taught that while one side of our being is wholly merged in the one timeless Super-Essence, the other is a limited and multiple manifestation in time. On the other hand, to take an example of thorough-going pluralism, Lotze, having shown that reality is a society of spiritual beings of many grades, works round to the view that all things are modes of God's activity. See Microcosmus, E. T., ii. p. 657. Too often it is assumed that the One must submerge the Many, instead of underwriting them.

when I know the Whole less fully I know something less than the Whole. (It is Spinoza who states these doctrines most clearly and uncompromisingly --- "All ideas, in so far as they have reference to God, are true." "The knowledge of evil is inadequate knowledge." +) According to common sense, these statements are manifestly untrue, and it is perfectly evident that I have much more information about the middle levels of the hierarchy than about the higher levels. But already I have shown in many places that common sense is mistaken in this opinion, and that (for example) our stellar functioning guides and inspires our terrestrial functioning in many unsuspected ways. And the law that valid knowledge (as distinct from the raw material of factual information, the empirical details) begins at the extremities of the hierarchy, and works in towards the middle or human layer rather than out from it, is beautifully exemplified when we come to the ultimate levels. "What is in God perfectly is found in other things by way of an imperfect participation," says St Thomas Aquinas, "And thus the creature has what is God's, and therefore is rightly said to be like God..... But the creature receives from God its similarity to Him, and not vice versa." × Indeed it is time that we realized that it is not our knowledge of what surpasses man, but of man himself, which is questionable, and that it is the agnostic humanist rather than the theist who needs to justify his beliefs. * For insight into the higher levels of experience is (a) directly given, (b) peculiarly lucid, free from distracting and distorting detail, and (c) of wider scope, more self-consistent, less fragmentary --- in a word, more true.

As man finds helium in the sun and mathematics in the stars, so he finds himself in the Whole. Let me give three instances out of the many that are available.

(i) It is a commonplace of modern psychology (and particularly of Jung's Analytical Psychology °) that we first know and give substance to our own psychic content as we project it upon the external world, so taking it to be objective and other than ourselves; only gradually do we learn to withdraw our projections, if indeed we come to this stage at all. Historically, the most significant objects of this projective activity have been demons and ghosts and spirits of all kinds, and the high gods, and the one God. Man could not develop on his own or at his own level: it is necessary for him to have commerce with the divine. (Certain French sociologists † have gone so far as to derive the notions of space and time, number and causality, from the practice of religious rituals amongst primitive peoples: at least it is likely that through such group activities men have become more keenly aware of abstract spatial and temporal relations, which are gradually applied to (relatively) secular and individual matters.) There can be little doubt that man's growth to self-knowledge has been indirect, and that he must know God's secrets to know his own. ϕ Theology precedes and prepares for anthropology. Nor can it be said that theology is useful historically, but has proved itself invalid --- a scaffolding which must be removed once it has made possible the building of substantial knowledge. Quite the reverse: consider St Paul's theology, which is as alive now as ever it was, and compare it with the science and the techniques of his day. The 'divine science of theology', and a fortiori of mystical theology, is perennial. And even the most

+ Ethics, II. 32; IV. 64. Cf. Descartes: "That idea by which I understand a supreme God has certainly more objective reality in itself than those ideas by which finite substances are represented." Meditations, III. Here the status of the object stands surety for the value of our thought about it. To suppose otherwise is to think too highly of man as man, --- our only claim can be that our knowledge of the Whole is the Whole's activity in us --- activity which, though imperfectly appropriated by us, is itself perfect. When Aldous Huxley writes, "In the spirit we not only have, but are, the unitive knowledge of the divine Ground" (The Perennial Philosophy, p. 38), he is denying and not asserting the competence of man qua man to know the Whole.

× <u>Summa Contra Gentiles</u>, I.

* "To prove God is not only impossible, it is a senseless endeavor, because God is already implied in the very centre of the thought that sets out to prove him." A. C. Bradley, Ideals of Religion, p. 257. On God as eminently knowable, the supreme intelligible, the first principle of all our knowing, see Gilson, The Philosophy of St Bonaventure, pp. 118-9, 130-1. The more excellent object is more easily apprehended. Even Descartes believed that without the knowledge of God we can know nothing: He is the principle of intelligibility. Or, in the Lady Julian's more vivid language: "I beheld with reverent dread, and highly marvelling in the sight and in the feeling of the sweet accord, that our Reason is in God ... " Revelations of Divine Love, p. 199.

^o "Strictly taken, projection is never made; it happens; it is met with. In the darkness of some externality I find, without recognizing it as such, a psychic or inner something that is my own." Jung, <u>The</u> <u>Integration of the Personality</u>, p. 212. Cf. <u>Psychological Types</u>, p. 582; <u>Two Essays on</u> <u>Analytical Psychology</u>, p. 99. † E.g., Emile Durkheim, <u>Group Theories</u> <u>of Religion</u>, p. 188.

φ In <u>De Diligendo Deo</u>, St Bernard says "We must begin by loving God; and then we shall be able, in Him, to love our neighbour too." This is indeed the order of history: our devotion to the human has its indispensable roots in our ancestors' devotion to the divine. Even our government has come down to Earth out of Heaven, seeing that religion, and astronomy, and statecraft, were originally not three but one. As Benjamin Farrington has pointed out, the visible divinity in the sky played "a multiple role in the government of cities and empires. The stability of ancient oligarchical society was bound up with a particular view of astronomy." Greek Science, II p. 88.

primitive religious beliefs -- as, for example, those concerning star-gods -- show a profound insight which we have for the most part lost, and need desperately to regain.

(ii) My second instance is drawn, not from primitive man, but from mediaeval man. It is literally true that the most sustained and subtle effort of reason ever made -- that of the Schoolmen, and notably of St Thomas Aquinas -- was a suprahuman effort. It was concerned primarily with the divine nature, and only secondarily with human nature --hence its lucidity. + If philosophy (as Webb tells us) can neither rise nor flourish except in the soil of religion, ° that is because religion not only nourishes the roots of philosophy with inspired myths, but also irradiates the young plant with intellectual light. The history of Christendom is a commentary on the text: "Seek ye first the kingdom of God". For what Whitehead called "the unguarded rationalism of the Middle Ages" -- rationalism applied in the main to the task of reconciling philosophy with religion --- was the prerequisite of modern natural science. "The Middle Ages formed one long training of the intellect of Western Europe in the sense of order..... Faith in the possibility of science, generated antecedently to the development of modern scientific theory, is an unconscious derivative from mediaeval theology." ×

(iii) I take my third instance from a distinguished contemporary philosopher. Dr Clement C. J. Webb devoted his Gifford Lectures * to a study first of personality in God, and then of personality in man. The order was deliberately adopted. "My grounds for adopting it are of two kinds," says Dr Webb; "historical and philosophical. As a matter of fact it will be found on inquiry that not only has the development of the conception of personality been profoundly affected by the discussions which were carried on in the Christian Church concerning the mutual relations of the persons of the Trinity and the unity of the divine and human natures in the person of Christ, but that philosophical discussion of the nature of human Personality is posterior in time to these theological discussions. Nay, it may even be said that it was the religious and theological interest in the Personality of Christ, conceived as being at once God and man, which actually afforded the motive and occasion of undertaking the investigation of the nature of Personality in men generally.† In placing therefore the consideration of Personality in God before the consideration of the Personality in man, I shall be, at any rate, following the clue given by the history of thought. But there are reasons of a more philosophical order which may be alleged in support of my procedure. Personality is not merely something which we observe in men; rather it is something which, though suggested to us by what we find in men, we perceive to be only imperfectly realized in them; and this can only be because we are somehow aware of a perfection or ideal with which we contrast what we find in men as falling short of it."

But the Whole is the realm of mystery no less than of clarity, of profound darkness no less than of dazzling light. The Whole is, indeed, above and beyond reason. For the criterion of coherence, having conducted us from the part to the Whole, is at that supreme level of no further use: while a lesser being owes its degree of reality, and its hierarchical status, to its conformability with other beings, to the measure of its agreement + I do not suggest that the great Christian philosophers believed God to be the natural object of our intellect. On the contrary, they vied with one another in their denials of this doctrine. St. Thomas, for instance, taught that the proper objects of our intellect are sensible things, and not God, who does not belong to the same genus as ourselves (He is not composed of matter and form) or in the logical category of substance in general (He is not composed of essence and existence). It is only by God's grace that we can enjoy the vision of the divine essence. Summa Theologica, I. 88; Summa Contra Gentiles, III. 42 ff. Cf. Etienne Gilson, The Spirit of Mediaeval Philosophy, XIII. My own adaptation of this truth is the statement that, when our total incapacity to know the Whole is realized, then that knowledge is freely given. ° God and Personality, pp. 216-7.

× <u>Science and the Modern World</u>, I. * <u>Op. cit.</u>, pp. 20, 21.

The history of philosophy is full of examples of argument from the higher level to the lower. Thus there is Plato's method of studying justice first in the city, and then in the individual. (<u>Republic</u>, 368, 369.) And thus Descartes did not argue from the indubitable existence of his thinking self to the existence of the objective world, but from God's existence, "to the knowledge of the other things in the universe." For "there is exceedingly little which is known with certainty respecting corporeal objects.... we know much more of the human mind, and still more of God himself." <u>Meditations</u>, IV.

† Nevertheless, having come to some knowledge of our own personality by a consideration of the divine nature, we may then look to the former to throw some light upon the latter. Cf. S. A. McDowall, <u>Evolution and the Doctrine of the Trinity</u>, p. 108.

The religious element is logically as well as genetically prior to the secular, and remains so. Mr Christopher Dawson well says "that the religious factor has had a far more important share in the development of human cultures than that which has usually been assigned to it by the theorists who have attempted to explain the phenomena of social progress..... We are only just beginning to understand how intimately and profoundly the vitality of a society is bound up with its religion. It is the religious impulse which supplies the cohesive force which unifies a society and a culture. The great civilizations of the world do not produce the great religions as a kind of cultural by-product; in a very real sense the great religions are the foundations on which the great civilizations rest. A society which has lost its religion becomes sooner or later a society which has lost its culture." Progress and Religion, pp. 95, 232, 233.

with them, the Whole owes its complete reality and supreme status to the fact that it stands alone, and there can for it be no question of agreement with another. The source and goal of knowledge is itself ineffable. "God is the ultimate limitation," says Whitehead in a well-known passage, "and His existence is the ultimate irrationality. For no reason can be given for just that limitation which it stands in His nature to impose..... No reason can be given for the nature of God, because that nature is the ground of rationality...... There is a metaphysical need for a principle of determination, but there can be no metaphysical reason for what is determined." × And these are conclusions which we have now come to expect: ultimate reality, as the Whole and the Centre, annihilates while perfecting, and perfects while annihilating.

In the end, perfect knowledge and perfect ignorance, the highest reason and the deepest unreason, reality wholly made and reality wholly unmade, are inseparables. And this is no matter for despair, but for encouragement in our inquiry. For the paradoxical truth is that if, instead of this 'duality', we had come upon a simple unity, it would be clear that we had not yet reached our goal which is the completion of the hierarchy. What we require to round off the series is not merely a supreme object, but that object perfectly known; and moreover known in such a way that the object remains the only object, in its unbroken unity. There must here be an experience which altogether abolishes the law of equality, and avoids all hint of duplication. What we need, in other words, is unity of essence with plurality of function. And this is provided by the Whole as object, and the Centre as subject, with the mutual relations that unite them. What may be called the fallacy of <u>self</u>-consciousness is here finally exposed. + The only way to avoid the infinite regress of self-consciousness (and the extension of the hierarchy ad infinitum) is to avoid selfconsciousness; and this is easy, seeing that it has in fact never existed, and what seems to be self-consciousness is always other-consciousness --- I can never get to the place where I am something without my journey there destroying that something. But whereas at intermediate levels there is always a plurality of subjects who may, by mutual projection and reflection, seem to become self-conscious, at the ultimate levels there is no such plurality and no such illusion. Here indubitably the knower gives place to the known, and can never exist side by side with it. The Whole empties itself. Becoming nothing at the Centre, it contains all, and there is perfect knowledge without division of that which exists.

Nor are these theoretical conclusions required to stand alone. If the mystic has direct insight into the life of the ultimate levels (in the same sense that the astronomer has direct insight into sidereal life), and if moreover his experience is not a case of mimicry or copying but of actual participation * (just as astronomy is participation in sidereal thinking), then it is to the mystic that we must turn for the empirical evidence for our theory. And the evidence he offers is overwhelming. As I have already pointed out, the ignorance of the Centre is for him the condition of the knowledge of the Whole. His inability to comprehend the Whole is not considerable: it is absolute. Until he gives up the idea that he can ever know the Whole, he can never know the Whole. Writing of the Dionysian tradition, Justin McCann says, \oplus "Man can attain God. For in

Yet another aspect of the primacy of religion is stressed by those thinkers who show that democracy draws its strength from suprahuman sources. Thus Maritain: "The worth of the person, his liberty, his rights, arise from the order of naturally sacred things, which bear upon them the imprint of the Father of Being, and which have in Him the goal of their movement." <u>The Rights of Man</u>, p.6. Cf. <u>Epinomis</u>, 977-8: the starry heaven "has been the cause of all the other good things we have", and "never ceases to teach men one and two, until even the most unintelligent have learnt sufficiently to number."

× Science and the Modern World, XI.

+ John Caird says, "It is only in the Absolute Thought or Self-consciousness that we reach a sphere where the object is one with the subject, where the knower is also the known..... The last element of foreignness vanishes; the object becomes a moment of its own being, the knowing, thinking spirit becomes object to itself." Introduction to the Philosophy of Religion, pp. 242-3. No doubt there is a sense in which Caird is right, and the ultimate other-consciousness is also the ultimate self-consciousness. But to make this the primary sense is to reduce the Whole to Bradley's Absolute making eyes at itself in a mirror. If the Whole is worthy of our worship, and has all virtues pre-eminently, then it is primarily other-regarding: or rather, it achieves an unself-consciousness of which man qua man is incapable. The saint and the mystic, in so far as they are the vehicles of the divine spirit, have something of this selfless objectivity. They are real people (in John Macmurray's sense of the word) because they are not turned in upon themselves.

* "For what man knoweth the things of a man, save the spirit of man which is in him? even so the things of God knoweth no man, but the Spirit of God. Now we have received the spirit which is of God." I Cor. II, 11 ff. Cf. Plotinus: "The soul neither sees, nor distinguishes by seeing, nor imagines that there are two things; but becomes as it were another thing, ceases to be itself and belong to itself. It belongs to God and is one with Him, like two concentric circles: concurring they are One; but when they separate, they are two..... In this conjunction with Deity there were not two things, but the perceiver was one with the perceived." Enneads, VI. 9.

 \oplus Introduction to <u>The Cloud of Unknowing</u>, pp. xxv, xxvi.

and through his recognition of his own impotence and of the limitations of his thought --- that is to say, in the darkness of his ignorance, in his cloud of unknowing --- man is united to God. The transcendent Being becomes immanent; the incomprehensible is in some way comprehended..... The mystic accepts this darkness, and through it attains a perfect illumination..... The process entails abstraction from sense and from ordinary human knowledge, and therefore is it called ignorance and unknowing; but it leads to a higher knowledge and a wonderful experience of God." And the validity of this procedure can only lie in its objectivity, in the fact that it is an aspect of the divine procedure. The mystic's 'cloud of unknowing' is nothing else than a sharing in the Whole's descent to the Centre, just as its correlate -- the mystic's knowledge of the Whole -- is a sharing in that perfect knowledge of the Whole-as-other which the Centre selflessly enjoys. The mystic's ignorance is therefore the truest kind of knowledge, seeing that it belongs to the Whole rather than to himself. And he does not hesitate to identify his own nescience with that of his object; for he is never tired of saying that this object really is the deepest darkness as well as the most brilliant light, not-being as well as being, nothing as well as all. God is God because He is the perfect atheist; and the mystic is a mystic because he shares in this atheism.

11. THE WHOLE AND GOODNESS.

Just as the idea of the Whole as an absolutely coherent system of fact is implicit in all our thinking, so the idea of the Whole as a transcendent moral order is implicit in all our practical life. For if goodness is, in one of its most important aspects, the conscious sacrifice of the self to the not-self, or the deliberate shifting of the self's centre to a higher centre, then (as this inquiry has already made plain) the cosmic hierarchy is a moral structure. × Its architectonic principle, the stresses and strains whose opposition is its support, are moral; and its highest storey is the scene of that final act of self-sacrifice in which the self, ceasing to distinguish its own interests from those of any other self whatever, makes actual the unity of the Self. Perfect goodness means perfect unselfishness, the ultimate refusal to separate oneself from anyone, the surrender of all private interests. The Whole is itself, is whole and holy, the highest and only true goodness, because it refuses to dissociate itself from any existent thing. The part is a part because it shows partiality; the Whole is the Whole because it sympathizes fully with all, and shows no favouritism. "Why callest thou me good? there is none good but one, that is, God." ° There is a cosmos because God is good: if he were not good, the world would fall to pieces. It is not the world's love of God, so much as God's love in the world, which makes it go round, and "moves the sun in Heaven and all the stars".

But to describe the good Whole as the emergent product of imperfect lower units is to misstate the case. The perfect goodness of the Whole is prior (in every sense) to such goodness as is realized in the parts, and this priority is reflected in history. Precisely as knowledge of the suprahuman tends to precede knowledge of the human, and science is heavenly before it is earthly, so the religion of the gods precedes the con"Look that nought work in thy mind nor in thy will but only God. And try to smite down all knowing and feeling of aught under God, and tread all down full far under the cloud of forgetting.... For it is the condition of a perfect lover, not only to love that thing that he loveth more than himself; but also in a manner to hate himself for that thing that he loveth." <u>The</u> <u>Cloud of Unknowing</u>, 43. The lover must even destroy (says the anonymous author of the <u>Cloud</u>) the "naked knowing and feeling" of his own being.

Young's dictum (<u>Night Thoughts</u>, IX): "A God alone can comprehend a God" is, in one most important sense, about as untrue as it could possibly be.

× If religion is world-loyalty (this is, at any rate, one of Whitehead's definitions of religion: cf. <u>Religion in the Making</u>, p. 60), then the hierarchy may also be called a religious structure, a kind of cosmic Church. At the higher levels of this Church is experience such as Olaf Stapledon describes when he finds in himself "a detached will for the good, not for my own good nor even for mankind's good, but for the good of the universe." This gives meaning to life, and is "the supreme consolation, the supreme inspiration, and yet also, strangely, a most urgent spur to action." <u>Saints and Revolutionaries</u>, pp. 58-9.

° <u>Mat</u>. XIX. 17.

"This <u>is</u> God, when one mortal helps another", says Pliny the Elder. <u>Historia</u> <u>Naturalis</u>, II. 18. And Julian of Norwich in her First Revelation: "God is all that is good, as to my sight, and the goodness that each thing hath, it is He." scious morality of men. (The great theocratic Sumerian culture, in which our own culture has deep roots, furnishes a striking example. ° Here the city was not so much a collection of human habitations as the abode of a divinity, whose priest and viceregent was the king. The real ruler, law-giver, land-owner, general, judge, and social organizer was the god (or the god accompanied by the goddess, who was generally some form of the Earth-mother): great irrigation schemes, wars, communal enterprises of every sort, were successfully undertaken, not because men as individuals agreed upon some plan and co-operated to carry it forward, but because they were the supra-individual, the divine or suprahuman will. The direction had to come from the higher level --- not 'Thus saith man...' but 'Thus saith the Lord....' In the earlier stages of human history no distinction is made between civil law and religious duty, between voluntary secular usage and obligatory sacred ritual: the profane as yet hardly exists. And when at last the divine commands are codified by a Hammurabi, they are still the requirements of Shamash the Sun-God, or of some other deity, from whom they continue to derive their force. Or we might equally well go for example to ancient China, × where the social order is regulated by the order of heaven; or to Vedic India, where sacrificial rites link man with the cosmos; or indeed to any of the great cultures of the past.) Always there is realized in practice (the theory is a late development) the profound truth that the individual man as such is not, and can never be, a moral being; that his virtue lies in establishing a connection with his suprahuman and supra-individual self; that his good consists in finding the level where he is one with his fellows because he is one with god, and one with god because he is one with his fellows. But primacy must be given to the divine: the merely human is inhuman. Even quite recently, it was primarily on religious rather than on humanitarian grounds that many of the great social reformers worked to abolish slavery, reform the prisons, and to introduce more honest methods into trading. + The controversy is still going on as to whether good conduct can long survive the faith that originally inspired it. But the problem, when so phrased, is based upon a misconception: the real question is the extent of the damage caused by our unconsciousness of the suprahuman nature of all morality. For good conduct is nothing else than the functioning of the higher or suprahuman self, and whatever men may say about the secular character of their motives and their lack of religious beliefs, their actions are the test. Goodness is not less divine for wearing a strictly human dress, or love among professing atheists a Godless love. A man cannot extend his loyalty horizontally without extending himself vertically.

Only the Whole is wholly good. That it is also nothing of the kind is clear from two considerations: (i) that goodness lies in the act of shifting centre, and (ii) that goodness is objective and concerned with the otherthan-self.

(i) Goodness lies, not in having shifted centre, but in the act of shifting; its proper home is that no-man's-land of hesitancy or contradiction which separates one level from the next. For as soon as the shift is fairly accomplished, and the new centre is adopted without qualification, then it becomes evident that (after all) the sacrifice of self was well worth ° Cf. S. H. Langdon, <u>Tammuz and Ishtar</u>, etc.; M. Jastrow, <u>Religious Beliefs in</u> <u>Babylonia and Assyria</u>; and, of course, the works of Sir Charles Woolley. Christopher Dawson has a usefully succinct account of the theocratic character of the Sumerian and Babylonian State in <u>The Age of the</u> <u>Gods</u>, VI.

The belief in a suprahuman communal self survived in the angels of the nations, cities, and churches (<u>Rev</u>. I. 20; Clement of Alexandria, <u>Stromata</u>, VII.), and is by no means dead today. In a letter to a bishop (June 3, 1603) St Francis de Sales writes: "I would also urge upon you great confidence and love for your Guardian Angel, the patron of your Diocese."

× "What standard may be taken as suitable for ruling? The answer is that nothing is equal to imitating Heaven. Heaven's actions are all-inclusive and not privateminded, its blessings substantial and unceasing, its revelations abiding and incorruptible. Thus it was that the Sagekings imitated it. Having taken Heaven as their standard, their every movement and every action was bound to be measured in relation to Heaven. What Heaven wanted, that they did; what Heaven did not want, that they stopped doing. The question now is, what does Heaven want and what does it hate? Heaven wants men to love and be profitable to each other..... Because it embraces all in its love of them..... Take then the Great Society. There are no large or small states: all are Heaven's townships." Mo Tzu Book, IV.

+ Wilberforce is a notable example, and the Quakers John Woolman and Elizabeth Fry. Though the love of God comes first for such noble souls, it is inseparable from the love of man. Our present tendency is to reverse the order of the new commandments (<u>Mat</u>. XXII. 37 ff), or rather to ignore the first commandment -- to love God -- altogether. Nor do we say to God, with the Psalmist, "Against <u>thee</u> have I sinned". <u>Ps</u>. LI. 4.

The Absolute of Bradley and Bosanquet been assailed from all directions, but for me its weakness lies in its failure to do justice to the fact that ultimate reality takes us beyond our finite categories by moving in two directions instead of one, downwards as well as upwards, to the Centre no less than to the Whole, thereby preserving and fulfilling all the values. To surpass the part by moving in one direction only is to abolish all the goods the part strives for; while, seeing that it only led to the self's further growth. In this way, the moral, becoming the prudential, is no longer moral. If honesty were always and manifestly the best policy there would be no honesty. Virtue consists in denying the self in favour of the not-self, and the resultant growth to include the not-self can never be the aim of virtue, or (for virtue) more than a by-product. Thus it is virtuous to love and to serve the citizens of one's country, because this requires constant self-denial; but to identity oneself with the State in all its dealings with the outside world is far from virtuous: on the contrary, it is for the most part a peculiarly obnoxious form of large-scale egoism. The cure is a further shift of centre. And so goodness, like explanation, and self-consciousness (socalled), and the pursuit of truth, is unstable: it refers from one level to the next, and threatens to set up an infinite regress. In becoming itself, the Whole is good: but in being itself, it cannot be called good; for the Whole as such can find no other for which to sacrifice itself, no outside centre to make its own.

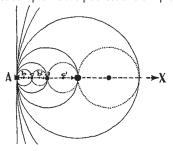
(ii) Goodness is not exempt from the law of elsewhereness: it is objective --- a character, not of the receptacle, but of its content. \underline{I} can never be good: all merit belongs to my object, to another. But if the Whole is only itself, and can never find another, in what intelligible sense can it be called good?

The Whole, then, is prevented by its very nature from performing that act of self-surrender which is an essential element in goodness. But, once more, the Whole is not only the Whole: it is also the Centre. That is to say, it performs no ordinary act of self-surrender, but an absolute sacrifice: it descends from the pinnacle of Being to the abyss of not-being. As befits the only one who is perfectly good, the Whole shifts centre to all centres, thereby accomplishing that final Copernican revolution which rounds off the entire series of such revolutions, and avoiding all hint of egocentricity. To deny this is not only to destroy the Whole by duplicating it, but also to make the ridiculous claim that self-congratulation is more admirable in a God than in a man. "The Absolute (as Bradley says in a deservedly famous passage) does not want to make eyes at itself in a mirror, or, like a squirrel in a cage, to revolve the circle of its perfections." ° While the Whole resembles Aristotle's God in that it is the good of the universe, it is utterly unlike the Aristotelian Thinker who "thinks himself", and who is far too exalted to notice the existence of the lower world that owes to him its motion and its life. \times For the Whole comes down to the level of its parts; more than this, it descends to the lowest depths. Here is a dying to self which is the archetype and ideal pattern for all lesser selves.

12. THE WHOLE AND BEAUTY.

It is a vision neither of truth nor of goodness, but of ideal beauty, which lies at the root of so much Western mysticism. \otimes In the celebrated passage of Plato's <u>Symposium</u>, the seeker discovers the earthly manifestations of the beautiful in due succession, till "there bursts upon him that

<u>doubly</u> to surpass the part is to preserve all that it has of worth. If reality as the Whole is the Lion's den <u>into</u> which all tracks lead, as the Centre it is the womb-cave <u>out</u> of which they lead; for reality is two-way. The typical protagonists of the Absolute do not here take seriously enough their own principle of the union of opposites, and thus they fall short of the truth (which is embodied in the symbols of the great religions) that the Greatest is the Least, that the First is the Last, that the richest and most complex is the poorest and simplest.



A shifts centre to b, and finds himself opposed to b'; a further shift to c unites him with b' but puts him in opposition to c'. And so on: each Copernican revolution makes a bigger one necessary. But to the Whole the entire series A....X is central.

° Appearance and Reality, p. 172. "God loveth not Himself as Himself but as Goodness." Theologia Germanica, XXXII. × Metaphysics, XI. Cf. Plato's World-Soul, which, though solitary, is able "by reason of its excellence to bear itself company, needing no other acquaintance or friend but sufficient to itself ... "Timaeus, 34 B. "The Father laughs into the Son and the Son laughs back to the Father", says Eckhart. Works (trans. Evans), i. p. 59. ⊗ Indeed, genuine mysticism embraces a joyful experience of the beautiful. There is a world of difference between the asceticism with gaiety of a St Francis, and the unrelieved gloom of so much puritan austerity. Dante's Paradise is a place of smiles and laughter:

"Then 'Glory to the Father, to the Son, And to the Holy Spirit,' rang aloud Throughout all Paradise; that with the song

My spirit reel'd, so passing sweet the strain. And what I saw was equal ecstasy: One universal smile it seem'd of all things; Joy past compare; gladness unutterable; Imperishable life of peace and love; Exhaustless riches, and unmeasured bliss." <u>Paradiso</u>, XXVII.

Coventry Patmore, in <u>The Rod, the Root,</u> <u>and the Flower</u>, well says: "If we may credit certain hints contained in the lives of the saints, love raises the spirit above the sphere of reverence and worship into one of laughter and dalliance: a sphere in which the soul says: --

'Shall I, a gnat which dances in Thy ray, <u>Dare</u> to be reverent?"

wondrous vision which is the very soul of the beauty he has toiled so long for." "The quest for the universal beauty must find him ever mounting the heavenly ladder" until at last "it is given to man to gaze upon beauty's very self --- unsullied, unalloyed" and to "see the heavenly beauty face to face."

Later seekers after reality have, on the whole, sadly neglected beauty in their concern for goodness and truth. Stern moral endeavour, and strict, disciplined thinking, are the means by which we hope to climb the heavenly ladder; but in fact they are not enough. By themselves, they can and do become solemn, ponderous, dreary. The fact is that none of the values can get very far without the company of the others. Goodness that leaves beauty a long way behind, that is joyless and over-serious, begins to take on an evil look. * It is no philistine prejudice, but a sound instinct, which prompts popular scorn of the saint who can never smile at himself, of the prophet who never relaxes, of the thinker who takes himself so seriously that he is never in danger of inspired self-contradiction. When the spontaneity of the artist, with his childlike genius for play, his lightness of touch, his gaiety, are altogether absent from the life of the spirit, then that life has become a stunted caricature of itself. The true marks of the spirit include freedom, joy, and even a certain abandon and irresponsibility --- a fact which Hinduism notably stresses. ° Of course Christendom has its St Francis, its fiestas, and even its mediaeval All Fools' Day, when religion itself took time off to laugh; but, particularly in Northern and Protestant Europe, gloom and virtue have for long been associated. ϕ There is as little evidence for the view that the Deity is grave as for the view that He is a logic-chopping metaphysician, or a practical manager who must show good reasons for all he does: common sense can hardly be predicated of Him. If the universe about us is any guide at all, He is not less aware of the value of nonsense than (say) Charles Lutwidge Dodgson was: He would seem to exercise an imagination so prodigal and so prodigious as to make our careful and cheese-paring methods look very miserable. For the Whole is free. Here is the creativity of the artist carried to the highest pitch of unhampered liberty. God is at least as truly the ideal artist as the ideal inventor, or mathematician, or lover, or father, or legislator, or friend. He plays; and in his magnificent and terrible and lovely cosmic game we join --- grudgingly, or enthusiastically. We are not likely to know Him till we enter into the joyful spirit of the game, taking it seriously enough to do our utmost, but still not so seriously as to forget that it is a game.

Beauty, no doubt, is indefinable. But at least this may be said: that it involves (<u>inter alia</u>) both richness and wholeness, diversity and unity. And it is the Whole which comprehends the maximum of detail in the completest unity. Some works of art fail because of the meagreness of their imaginative content; others because their content is unintegrated. But our experience of the Whole (on those occasions when the quality of that experience is most compelling) indicates that these two requirements -- of richness and wholeness -- are there perfectly met. But there is a third: namely, otherness. Just as 'my' truth is always the truth about another, and 'my' goodness the goodness of another, so 'my' beauty is always the beauty of another. • To claim it is to destroy it. Neither can * Cf. T. R. Glover, Jesus in the Experience of Men, p. 257.

"Spirit lacks all gravity and in so far seriousness. Seen from Spirit, nothing is heavy; it takes all things lightly..... Spiritual man must needs impress man of the earth as wanting in seriousness." Count Keyserling, South American Meditations (London, 1932), p. 373. This quotation is taken from Alan W. Watts' book Behold the Spirit, in which the need for beauty and laughter in religion is persuasively presented. Mr Watts goes so far as to say that sin "is precisely the adult, unplayful action of taking oneself seriously." (p. 181) Cf. A. Clutton-Brock's contribution, 'Spiritual Experience' in The Spirit, Ed. Canon Streeter.

° E.g., Ramakrishna: "The world is the Mother's plaything. It is Her pleasure to let slip from Illusion one or two flying kites among the thousands. It is Her sport. She says to the human soul in confidence with a wink of the eye: 'Go and live in the world until I tell you to do something else!'" Romain Rolland, <u>The Life of Ramakrishna</u>, p. 186.

φ But the early Christian ascetics went to the limit. Aphraates said that the saint must pursue sadness, and constant weeping was a great sign of sanctity. Some lived only on grass; others entombed themselves. Never to wash or to lie down, to eat only two or three times a week, to load oneself with heavy chains, to do without sleep, were common austerities. I am listening to a Bach fugue here; but where from? From the atoms or molecules or cells of my organism, or the soundwaves in the room, or the pianist, or the B.B.C., or the Sun which is the source of all terrestrial motion, or the Galaxy which is the Sun's source, or the Whole which originates all? How do I take this music, from whom and from what range? To which hierarchical level do I consciously attend? Clearly it comes to me from the highest level, through the others; and the value it has for me is bound up with my realization of this fact. The saint who sees the hand of God in everything sees all transfigured; so does the artist who is sufficiently detached. • This truth finds expression in the ancient parable of the lover who knocks at the Beloved's door, saying: "Open, it is I." The voice within answers: "There is not room here for me and thee." After a long while the lover comes back and knocks again. "Who is there?" the voice asks. He answers: "It is Thou", and the door is straightway opened.

Cf. St Bernard of Clairvaux: "How shall God be all in all if anything of man remains in man?" <u>De Diligendo Deo</u>, X.

the Whole enjoy itself as the Whole, but must descend to the nothingness of the Centre, disclaiming as subject all that it claims as object. For the Whole as the supreme work of art is unconscious, and the Whole as the supreme artist has no materials upon which to work. Again, the concrete reality is the Whole-Centre. And that is why, to gain the vision of the eternal beauty, it is necessary to go down to the very foundation of the hierarchy, no less than to mount the heavenly ladder to the apex.

Whatever way we look at the Whole, we find that it implies this descent to the Centre. Let me give three illustrations. (i) It is a condition of living knowledge that it should be periodically unlearned, and learned afresh; of genuine goodness that it should never be a matter of mere habit, but should be arrived at anew for each occasion; of beauty that it should be for ever re-created and re-enjoyed, as if for the first time. These things will not keep. In other words, the existence or assertion of the value is linked with its non-existence or denial --- truth and goodness and beauty that are only themselves and not also their opposites are not themselves. The realm where the values are perfectly realized is then likely to reflect, or rather to provide the basis for, this fundamental polarity or union of opposites.

(ii) The Whole, at its own level is without parts or composition, for here all lesser units are overcome or merged in the higher unity. This is not to deny that the Whole possesses, in its ideal form, every virtue found at lower levels; \times nevertheless this very perfection is a kind of limitation --- even an imperfection. If, at lower levels, we are well aware that goodness loses something by obviousness, that he is not wise who is only wise, that easy beauty palls, that to know all the answers is a tiresome and ungracious thing, that (in short) real merits are for the most part hidden; then, I suggest, the supreme individual is not likely to be ignorant of these facts, or backward in their exemplification. And, in fact, everything goes to show that the Whole, in this as in all else, sets a perfect example. The supremely great is the supremely humble. God comes down: in Carlyle's phrase, He is no absentee. The unsullied aloofness of Aristotle's God was designed to preserve Him from contamination with the world: in fact, it only provides a reason for despising Him. For the perfection of such a God is inferior to the imperfection of the man who does not disdain to play childishly with his children, and to understand and sympathize with his animals.

(iii) The Whole, as perfect goodness, cannot be dissociated from any goodness whatever its level; as perfect wisdom, cannot be ignorant of any event; as the divine beauty, cannot fail to own and inspire and enjoy all beauty no matter how humble its rank. That is to say, though the Whole is the apex of the hierarchy, it is also (in a certain sense) the supersession of the hierarchy, abolishing for itself the limitations of the schema. ^o It is true that the Whole's descent, like our ascent, is a metamorphosis * (one can in no sense be at a level without complying with its conditions); but if it is truly I who rise above and sink below the human, by the same token it is truly the Whole that descends to the suprahuman, and the human, and the infrahuman, and the Centre itself. Thus the genuine Whole, the entirely concrete Reality, is three-sided rather than two-sided: it is the one-level Whole, and the two-level Whole-Centre, and

Mr C. S. Lewis has some fine passages on the theme of the divine descent in Miracles (e.g., pp. 135-6, 151,157). God comes down "to the very roots and seabed of the Nature He has created. But He goes down to come up again and bring the whole ruined world up with Him. One has the picture of a strong man stooping lower and lower to get himself underneath some great complicated burden. He must stoop in order to lift, he must almost disappear under the load before he incredibly straightens his back and marches off with the whole mass swaying on his shoulders. Or one may think of a diver.... into the death-like region of ooze and slime." Death and re-birth are the key to nature because in God they find their supreme and archetypal instance: other instances are only faint analogies "to this huge descent and re-ascension in which God dredged the salt and oozy bottom of Creation."

× The doctrine of the <u>via eminentiae</u> goes back to the words: "If ye then, being evil, know how to give good gifts unto your children, how much more shall your Father..." <u>Mat</u>. VII. 11. Edward Caird writes: "What Christianity teaches is that the law of the life of spirit -- the law of self-realization through self-abnegation -- holds good for God as for man, and, indeed, that the spirit that works in man to 'die to live' is the Spirit of God." <u>Hegel</u>, p. 218. "Wouldst thou love one who never died For thee, or ever die for one who had not died for thee?

And if God dieth not for Man, and giveth not Himself

Eternally for Man, Man could not exist....."

Blake, Jerusalem, 96.

° Cf. Father Przywara: "The whole hierarchy of stages rising from dead matter to pure spirit is a hierarchy of stages inside the process of becoming; so that in consequence, since dead matter and pure spirit are both (as 'process') equally distinct from the pure Being of Deity, any stage rising to God is impossible, and only that relationship counts which is shared by all the various stages of evolution, between the creaturely 'becoming' and the Divine 'Being'. It follows directly that the highest grade in the process (that of pure spirit) is not, as compared to the others, the nearest to God, but that the hierarchy of stages in its total complexity of union, and in its network of 'prehensions', from dead matter upwards to pure spirit and from pure spirit downwards to dead matter, is the whole of it in the highest degree near to God and in the highest degree the similitude of God." Polarity, p. 69.

* Hence the trenchant saying of Bosanquet: "When the Absolute falls into water, it becomes a fish." the all-level hierarchy itself --- the hierarchy, not taken piece by piece in its immense failure and imperfection, but in its entirety, as united to and saved by the ultimate levels. In brief, the Whole is "above all, and through all, and in you all."

13. MYSTICISM AND THE THREE ASPECTS OF THE WHOLE.

While the ultimate reality is (a) the timeless fulness of the transcendent Whole, and (b) the timeless emptiness of the immanent receptacle or Centre, it is nevertheless (c) manifested in the time-world of the intermediate levels.

Now this is not an assertion unsupported by empirical evidence. It is amply borne out in the mystic's experience --- experience which is an utter illusion if it is not actual participation in the divine life, and for that reason ontological. The 'way of illumination' (as I have tried at some length to show) is an ascent of the hierarchy, a progress from the human, through the suprahuman, to the plane of the divine. And this progress, I have pointed out, is by no means uniform, but an alternation of states (described as darkness and light, purgation and fulfilment, confusion and clarity) as one level succeeds another: in other words, each new access of life involves a new acceptance of death. Now, so far from the final stage of the journey putting an end to this recurring contradiction, it provides the extreme instance. For the mystic comes, at the end of the way of illumination, not to his longed-for goal of light and love, but on the contrary to what he calls 'the dark night of the soul' \times --- a phase of privation and aridity, of lifelessness and emptiness. Here the soul loses all that it has gained: joy, peace, power, knowledge, are replaced by their contraries. The quest has failed. Instead of the Whole --- the Centre.

This state of loss -- an absence of God amounting to virtual atheism -- is recognized, by those who have passed through it, to be the indispensable act of complete self-abnegation, preparatory to the final phase of the mystic way known as 'union', in which the emptied self is filled with the divine life. Here the soul, thoroughly purged of all egoism and pride, having ceased to be concerned about its own spiritual welfare, content at last to be nothing for the sake of the object, returns to the ordinary time-ridden world in order to live in it 'the unitive life' of love and service. ϕ "The spirit of man having at last come to full consciousness of reality, completes the circle of Being; and returns to fertilize those levels of existence from which it sprang." ° And, after all, this outcome of the mystic's endeavour is neither an anticlimax nor an afterthought. Quite the contrary: it is a development that we have no difficulty in recognizing to be necessary. For the way of illumination, or hierarchical ascent, though it is an indispensable graduation from the relatively unreal to the relatively real, does sacrifice richness to orderliness, intransigent but interesting detail to broader and more regular patterns, the marred and distributed loveliness of familiar things to astringent and remoter beauties. Ascending the mountain, the mystic cannot help but leave behind the luxuriant and often loathsome vegetation of the valleys. But if this is

"Every new conquest of life means a 'harrowing of Hell" says D. H. Lawrence (<u>Apocalypse</u>, p. 129); and in his poem 'Nullus' (<u>Pansies</u>, p. 101) he speaks of ".... creative pauses, pauses that are as good as death, empty and dead as death itself. And in these awful pauses the evolutionary change takes place."

× "If she would elevate her spirit", says Augustine Baker of the soul at this stage of her journey, "she sees nothing but clouds and darkness. She seeks God, and cannot find the least marks or footsteps of His Presence..... To her thinking she has no spirit at all, and, indeed, she is now in a region of all other the most distant from spirit and spiritual operations --- I mean, such as are perceptible. "<u>Holy Wisdom</u>, III. iv. 5. Cf. St John of the Cross, <u>The Dark</u> <u>Night of the Soul</u>.

 ϕ "It is no merely human joy to lose oneself like this," writes St Bernard; "it is the bliss of heaven." But "his brother's need calls on him to return. Alas, he has no choice but to come back." <u>De Diligendo</u> <u>Deo</u>, X.

° Evelyn Underhill, Mysticism, p. 414. Nor (contrary to popular belief) is Eastern mysticism indifferent to the necessity for this return. Thus in Mahayana Buddhism the Bodhisattva vows to forego the life of blissful contemplation, and to accept the pain of re-birth again and again, till all sentient beings are delivered. Modern Hinduism has much of the same spirit. "Knowledge of the Advaita has been hidden too long in caves and forests", says Vivekananda. "It has been given to me to rescue it from its seclusion and to carry it into the midst of family and social life The drum of the Advaita shall be sounded in all places, in the bazaars, from the hill-tops and on the plains." The Life of Vivekananda, by Romain Rolland, p. 230. But it is by no means necessarily true that the solitary Hindu ascetic of the traditional type is socially ineffective or indifferent to the fate of others. We are not insulated selves, incapable of deriving benefit from the lonely saint's devotion, even if we never so much as hear of him. Invariably to judge him by the Western standard of external works is to make the mistake of those who would dismiss non-Christian mysticism as an egocentric psychological technique. Cf. E. L. Mascall, He Who Is, p. 22, footnote.

by no means all loss, neither is it all gain. The swarming and unpredictable life of the foothills, with its astonishing squalor and variety, its vitality and abandon --- what generous and humane soul is willing for ever to turn his back on this, for the sake of the sublime perspectives of the mountain tops? The other-worldly mystic, content to stay upon his pinnacle and to overlook all other altitudes, deserves the contempt he gets: indeed his spiritual pride and spiritual egoism (arising from the illusion that his own salvation is a private somewhat, independent of the salvation of others) make him far worse than the ordinary sensual man who has no such pretensions. The true mystic, on the other hand, completing the circle, returns to illuminate our common life, to serve self-forgetfully all creatures, and to demonstrate the truth that the spiritual is not other than this despised material world, but this same world seen under the form of eternity. +

As I have urged, it is not to his own nature, so much as to the nature of the reality he explores, that these stages of the mystic's progress bear witness. "It is not I who know these things", says Boehme, "but God who knows them in me." The mystic's history (as distinct from the human history with which it is linked) is not his own. Paradoxically, it is by virtue of the work already performed out of time -- namely the descent of the Whole to the Centre, and the ascent from the Centre to the Whole -- that he is able now to play his part in that same work. The great mystic lives at the apex of the hierarchy, and at the base, and at the intermediate levels, because such is the nature of the reality that lives in him.

14. MYSTICISM AND THE THREE PATHS TO THE WHOLE.

Moreover, just as the mystic witnesses to the ultimate union of the three main hierarchical stages, so also he witnesses to the ultimate union of the three main ways which link these stages --- the way of thought, the way of good works, and the way of devotion to the beautiful. These ways correspond to the three aspects of our mental functioning -- the cognitive, the conative, and the affective -- as well as to the three values of truth, goodness, and beauty. According to our temperaments, we seek reality along one or other of these lines; we are (to use the terminology of Dr William Sheldon) predominantly cerebrotonic, or somatotonic, or viscerotonic, and naturally tend to the method of contemplation, or of works, or of feeling. Whether we tend to the intellectual procedure of science and philosophy, or the practical procedure of moral endeavour, or the intuitive procedure of the artist, we are persuaded (or at least there are moments when we are persuaded) that there is no discrepancy between their respective goals, and that in fact they coincide. * In each of us, knowing and willing and feeling, though differently apportioned, are inseparable; accordingly it is no wonder that neither the contemplative, nor the active, nor the feeling-type, ° can exist without a large admixture of the other two. And certainly no-one is likely to progress very far along his own line by the expedient of devoting his energies to that alone.

Now the great mystic is one who has overcome the trifurcation of the

+ "In knowing more about the world I am learning about God", said Bishop Gore. (Belief in God, III) In the case of the present inquiry a study of the lower levels has been (despite the ultimate disparity between the highest level and all the rest) of the greatest help towards an understanding of the highest, even though at last it is clear that the highest illuminated all. If we recognized the suprahuman hierarchy, we would have much less difficulty in recognizing its Head; the reason that we don't believe in God is that we don't believe in angels! For the angels are, in proportion to their status, similitudes of Him. The discrepancy which John Laird (Mind and Deity, p. 306) finds between the cosmic God and the God of the Incarnation vanishes as soon as we allow that the Incarnation involves all levels, including the suprahuman series. Robert Hamilton well says that "there is a sense in which, in Christ, God is nature: The human body which God assumed in Christ is also the garment of earth and moon and sun and stars, and of the whole material universe." (W. H. Hudson: The Vision of Earth, p. 137.) Many patristic writings could be quoted in support of this view. Gregory of Nyssa, for instance (Cathetical Discourse, XXXII) says that the Incarnate Word "unites the universe to Himself, bringing in His own Person the different kinds of existing things to one accord and harmony."

* Patmore (<u>The Angel in the House</u>, I. v. 1) calls beauty "virtue's badge".

See Gilson, <u>The Philosophy of St Bonaven-</u> <u>ture</u>, pp. 80 ff, on the remarkable union of piety and intelligence in that saint.

° The Christian Church has generally given some recognition to the different vocations of the active and the contemplative; but it is Hinduism which is notable for its frank acknowledgement of the fact that there are several paths to the one goal, corresponding to the main types of human temperament. The three chief yogas are Karma (the way of disinterested works, the doing of good without attachment), Bhakti (the way of the heart, of devotion to a divine incarnation or a more 'personal' aspect of God), and Jnana (the way of reason, and knowledge). Raja Yoga (the elaborate technique of concentration and self-mastery, of psycho-physical control) is regarded as a more or less essential practical basis of the others, and particularly of Jnana Yoga. The Bhagavadgita, though primarily the classic of Bhakti (in the form of devotion to Krishna) allows the validity of the way of knowledge (recognizing no personal God) and the way of action without attachment. But it is important to realize that, in so far as one value is pursued without any concern for the others, it ends in failure and self-contradiction. Thus

values: Starting off by one of the three paths, he has come to the place where they join, and there is henceforth no discrepancy between what is wholly good and what is wholly true, and both are supremely beautiful. Or rather, the reality which the mystic perceives is above these distinctions --- the values are divided only in the realm where they remain unrealized. In ultimate reality they come together into an ineffable unity. And, once more, what is true of the mystical experience is so because it is still truer of the Object of that experience. There can be no discrepancy between what God wills and what He knows to be true, or between this and the ideal of beauty. In so far as the higher religious life nears its goal, and self-will gives way to the divine will, what really <u>is</u> reveals itself as altogether good and lovely: for the soul is beginning to share in the perfection which lies beyond all such distinctions. The soul's thought and works and love, no longer appearing as the threefold act of the subject, merge into the unitary being of the Object.

Pascal: "We make an idol of truth; for truth without charity is not God, but his image and idol, which we must neither love nor worship." Much of Aldous Huxley's novel Ape and Essence has for its theme the dreadful consequences of neglecting goodness and beauty in favour of truth --- truth which, taken so in isolation, becomes progressively false. Truth without goodness leads to Hiroshima, truth without beauty to any industrial town; goodness without truth leads to the Inquisition, goodness without beauty to the plaster image or the tin tabernacle; beauty without goodness leads to the world of The Moon and Sixpence, beauty without truth to Dada. But most of all we are today proving the truth of St Bernard's dictum: "knowledge without virtue leads to ruin". (De Diligendo Deo, II.)

<u>A NOTE ON SOME ASPECTS OF CHRISTIAN DOCTRINE FROM THE</u> <u>POINT OF VIEW OF THIS INQUIRY</u>.

(i) The doctrine of the Trinity

The doctrine of the Trinity is generally regarded as a revealed truth which is above reason. † This does not, however, imply that the doctrine is unintelligible, or incapable of rational formulation. And, in fact, from St Augustine onwards, many of the great teachers of the Church have sought to show that the Trinity is reflected in the structure of the human soul (if not in nature at large), and that reason itself demands some such formulation of all experience, whether human or divine. × I confine my comments here to one of the several interpretations which have been offered --- namely, to that which turns on the 'social' nature of consciousness.

Put briefly and crudely, the argument is as follows. If the ultimate reality is one, it cannot know itself; if, on the other hand, it knows itself, it is plural, divided into knower and known (with, it may be, their mutual relationship as a third element). Such is the dilemma which the doctrine of the Trinity expresses, and (it is said) resolves. The Father is the Subject, and "origin of the entire procession of Deity"; ° the Son is the Object, the eternally begotten Θ manifestation, the reality and the truth of the Father, ø "the not-self with which God contrasts Himself"; * the Holy Spirit is the vinculum of their mutual loving knowledge. Yet all three 'Persons', + thus differentiated in function eternally, are of one undivided essence. In the words of one whose knowledge is least likely to be merely external, \oplus "The Heavenly Father, as a living Ground, with all that lives in Him, is actively turned towards His Son as to His own Eternal Wisdom. And that same Wisdom, with all that lives in it, is actively turned back towards the Father, that is towards that very ground from which it comes forth. And of this meeting is born the third Person, between the Father and the Son, that is, the Holy Spirit, their mutual Love." Or, in the words of a modern writer, \otimes "If God is eternal love, there must be an eternal object for His love. Again, the life of reason is a relationship of the subject which thinks to the object thought, and an eternally perfect mind postulates an eternal object for its contemplation. ϕ Once more, the life of will means the passage of will into effect: there is no satisfaction to will except in production; an eternally living and satisfied will postulates an eternally adequate product. Thus it is that our upward-soaring trains of thought lead us to postulate over against God in His eternal being, also an eternal expression of that being, which shall be both an object to His thought and a satisfaction to His will and a repose to His love."

Let me now try to restate this doctrine (with as few modifications as possible) in the terminology of this book.

The Whole, as the head of the hierarchy, is the One who gathers up into His perfection all that is good at lower levels. (God, says St Thomas, • "lacks not the excellence of any genus."). His love and knowledge, or loving knowledge, are perfect. It follows that His loving knowledge is free from any residue of self, from any self-seeking consideration that in † Cf. St Thomas, <u>Summa Theologica</u>, I. xxxii. 2. Reason, according to St Thomas, discloses the unity rather than the trinity of the Godhead; God's existence rather than quidditative knowledge of His essence. Thus the doctrine of the Trinity is outside the realm of natural theology.

× Cf. St Augustine, <u>De Trinitate</u>, VI, IX, X, XIV; <u>City of God</u>, XI. 26; <u>Confessions</u>, XIII. 11. And St Thomas, <u>Op. cit.</u>, I. xlv. 7; <u>Summa Contra Gentiles</u>, IV. 26. The creature, says St Bonaventura, is a book in which the Trinity may be read. (Gilson, <u>The Philosophy of St Bonaventure</u>, p. 214). Cf. Julian of Norwich, <u>Revelations of Divine Love</u>, XLIV, LV --- "Our soul is <u>made-trinity</u>, like to the unmade blissful Trinity."

° St Thomas, <u>Summa Contra Gentiles</u>, IV. 26.

θ Westminster Confession, II. 3.

ø Athanasius, <u>Contra Arianos</u>, I. 20.

* C. C. J. Webb, <u>Journal of Theological</u> <u>Studies</u>, Oct., 1900.

+ The He-ness of the third person is an admittedly difficult doctrine. See Dr Kirk's contribution to <u>Essays on the Trinity and</u> <u>the Incarnation</u>, Ed. Rawlinson.

⊕ Ruysbroeck, <u>Adornment of the Spiritual</u> <u>Marriage</u>, II. 37.

© Charles Gore, <u>Bampton Lectures</u>, 1891: <u>The Incarnation of the Son of God</u>, p.134, 135.

Cf. the doctrine of Gregory of Nyssa (<u>Contra Ar. et Sab</u>. XII) that the Father and the Son contain each other, filling the same space. Such mutual penetration is the mark of the divine nature as distinct from the human. Nilus has a similar doctrine (<u>Epp. II. 39</u>). See Prestige, <u>God in Patristic</u> <u>Thought</u>, pp. 33-4.

 ϕ "God first of all thinks Himself, and in knowing Himself, He expresses in Himself, by a wholly internal act, the Son or eternal Word, Who is the resemblance of the Father, because He is caused by this very act of knowing." Gilson, <u>The Philosophy of</u> <u>St Bonaventure</u>, p. 146.

For Eckhart, the Godhead is above all thought, which involves duality. But He becomes personal and self-conscious as the Father who knows, the Son who is known, and the Spirit who is their unity. In eternity, and again in the human heart, the Father gives birth to the Son, thereby gaining "perfect insight into Himself, profound and thorough knowledge of Himself by means of Himself, not by means of any image". (Evans, i. p. 5.)

• St Thomas, <u>Summa Contra Gentiles</u>, IV. 26.

loving the other the self is really loved. If this were not so, if the divine love had any eye to its own advantage, if it were not altogether sacrificial and self-abnegating, it would fall below some instances of love amongst men. Ideal love is necessarily objective. Spinoza's God, loving Himself with an infinite love, • is plainly inferior to Spinoza who can yet love such a Deity. So far from such a lover loving Himself, He claims no self to love. This is not a case of finite lovers, who seem to exist side by side as equals, and as mutually exclusive --- "The Father is in me, and I in Him." × To love perfectly is literally to make everything of the other and nothing of the self. This is firstly the moral requirement of the highest level, and secondly it is the only way in which the Whole could possibly be known and loved. For if the knower claims to be the Whole, the known cannot be the Whole, or indeed anything at all: indeed, so long as the knower reserves an atom or a thought for himself and his subjectivity, his object is not yet the Whole. In other words, the reason why the ultimate Individual can be twofold (the Whole and the Centre) or threefold (the Whole, and the Centre, and their mutual relationship) and yet an absolutely unbroken unity, is that the Whole is never parcelled out by these distinctions between knower and known, but ever remains the Whole. Here the absolute identity and mutual immanence of subject and object are achieved by their absolute contrast and mutual exclusiveness.

The Whole, then, is perfect love. For only perfect love (embracing perfect knowledge) knows how to keep richness without sacrifice of oneness, and how to reconcile the plurality of experience with the unity which alone can crown the hierarchy.

(ii) The doctrine of the Incarnation.

The second Person of the Trinity came down, "emptied himself", + "became flesh Θ and dwelt among us", died, and descended into the regions of death and hell.

(The traditional doctrine of the Descent into Hell * takes several forms, but in general it states that, during the three days between the Crucifixion and the Resurrection, Christ (i) went to deliver certain captive spirits (some say, the spirits of the Old Testament Saints; others, the spirits of all the departed), and (ii) descended in spirit into Hell, to complete His triumph over Death and Satan. It is true that the <u>Descensus Christi ad inferos</u> is now regarded by many theologians more as an interesting relic than as a living article of faith. \dagger Nevertheless (a) it has a considerable (if difficult and obscure) scriptural basis; (b) it is the sole vestige of primitive Christian thought which, more or less independently of the Bible, has survived in all the main communions of the Christian faith; (c) its hold upon poets and the popular imagination \oplus (particularly in mediaeval times) suggests that it is 'psychologically true', or answers to some persistent need. ϕ

St Bonaventura \circ , in particular, gave the doctrine a cosmological setting: "Now the centre of the world is the Earth; central and small, it is situated in the lowest position; and because small and low-lying, it receives all the influences of the celestial bodies to which it owes its amazing productivity. So the Son of God, poor, miserable, come down for us to this lowly spot, clothed with our earth and formed of it, did not come • <u>Ethics</u>, V. 36.

× <u>John</u>, X. 38. We hear much in the Gospels of the Father's love for and knowledge of, the Son, and <u>vice versa</u>, but nothing of their <u>self</u>-knowledge and <u>self</u>-love. "Nowhere is there a fuller consciousness", writes Dr Webb, "of the distinction from one another of the persons concerned than there is in love. Yet just here, in proportion to the greatness and the depth of the love, such mutual exclusiveness is transcended and done away." <u>God and Personality</u>, p. 148.

"So they loved, as love in twain Had the essence but in one; Two distincts, division none: Number there in love was slain." Shakespeare, 'The Phoenix and the Turtle', 7.

+ <u>Phil</u>. II. 6, 7.

θ Archbishop Temple suggested that the word <u>flesh</u> was "no doubt, chosen because of its specially materialistic associations." <u>Nature, Man and God</u>, p. 478.

* The Scriptural sources are: I <u>Pet</u>. III. 19 ff; IV. 6; <u>Acts</u>, II. 24 ff; <u>Eph</u>. IV. 9; <u>Rom</u>. X. 7; <u>Mat</u>. XII. 40; <u>Hos</u>. XIII. 14. The chief non-canonical source is the 4th century <u>Gospel of Nicodemus</u>. See the very detailed article 'Descent to Hades' in Hastings' <u>Encyclopaedia of Religion and Ethics</u>. † "He descended into hell" remains, nevertheless, a part of the Apostles' Creed. According to the Creed of Sirmium, Christ "descended to the regions below earth and economized affairs there"; cf. Origen, <u>Contra Celsus</u>, II. 16.

⊕ The Harrowing of Hell was a favourite subject of mediaeval art and poetry. A famous instance is passus XVIII of Langland's <u>Piers Plowman</u>.

 ϕ Note that, apart from any question of the Descent into Hell, the doctrine of the Incarnation implies that God came down to the level of the most primitive life, and recapitulated in the womb the main phases of biological evolution. "He is", says Mr Lewis, "the representative 'Die-er' of the universe: and for that very reason the Resurrection and the Life. Or conversely, because He truly lives, He truly dies, for that is the very pattern of reality." The Son who has through eternity died the death of surrender to the Father, dies most fully the death of the body. See <u>Miracles</u>, p. 157.

• Collationes in Hexaëmeron, I. 21-4. The summary I quote is by Etienne Gilson, The Philosophy of St Bonaventure, p. 231. Cf. T. R. Glover, Jesus in the Experience of Men, VII. 1; Gilbert Murray, Five Stages of Greek Religion, p. 164. Several varieties of the doctrine of the Descent into Hell are to be found in the teaching of the Gnostic sects, e.g., the Marcionites. only to the surface of the earth, but also descended to the depths of its centre. By his crucifixion Christ became the centre of the world's centre --- <u>operatus est salutem in medio terrae</u>, because after his crucifixion his soul descended to Limbo to deliver the just who awaited him. So Christ is to the heavenly kingdom what the Earth is to the machinery of the world; an allegorical proportion to which is added a tropological, that is moral, proportion, for this centre of the world is also the centre of humility from which we cannot stray and save our souls: <u>in hoc medio operatus est salutem</u>, <u>scilicet in humilitate crucis</u>." Of the many non-Christian analogues of this story, the sixth lay of the Babylonian Epic furnishes what is perhaps the most striking: the goddess Ishtar, descending into the underworld, is at each of the seven gates of Hades bereft of some part of her apparel until, naked, she arrives at the abode of the dead, where in the darkness the shades feed on dust.

It is by virtue of this complete and perfect self-sacrifice of God the Son that man is 'saved', and becomes capable of union with God. The Son brings many sons to glory: they are all one in Him. In the eternal Son they share in the life and mutual love of the Trinity. Thus our intercourse with ultimate reality "is not something accidental, as it were, to the essence of that ultimate Reality, but is an admission to participation in what is from all eternity its inner activity." $^{\circ}$ Or, to quote another contemporary, "Christ is the gift of union with God to humanity in general and to human beings in particular. He is born in us; he lives in us a life of perfect abandonment to the divine will; he dies in us; and in and with us he rises and ascends into heaven, into the eternal life of the Divine Trinity." \times Our life is "hid with Christ in God". + Receiving the "adoption of sons", * we participate in the Sonship of Christ and so enter into the inmost processes of the divine life. \dagger

What do these doctrines really mean for the present inquiry?

If the self-sacrifice of the Son is complete and perfect, it is a descent from the very top to the very bottom of the hierarchy, a movement from the circumference to the Centre. His down-coming is not from heaven to earth alone, but through earth to the lowest point of hell --- the point which Dante places at "the heart of the earth". ϕ Man is by no means the terminus of His journey, but the half-way point, the axis of its symmetry. (This symmetry is clearly suggested by the words: "Now that he ascended, what is it but that he also descended first into the lower parts of the earth? He that descended is the same also that ascended up far above all heavens." Ø And, "Who shall ascend into heaven? (that is, to bring Christ down from above:) Or, Who shall descend into the deep? (that is, to bring up Christ again from the dead.)") • But man is, potentially, much more than the mid-point of the divine descent-ascent: he is also (in so far as he realizes what he is) a participant in the entire journey. Not only is he caught up in the self-naughting and fulfilment of the Whole; ultimately, he is nothing else than a phase of this process, having no existence outside it. Thus there is no Centre in us to which the Son does not edge of God is not other than His knowledge of God in us. "The Son of God, the Eternal Word in the Father", says Boehme, "must become man and be born in you, if you will know God." \otimes In the last resort, there is

In C. S. Lewis's Pilgrim's Regress, John has to dive into a deep pool, and in the heart of the Earth he learns many mysteries, and passes through many elements, and dies many deaths; he has to sink to depths that no man can reach. Cf. Jung, The Integration of the Personality, pp. 230-1.

In the Babylonian Epic of Gilamesh, the hero is told about a precious plant that grows at the bottom of the sea --- a plant which rejuvenates anyone who partakes of it; Gilamesh, having found the right spot, dives, and comes up with the plant. Cf. Mat. XIII. 31-46.

° C. C. J. Webb, <u>Op. cit.</u>, p. 239. On a later page, Dr Webb speaks of "the life of mutual knowledge and love which, in the intercourse of Religion, the worshipper, so far as he realizes his sonship, enjoys with the Supreme, and in enjoying it recognizes to be no other than the very life itself of the Supreme." (p. 275) Cf. Leonard Hodgson, <u>Towards a Christian Philosophy</u>, p. 153: "The new life of communion with God in Christ is derived from the activity of God Himself."

× Alan W. Watts, <u>Behold the Spirit</u>, p.86.

+ <u>Col</u>. III. 3.

* <u>Gal</u>. IV. 5 ff. <u>Rom</u>. VIII. 14 ff.

† Cf. E. L. Mascall, He Who Is, p. 149.

φ "For as Jonas was three days and three nights in the whale's belly; so shall the Son of man be three days and three nights in the heart of the earth." (<u>Mat</u>. XII. 40) In the cosmological scheme of the <u>Divine</u> <u>Comedy</u>, the lowest abyss of Hell is at once the heart of the earth and the centre of the entire system of infernal and celestial circles. (In fact it is, in my own terminology, the Centre of the regional system.) And the sphere of man is half way, dividing the lowest circle of Heaven from the highest circle of Hell.

ø <u>Eph</u>. IV. 9, 10.

× <u>Rom</u>. X. 6, 7.

• Cf. the Gnostic <u>Hymn of Bardesanes</u>, in which the son is sent by his parents to find a precious pearl hidden at the bottom of a well. See Jung, <u>The Integration of the</u> <u>Personality</u>, p. 67.

⊕ Cf. <u>Rom</u>. VIII. 17: "If so be that we suffer with him, that we may be also glorified together." And VI. 4, 8: "We are buried with him by baptism into death..... Now if we be dead with Christ, we believe that we shall also live with him."

 \otimes <u>The Threefold Life of Man</u>, III. 31.

only one Descent into Hell and only one Ascension resulting from it. "Without me ye can do nothing." \emptyset

(iii) Doctrines of the relationship of God, man, and the universe.

By the Son "were all things created, that are in heaven, and that are in earth, visible and invisible, whether they be thrones, or dominions, or principalities, or powers: * all things were created by him, and for him: and he is before all things, and by him all things consist..... For it pleased the Father that in him should all fulness dwell." (> Here is no deus ex machina. "In theology worthy of the name," writes Bishop Gore, Θ "the sequence and fundamental unity of nature and grace, of creation and redemption; are always insisted upon. Thus the doctrine of St Paul and St John will not allow us to separate the two parts of the self-manifestation of God..... The Son of God who redeems is also the creator, and His mediation in grace is strictly on the lines of His earlier mediation in nature. He is the author of the universe, and He abides in all His creation as its principle of cohesion. He is the ground of its progress and the light of its rational members. Finally, He is the goal of all its movements. When sin perverted His creation in part, He was not baffled by its ravages, but came out again to redeem, and in redeeming to consummate His creation, by the same method as characterized His previous working." ° The Son is the immanent sustaining principle of the universe, "upholding all things by the word of his power." \times

The question that arises at this point is whether the never-ceasing cosmic activity of the Son is internal or external to the essential life of the Trinity. On this, theologians are not agreed. Until recently, it was commonly held that the divine relationship with the universe is 'organic' as well as transcendent, and that the creation and sustaining of the universe comprise a necessary 'moment' in the divine life, without which activity or self-expression that life would fall short of its fulness. But there has arisen a very strong reaction against doctrines of the Logos, of divine immanence, and of God's need of man --- a reaction which is particularly strong in Protestant Europe.

On the one hand (to mention only a few of the great company) are Hegel, Ulrici, John Caird, James Ward, + Pringle-Pattison, F. R. Tennant, Whitehead, Temple, and Dr W. R. Matthews, who hold (more or less, and with variations) to the view that "there is something in the very nature of God which would remain unrevealed and unrealized, but for His relation to the world, and especially to the finite spirits He has made in His own image." * "The Infinite of religion", says the same writer in another work, † "contains, in its very nature, organic relation to the Finite; or rather it is that organic whole which is the unity of the Infinite and the Finite." Some approach the uncompromising position of Hegel, who taught that God without the world is not God: thus Pringle-Pattisonø tells us that God receives "His filling from nature"; and Dr Tennant: "God without a world, or a Real other, is not God but an abstraction." o Rather more cautiously, Dr Matthews \oplus is content to argue that, while God depends upon some created order (inasmuch as it is a necessity of His nature to create), this does not imply the eternity of our universe or of any other; and, further, that the 'dependence' of God upon His creaø <u>John</u>, XV. 5.

The three Masses on Christmas Day commemorate respectively the eternal generation of the Son, His earthly Incarnation, and His birth in man's heart.

* Note that four suprahuman ranks (which the Dionysian tradition included in the ninefold angelic hierarchy) are expressly mentioned.

<u>Col</u>. I. 16 ff. Cf. <u>John</u>, I. 3-4.
 "All things were made by him (the Logos);
 and without him was not any thing made
 that was made. In him was life; and the life
 was the light of men."

 Θ <u>Bampton Lectures</u>, 1891, pp. 40, 41. "What an harmonious agreement does there thus appear between our creation and redemption! and how finely, how surprisingly, do our first and our second birth answer to and illustrate one another!" William Law, <u>Christian Regeneration</u> (Hobhouse, p. 12)

° Cf. Temple, <u>Nature, Man and God</u>, p. XVII, XIX.

× <u>Heb</u>. I. 3. Cf. I <u>Cor</u>. VIII. 6; <u>Eph</u>. III. 9 ff. The Logos, says Eusebius (Dem. Evang.) "always continuously pervades the whole matter of the elements and of actual bodies; and, as being creator-word of God, stamps on it the principles of the wisdom derived from Him. He impresses life on what is lifeless and form on what is in itself formless and indeterminate..... He orders everything out of disorder, giving development and completion: with the actual power of deity and logos He all but forces all things." See Prestige, God in Patristic Thought, pp. 35-6. On the similar logos-doctrines of Philo and Origen, see Tollinton, Alexandrine Teaching on the Universe, pp. 108 ff. Origen's Logos descends to fashion the elements, and reascends the scale of being.

+ <u>The ReaIm of Ends</u>, p. 233: "If creation means anything, it means something so far involved in the divine essence, that we are entitled to say, as Hegel was fond of saying, that 'without the world God is not God."

† <u>Introduction to the Philosophy of Reli</u>gion, p. 238.

φ <u>The Idea of God in Recent Philosophy</u>, p. 309. Cf. p. 254: we have no justification for supposing that God exists outside his relationship to the cosmos.

θ Philosophical Theology, ii. p. 168.

⊕ <u>God in Christian Thought and Experi-</u> <u>ence</u>, p. 206. Dr Matthews would certainly repudiate Whitehead's assertion: "It is as true to say that God creates the World, as that the World creates God." <u>Process and</u> <u>Reality</u>, p. 528.

^{* &}lt;u>Fundamental Ideas of Christianity</u>, i. p. 162, by John Caird.

tion is in any case a very different matter from its absolute dependence upon Him. The doctrine in general is perhaps best summed up in the words of the Archbishop: \otimes "God, who is spirit, is His eternal self in and through the historical process of creating a world and winning it to union with Himself. His creation is sacramental of Himself to His creatures; but in effectively fulfilling that function it becomes sacramental of Him to Himself --- the means whereby He is eternally that which eternally He is."

On the other hand, this doctrine is forcibly attacked + by anti-liberal theologians of every persuasion. They insist (again, more or less, and with many variations) (a) that all doctrines of God's need of His creation deny the absolute self-existence of God, without which there is very little reason for believing in Him at all; (b) that a First Cause which is somehow involved in the finitude of subsequent events is no real First Cause; (c) that there is in the divine life of the Trinity itself all the richness and concreteness or 'filling' that are proper to perfection, and that to assimilate this divine life to the life of the created universe is to confuse the essentially separate; ° (d) that the one-sided dependence of the universe upon God \times is precisely what is necessary for the religious consciousness --- a God that we feel to be, however indirectly, dependent upon ourselves, can never meet our need for one who is "wholly other" and infinitely transcendent. Creation is no more than an analogue, says M. Gilson, of its Creator. "God added nothing to Himself by the creation of the world, nor would anything be taken away from Him by its annihilation." + And so the well known formula: ---

> GOD - UNIVERSE = GOD UNIVERSE - GOD = 0

It is in the works of such neo-Protestants as Karl Barth, * Emil Brunner, † Nygren, ϕ and Reinhold Niebuhr, Θ that the anti-liberal reaction is at its most violent. This school vehemently denies the possibility of mysticism ¤ (in the good sense of the word), of man's union with God, and even of his loving God --- the last, says Nygren, in effect, is the supreme heresy, the crowning impertinence of the creature who dares, in his sinful pride, to forget that he is a creature. Man is thoroughly corrupt and worthless, and his only appropriate attitude is humble and unquestioning faith in an unspeakably holy God who lives (so to say) in another dimension altogether. \Diamond It is not surprising that natural theology should be anathema. Not only are the speculations of liberal and philosophizing theologians (particularly when they qualify the absolute self-sufficiency of the Deity) dangerously heretical: it is presumptuous, according to Karl Barth, to reason about such matters at all.

At the risk of doubling the number of my enemies, I venture (with some reservations) to agree with both sides in this controversy. \ddagger For all their violent contradictions (or rather, on account of them) the two attitudes are complementary. If the immanentism of the neo-Hegelians cannot find use for the transcendentism of their most outright opponents, then the neo-Hegelian position is untenable. \oplus Only as a man humbles himself after the manner of the Barthian can he become a vehicle of the divine after the manner of the Hegelian. To be filled, he must be emp-

⊗ Temple, <u>Op. cit</u>., p. 495.

+ The attack sometimes takes the form of a rejection of ante-Nicene Logos doctrine, and consequently involves some very difficult exegesis (if not straight contradiction) of the numerous New Testament passages which clearly teach that doctrine. Cf. Professor Leonard Hodgson, <u>And Was</u> <u>Made Man</u>, p. 187; <u>The Doctrine of the</u> <u>Trinity</u>, V. i.

° Cf. E. L. Mascall, <u>He Who Is</u>, pp. 106 ff; Leonard Hodgson, <u>Towards a Christian</u> <u>Philosophy</u>, IX. For the view that the eternal begetting of the Son (contrary to the opinion of Pringle-Pattison and others) is unconnected with the creation of the world, see F. H. Brabant in <u>Essays on the</u> <u>Trinity and the Incarnation</u>, p. 349.

× Cf. Prebendary Hanson's contribution to <u>Dogma in History and Thought</u>, p. 105. This writer admits (and seems to regard it as a positive advantage) that such a doctrine is dualistic, miraculous, and "presents great difficulty to the human reason".

+ <u>The Spirit of Mediaeval Philosophy</u>, p. 96.

* <u>The Knowledge of God and the Service</u> <u>of God</u>.

† <u>The Mediator</u>.

φ <u>Agape and Eros</u>.

θ The Nature and Destiny of Man. ¤ In fact, however, Barth insisting on God as the only source of knowledge of Himself, as the One and only One, as infinitely greater than any Principle underlying human systems, reads like many a true mystic. See, e.g., op. cit., p. 19. Rudolph Otto's <u>The Idea of the Holy</u> (Das Heilige) is a notable essay on the absolute otherness of the religious Object; and this otherness, so far from being incompatible with mysticism and the experience of the numinous, is their very basis. Indeed, genuine mysticism may just as readily be accused of over-emphasizing the divine transcendence as the divine immanence.

‡ In one matter I must take sides. The increasingly informed and understanding attitude of liberal theologians towards non-Christian religions is surely nearer to the Christian spirit than the contemptuous attitude of so many of the newer school. \oplus As an instance of the sort of language that makes a reaction inevitable, take the following from F. H. Bradley: "In the universal mind each one has nothing but self-certainty, the assurance of finding in existing reality nothing but himself." (Ethical Studies, p. 186). As an instance of the reaction, take Niebuhr's: "The Christian faith is set against all idealism and participates in the romantic and materialist protest against it." Op. cit., i. p. 30.

tied, not once, but again and again. Both historically and in the life of the individual, thorough purgation and self-naughting are a recurring necessity. For as soon as our attention is diverted from the God in us to the fact that God is in us, that fact ceases to be true. "I am the eye with which the Universe beholds itself and knows itself divine" \otimes --- but (as Chapter II made clear enough) the eye and what it beholds are mutually exclusive: there is no room here for me and God. It is a case of one or the other. The Bodhisattva who retains the thought of his ego or soul is no longer a Bodhisattva, says the Diamond Sutra. And Ruysbroeck, on the final stage of the mystic way: "We are emptied, and God, our heavenly Father, dwells in us." Ø The Eckhart whom Niebuhr † accuses of spiritual pride is the Eckhart who repeatedly insists that "He alone hath true spiritual poverty who wills nothing, knows nothing, desires nothing" --- a poverty which is, I think, more humiliating and difficult than any which the neo-Protestants are in the habit of advocating. ° The truth is that our refusal to accept God's gift of Himself instead of ourselves, on the plea of our unworthiness, is not humility at all, but pride; + in addition, it is the worst of reasons, seeing that it is our realization of unworthiness which alone makes us worthy.

Nevertheless the present reaction, with all its excesses and intolerance, is the necessary corrective of a mysticism which had begun to overlook the otherness of the Real, and of an immanental philosophy which had become much too complacent. Not only do we need constantly to be conducted to the Centre of our own worthlessness: we need also to go by new roads, which offer no distant glimpse of the Whole that may reward us at the end of the journey.

The question remains: What is the connection between (a) the internal 'processions' which differentiate the unity of the Godhead into the Trinity; (b) the creation of the many-levelled universe, and the maintenance of its upward and downward processes; Θ (c) the descent and ascent of the Son; × (d) the religious experience in which the worshipper, by self-naughting, becomes the receptacle of God? *

Here we have four 'processes', each of which involves, not merely some loss of status, but complete self-surrender, as a condition of the realization of the Whole --- four variations on the theme of dying to live, four descents-ascents. Now straightway to identify them would be absurd. It would be equally absurd (or at any rate absurdly uneconomical, as well as quite unorthodox) to hold that they are all essentially independent, and their interrelations external to each of them. To say that they are 'modes' or 'aspects' of one fundamental Reality, part of whose essence is suggested by the formula 'dying to live', ‡ is deplorably vague; but perhaps we cannot expect more than something of this kind on the plane of verbal formulation. The Son is the "express image" of the Father; yet, as loving with a perfectly unselfish love and knowing with a perfectly objective knowledge, He sacrifices Himself eternally. And this self-abnegation is disclosed to us, firstly, in the processions of the Trinity; secondly, in the creating and sustaining Word which, reaching down through the realms of the suprahuman and the human and the infrahuman, penetrates to the very abyss of the physical universe; thirdly, in the incarnation, death, and ascension of the Son; fourthly, in the life of \otimes Shelley, 'Hymn of Apollo'.

ø The Seven Steps of the Ladder of Spiritual Love, VII.

† <u>Op. cit.</u>, i, pp. 61 ff; cf. Brunner, <u>op. cit</u>., p. 110.

° "They say this grain of wheat dies utterly, losing its shape, its colour and its being. Wheat-nature is equally stone-nature then. Receptivity alone remains. Even so the soul must die if she is to grow receptive to another nature..... As the soul dies in herself God comes to be her whole life, and there will remain no more than one." Eckhart, <u>Works</u> (trans. Evans), ii. pp. 184, 185.

+ Cf. Watts, <u>Op. cit</u>., p. 75.

 Θ For modern man, of course, the doctrine of evolution has the effect of abolishing any clear line between the creation and the sustaining of the universe; creation is brought down to the present moment.

× On the Incarnation as requisite, not only for man's redemption from sin and death, but also for the re-creation of subhuman and even inanimate nature, and for the perfection of the Divine Nature itself, see C. S. Lewis, <u>Miracles</u>. pp. 148 ff.

It was a favourite patristic doctrine that the Incarnation was the climax and fulfilment of the entire creation.

* St Paul, admonishing the Philippians to look each on the things of others, and not on his own, expressly links (or even identifies) this attitude of mind with the mind of the Son who humbled Himself. <u>Phil</u>, II. 3 ff.

‡ One criterion by which the modes may be seen to differ is the <u>route</u> of the descent --- whether <u>via</u> man, or more directly. As I shall show in the next two chapters, there are several routes from the Whole to the Centre, and <u>vice versa</u>, which by-pass humanity.

"The renewal of creation has been wrought by the Self-same Word who made it in the beginning. There is thus no inconsistency between creation and salvation; for the One Father has employed the same Agent for both works.... As Man He was living a human life, and as Word He was sustaining the life of the universe, and as Son He was in constant union with the Father." St Athanasius, <u>The Incarnation of the Word</u> of God, I. 1; III. 17. religion --- and, implicitly, in all our experience, inasmuch as it is only by the destruction of the self that we become receptacles of the other which is, in its completeness, the Whole. ϕ It is not four beings but One Being (i) who, "as the thought of the divine mind is called the Word, who is the Son"; Θ (ii) who, as "the wisdom of God, when first it issued in creation, came not to us naked, but clothed in the apparel of created things"; \oplus (iii) who, "when that same wisdom would manifest Himself to us as the Son of God took upon Him a garment of flesh"; \oplus (iv) and of whom St Thomas says: "Every intellectual process has its origin in the Word of God who is the Divine Reason." More briefly, it is <u>one</u> Word who (1) was God and was with God, and (2) made all things, and (3) was made flesh, and (4) lighteth every man. \otimes

Does this fourfold descent, in any of its aspects, compromise God's absolutely transcendent majesty? Quite the contrary: it is the most radical assertion of His transcendence --- the assertion that nothing (not even the creature's preoccupation with his own sin and unworthiness) can survive in the presence of the One who is a consuming fire. Not only does it reveal God as wholly independent of what we are: it reveals us as nothing apart from Him. It utterly abolishes the illusion (which is yet sufficiently real at its own levels to be of the very essence of sin) of our self-dependence; it brings to naught all that we supposed we were or hoped we might become --- giving it back to us in fuller measure as the wholly other, as God Himself. ° The universe as self-existent, ourselves as something in ourselves, --- these are certainly not organic to the divine nature. Far from it. While none of the rich content of God's universe is lost, none of it is saved as it is, untransmuted by the furnace of death --- the death of the Centre, at "the heart of the earth", × where all things pass over from the self to the not-self. To those whose loving sight is thus innocent of self, the regenerated world is full of the divine splendour, and the most trivial thing a shining revelation of God's glory. Such a universe (so rarely more than glimpsed, but, even when only glimpsed, so real) is indeed 'related organically to God'. And if it were not, then religion and art and philosophy and science would all be in vain, and our lives a miserable fraud.

"He died for all, that they which live should not henceforth live unto themselves, but unto Him which died for them, and rose again. Wherefore henceforth know we no man after the flesh..... If any man be in Christ, he is a new creature: old things are passed away; behold, all things are become new. And all things are of God." Θ Everyone has to discover for himself the living truth of these words, and translate them into his own idiom. ϕ Cf. the doctrine of Malebranche, that 'ideas' do not exist in us, but we exist in that which ideas unite to compose, namely God and His wisdom. Our knowledge (so far as it is real) is participation in the self-knowledge of God, and all our ideas are limitations of the idea of God. <u>De la</u> <u>Recherche de la Vérité</u>, III.

θ Summa Contra Gentiles, IV. 13.

 \oplus Hugh of St Victor, (Migne, clxxvii, p. 580).

⊗ <u>John</u> I. 1-9.

St Thomas distinguishes between a <u>processio Dei ad intra</u> and a <u>processio Dei ad</u> <u>extra</u>. The latter -- the movement of God from God -- finds expression in creation and salvation, in the outward movement and return which reflects and is intimately linked with the inward movement. But in the Augustinian type of theology these two movements are united in one <u>processio Dei</u>. See Przywara, <u>Polarity</u>, pp. 75-9, 147-8.

° To the 'decapitation' doctrine of Chapter I there is an all-important exception. "God be in my head", I sing, in the words of the beautiful old hymn; and only so can I have my own head on my shoulders, instead of other people's. For while my other objects abolish me, this object also includes me, and so gives me back to myself. Though to have Him I must lose all, yet in Him I have all.

× <u>Ma infino al centro pria convien ch'i</u> <u>tomi</u>. <u>Inferno</u>, XVI.

Θ II. <u>Cor</u>. V. 15 ff.

Part III

Our true religion is a monotheism of consciousness, a possession by it, with a fanatical denial of the existence of autonomous partial-systems..... This <u>hybris</u>, that is, this narrowness of consciousness, is always the shortest way to the insane asylum..... The gods have become diseases; not Zeus, but the solar plexus, now rules Olympus..... It is not a matter of unconcern whether one calls something a "mania" or a "god". To serve a mania is detestable and undignified, but to serve a god is full of meaning, and rich in possibilities because it means yielding to a higher, invisible, and spiritual being.

C. G. Jung, The Secret of the Golden Flower, pp. 110-113.

The hierarchies love the young people.

Edith Sitwell, 'Invocation', Green Song and Other Poems.

A man that could look no way but downwards, with a muck-rake in his hand: there stood also one over his head with a celestial crown in his hand, and proffered him that crown for his muck-rake; but the man did neither look up nor regard, but raked to himself the straws, the small sticks, and the dust of the floor.

The Pilgrim's Progress, II.

It is dangerous to make man see too clearly his equality with the brutes without showing him his greatness. It is also dangerous to make him see his greatness too clearly, apart from his vileness. It is still more dangerous to leave him in ignorance of both.... Man must not think that he is on a level either with the brutes or the angels, nor must he be ignorant of both sides of his nature; but he must know both.

Pascal, Pensées, 418.

What powerful Spirit lives within! What active Angel doth inhabit here! What heavenly light inspires my skin, Which doth so like a Deity appear! A living Temple of all ages, I Within me see A Temple of Eternity! All Kingdoms I descry In me.

An inward Omnipresence here Mysteriously like His within me stands, Whose knowledge is a Sacred Sphere That in itself at once includes all lands. There is some Angel that within me can Both talk and move, And walk and fly and see and love, A man on earth, a man Above.

Dull walls of clay my Spirit leaves, And in a foreign Kingdom doth appear, This great Apostle it receives, Admires His works and sees them, standing here. Within myself from East to West I move As if I were At once a Cherubim and Sphere, Or was at once above

And here.

Traherne, 'An Hymn upon St Bartholomew's Day.'

CHAPTER XIII

THE LAW OF HIERARCHICAL SYMMETRY

From the inmost heart Outwards unto the thin Silk curtains of the skin, Every least part Astonish'd hears And sweet replies to some like region of the spheres.

Coventry Patmore, 'The Body'.

I swear to you that body of yours gives proportions to your Soul somehow to live in other spheres.

Walt Whitman, Works, Nonesuch Edn, p. 510.

No lily-muffled hum of a summer-bee, But finds some coupling with the spinning stars.

Elizabeth Barrett Browning, 'Aurora Leigh'.

The motions akin to the divine part in us are the thoughts and revolutions of the universe; these, therefore, every man should follow and by learning to know the harmonies and revolutions of the world, he should bring the intelligent part, according to its pristine nature, into the likeness of that which intelligence discerns, and thereby win the fulfilment of the best life set out by the gods before mankind.

Plato, Timaeus, 90.

Slave to no sect, who takes no private road, But looks thro' Nature up to Nature's God; Pursues that chain which links th' immense design, Joins heaven and earth, and mortal and divine; Sees that no Being any bliss can know, But touches some above and some below.

Pope, 'Essay on Man'.

My flesh is generated in this world and is ruled by the quintessence of the stars and elements, which dwells in it and is master of the body and the outward life. This world in its innermost unfolds its properties and powers in union with the heaven aloft above us..... All is in man, both heaven and earth, stars and elements..... This is the philosopher's stone.

Boehme, The Confessions of Jacob Boehme, (compiled and edited by W. Scott Palmer), pp.

58, 23, 88.

The question is asked: Man's life being in relation to Heaven and Earth and they being inactive and man a creature endowed with a heavenly nature, how can it be right that he is active as well as inactive? The answer is that a man whose whole being is imbued with moral power is endowed with a large quantity of heavenly vital energy. Thus it is that he is able to pattern himself on Heaven, be naturally so, be inactive. Where a man is endowed with only a slight amount of vital energy, pays no attention to the Virtue of the Tao, and bears no resemblance to Heaven and Earth, the result is that he is called an unconscionable fellow: 'unconscionable', that is not conforming to Heaven and Earth, not of the same class as the sages and worthies. The result is that he is (full of) activity.

Wang Ch'ung, <u>Nun Heng</u>, XVIII, 1.

1. HIERARCHICAL PAIRS.

What am I? In this chapter and the next I propose to bring together the answers so far given and to draw certain general conclusions from them, thus completing what may be called my self-portrait in space. That done, I shall go on, in Part IV, to add the time dimension.

As Emerson says, I am entitled to the world by my constitution: $^{\circ}$ for the world <u>is</u> my constitution. If only this and similar pronouncements were not so vague! While there is an enormous mass of piecemeal information about what I am level by level, the work of making sense of

° 'Nature' (1836), III.2.

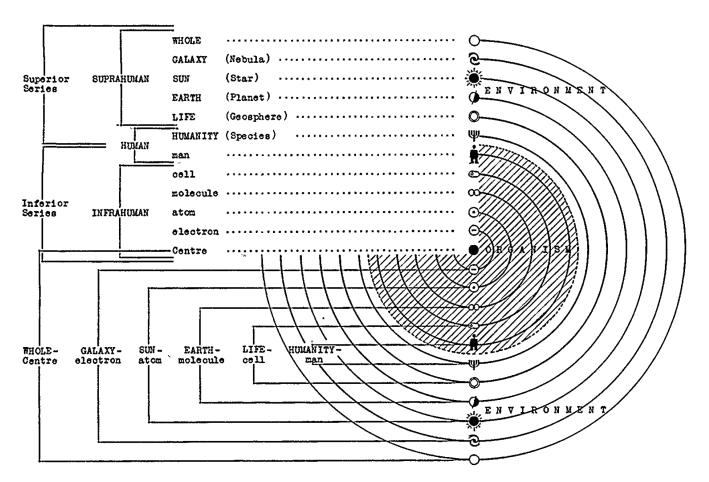
The scientist, restricting his attention to one level, can <u>predict</u> events, but never <u>understand</u> them: considered horizontally, they are meaningless. As Joseph Needham has pointed out, "Meaning can only be introduced into our knowledge of the world by the simultaneous investigation of all the levels of complexity and organization..." <u>The Philosophy of Alfred North</u> <u>Whitehead</u>, Ed. Schilpp, p. 269. this information as a whole, of organizing it vertically, has scarcely begun. Just as the architect's two-dimensional floor plans can have meaning only in so far as they refer to a three-dimensional building, so the many cross-sections of my nature can have meaning only in so far as their mutual connections are discovered. × At the moment, when I ask science for a three-dimensional scale-model of myself, I am presented with a vast collection of two-dimensional sketches -- sketches which are full of detail, but not particularly consistent -- and left to put the model together as best I can. It is as if a builder offered a homeless man a bundle of drawings instead of a house, and innumerable sketch-plans instead of a single set of working drawings.

"The crystal sphere of thought is as concentrical as the geological structure of the globe. As our soils and rocks lie in strata, concentric strata, so do all men's thinkings run laterally, never vertically." ° But if this were the whole truth we could never know it to be true. Everything goes to show that, in spite of our horizontal tendencies, we are by no means incapable of discovering the laws of hierarchical order, of the vertical 'go' of things. My present aim, at any rate, is to look for signs of this order: that is to say, for the kind of relationships <u>between levels</u> that science looks for at each level.

To begin with, let me set down clearly the hierarchical schema which the previous chapters have disclosed:---

× Dr F. R. Tennant well says that while science must "divide in order to conquer, it is also necessary to recognize such continuities and interdependencies between the sciences as are forthcoming, if we would consolidate our conquests." When, however, he adds that "Our knowledge, as a whole, is comparable to an organism with its members rather than to a house with its walled-off rooms," he is surely speaking of what ought to be, rather than of what is. <u>Philosophy of the Sciences</u>, p. 189.

° Emerson, 'The Method of Nature'. The truth is that pre-scientific man is as apt to neglect the horizontal for the vertical as we are to do the opposite. Marcus Aurelius, for example, was keenly aware of vertical connections, but because he lacked horizontal data, his cosmos is vague and amorphous. "All things are linked and knitted together, and the knot is sacred. For all things are ranked together, and by that decency of its due place and order that each particular doth observe, they all concur together to the making of one and the same cosmos." <u>Meditations</u>, VII. 6.



Here, provisionally, are twelve hierarchical orders, which fall naturally into six Pairs (as I have indicated in the diagram). The following pages

are devoted to the evidence for, and the significance of, this grouping.

2. <u>THE 'GREATEST COMMON MEASURE' AND THE 'LEAST COM-</u> <u>MON MULTIPLE'</u>.

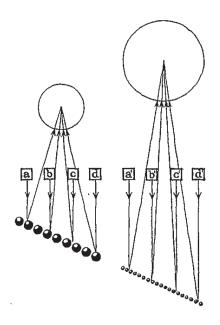
If I take any group of physical objects in the universe, and discover (i) what is their 'greatest common measure' (to borrow the arithmetical expression) or the <u>highest</u> unit of hierarchical status of which they are all composed; and discover (ii) what is their 'least common multiple' or the <u>lowest</u> unit of hierarchical status of which they are all components, I shall find that (i) is the inferior member and (ii) is the superior member of one of the six hierarchical Pairs --- Whole-Centre, Galaxy-electron, Sun-atom, Earth-molecule, Life-cell, Humanity-man. (This statement is not absolutely true, but it is sufficiently near to the truth to serve as a provisional definition of what I mean by hierarchical Pairs.)

For example, when I consider the collection of objects a, b, c, d -- this hand, my dog, the flowers on my table, and the fly on the window pane -- I find that their greatest common measure is the cell, and that their least common multiple is Life. If I take a', b', c', d' -- my hand, my pen, this sheet of paper and the ink I am using -- I find that the GCM is now the molecule, and the LCM is Earth. Again, if I take a'', b'', c'', d''-- my hand, and samples of matter of similar bulk on the surfaces of the sun and Mars and Venus -- the GCM becomes the atom, and the LCM the Sun. In each case there is analysis, or hierarchical descent to find the common whole; and the lower the descent the higher the ascent. Thus the Pairs are symmetrically arranged about the horizontal axis of the hierarchy.

And this is, indeed, only a special case of the linked analysis and synthesis which is characteristic of all thinking. Abstraction and generalization proceed <u>pari passu</u>. The way to the greater whole is through the smaller part. *

3. <u>HIERARCHICAL PAIRS AND THE CLASSIFICATION OF THE SCI-</u> ENCES.

Science is horizontally departmentalized $^{\circ}$ in such a way that the existence of the hierarchical Pairs is obscured. Nevertheless, as science advances, the Pairs become increasingly evident. For instance, what may be called the anthropological sciences (including psychology, sociology, and economics) can hardly proceed without recognizing the existence of the community as something more than a name for a large number of individual men: if there is no such thing as Humanity <u>per se</u>, neither is there any such thing as <u>a</u> man --- the concrete reality is man-in-community. Similarly, while the biological sciences take as their basic unit or 'building block' the cell, the progress of palaeontology and ecology point



* Aristotle points out that in all science "the compound' should always be resolved into the simple elements or least parts of a whole." <u>Politics</u>, I. But in reality this is only half the story. We cannot find the parts if we have no idea of the larger whole to which they belong.

° Cf. F. R. Tennant, <u>Op. cit.</u>, pp. 18, 19.

My classification of the sciences here is not unlike that of Comte, whose hierarchy is (1) mathematics (number, geometry, mechanics), (2) astronomy, (3) physics, (4) chemistry, (5) biology, (6) sociology. Each of these, says Comte, builds on the basis provided by those that precede it, and therefore arises later than they do. The principle of this classification is that the order of science conforms to the order of human history. to the real unity of Life: they even hint that to separate these maximum and minimum biological units -- Life and the cell -- is just as artificial and misleading as to separate Humanity from man. Again, though the chemist need not be a geologist, he must take some account of the Earthenvironment of his molecules, even if he does not pursue the matter as thoroughly as L. J. Henderson ×; and certainly the geologist must be something of a chemist. It is still more evident that progress in the science of the smallest things is tied up with progress in the science of the biggest things: the physicist and the astronomer find common ground in astrophysics, in relativity theory, in cosmology and cosmogony. Thus Eddington writes °: "Hope of progress in our understanding of electrons, protons and quanta is bound up with this investigation of remote galaxies." Later in the same book he describes the Cosmical Constant as the connecting link between the galaxies and the behaviour of the electrons in the atom --- "I believe that this wedding of great and small is the key to the understanding of the behaviour of electrons and protons..... To measure the mass of an electron, a suitable procedure is to make astronomical observations of the distances and velocities of spiral nebulae!" As for the ultimate Pair, which are the province of metaphysics and theology, of religion and mysticism, I have said enough in the previous chapter to show how impossible it is to divorce them.

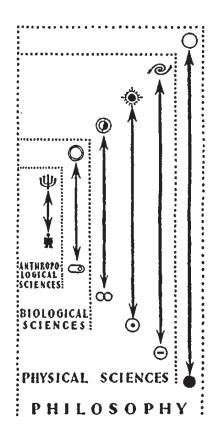
Briefly, it may be said that, while the six hierarchical Pairs are implicit in science and in the organization of scientific endeavour, they tend to become explicit as science advances.

Moreover the history of science bears witness, not only to the existence of the hierarchical Pairs, but also to their order. The preoccupation of the Middle Ages was the 'divine science' of the ultimate Pair. The foundations of modern physics and astronomy were laid in the 17th century, of chemistry and geology in the 18th and early 19th century, of biology in the 19th century, of psychology and sociology and economics in the late 19th and early 20th century. Nor is there anything surprising about this sequence --- the order of appearance is the order of logical dependence: the later sciences need the earlier ones. Philosophy and theology (as I have already urged) were the prerequisite of secular or natural science: in the broad sense, philosophy still embraces the whole of science, while in the narrow sense it is confined to the ultimate Pair. Similarly, physical science precedes, underlies, and includes the biological sciences, while retaining for its own province the 'inanimate' and astronomical units. Again, the biological sciences precede, underlie, and include the anthropological.

(But while science progressively brings to light in this way the vertical organization of the hierarchy, it also does much (in actual practice) to conceal that organization and to suggest horizontality. One of the effects of the science of Life is to hide from us our unity with Earth: the biological series is allowed to come between the two points of our unity with the terrestrial Pair. Again, the anthropological sciences obscure to some degree the fact that (by virtue of our cellular constitution) we belong to Life, just as truly as we belong to Humanity. There is a tendency for later Pairs to become substitutes for earlier ones, and for the all-inclusive verticality of the ultimate Pair to give place to the exclusive horizontality of

× The Fitness of the Environment.

° <u>The Expanding Universe</u> Cf. R. A. Sampson, <u>The Sun</u>, p. 5, on the interdependence of physics and astronomy. Eddington's great work (summarized in his <u>Fundamental Theory</u>) of calculating physical constants, independently of experiments which arrived at similar results by the empirical method, was largely due to his method of linking the very large and the very small.



"The sciences which they learned without any order in their early education will be brought together and they will be able to see the natural relationship of sciences to one another and to true being." Plato, <u>Republic</u>, 537. (Jowett's translation). the merely human. In a sense, each successive development of science is a less satisfactory reflection of, and substitute for, the original divine science. In another and equally true sense, the later fills in the earlier, giving it the richness it otherwise lacks.)

4. <u>GENETIC PAIRS</u>.

The evolution of the sciences recapitulates evolution at large. The latter -- the temporal development of the hierarchy -- is the topic of Part V: here I shall anticipate some of my conclusions, leaving the more detailed discussion to follow.

The law is that the superior and inferior members of a hierarchical Pair emerge together and develop together: they are coeval. In the case of the human species and the human individual, it is, indeed, a tautology to say that they arose, not as two things, but as two sides of one thing. ° Life and the cell stand in a similar relationship: they are alternative ways of describing the same facts. If, noting the unbroken continuity of the protoplasm, we look upon the original 'cell' as surviving in and embracing all its daughter cells down to the present moment, and as developing in this way incalculable richness of organization without sacrifice of real unity, then we are attending to the superior member of the vital Pair; \times if, on the other hand, we disregard this continuity and narrow the field of our vision, then we take each daughter cell to be a separate organism, and confine our attention to the inferior member of the Pair. But we are not dealing here with two objects, one very big and the other very small --- Life is the cell expanded, and the cell is Life in miniature; the cell is embryonic Life surviving throughout Life's maturity as Life's basis. Somewhat similar is the role which the molecule plays in the developed planet. The molecule belongs to and is coeval with Earth. For it is when a star differentiates into a planetary system that there occurs (in the planets) a temperature low enough for the synthesis of numerous chemical compounds of the simpler kind; * and it is when the planet differentiates into a system of geological strata and geographical regions that molecular development can proceed to extreme elaboration. Chemical substances (it is too often forgotten) are just as continuous with and dependent upon their environment as living organisms are upon theirs. The molecules of a crystal, or of a droplet of water, or of any other terrestrial object, cannot be amputated from their Earth-body: in particular, they cannot be severed from that body's thermal condition. + And what is true of Earth and molecular evolution is true mutatis mutandis of the Sun and atomic evolution. Every atom -- whether in the sun, or in Earth, or in my human body -- is solar, a Sun-atom. † Stars (there is good reason for believing) are atom-factories. In them, it seems, higher atoms are built up from lower ones, and the development of the star as a whole is very closely linked with the development of its atomic material. Many of the details are obscure and disputed, but this much is certain enough --- that stellar and atomic evolution are inseparable. φ As Earth's business was the development of solar atoms into terrestrial molecules, so, presumably, the Sun's business was the development of galactic elec° This is not to say that man evolved merely as a species and as an individual organism. His evolution is conducted at a number of levels: e.g., (1) at the level of the species in so far as he competes with other species; (2) at the level of the race (cf. A. C. Haddon, The Races of Man) in so far as he competes with other races; (3) at the level of the smaller social group (cf. Sir Arthur Keith, <u>A New Theory of Human Evolu-</u> tion) in so far as he competes with other such groups; and (4) at the level of the individual man in so far as he competes with other individuals. But all such levels are contained within the hierarchical Pair --- Humanity-man. They are details of internal organization.

× Cf. Bergson: "As the smallest grain of dust is bound up with our entire solar system.... so all organized beings, from the humblest to the highest, from the first origins of life to the time in which we are, and in all places as in all times, do but evidence a single impulsion..... All the living hold together." <u>Creative Evolution</u>, p. 285.

* In very cool stars, of spectral classes K and M, certain compounds such as titanium oxide are found. But this would appear to be a minor and abortive branch of evolution: viable molecular evolution is, it seems, planetary.

+ Cf. Benjamin Moore, <u>The Origin and</u> <u>Nature of Life</u>, p. 185.

† Jeans writes: "The physics of atomic nuclei can ... explain many hitherto puzzling stellar characteristics; the largest and the smallest ingredients of nature -- the star and the atomic nucleus -- have met and thrown light on one another, to the great improvement of our understanding of both." <u>The Universe Around Us</u>, Preface to 4th Edn.

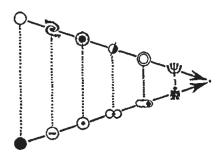
 ϕ An elaborate theory of energy-production in the stars has been worked out by H. A. Bethe -- several kinds of atoms of low atomic weight are involved in reactions, the chief result of which is to convert hydrogen into helium. As for the heavier atoms, it may well be that they were built up at the time of the cataclysm which gave birth to the solar system. trons and protons into solar atoms. It is at any rate a plausible hypothesis that the differentiation of the primitive Galaxy into stars was roughly synchronous with the integration of its protons and electrons into the simplest types of atoms. The suggestion is that every nebula comes into existence as a gigantic cloud of free subatomic particles, which do not coalesce into atoms till the nebula divides into stars. In that case, the electron (for brevity, I use this tern to include the proton and any other 'irreducible' particles) is linked with the Galaxy precisely as the atom is linked with the Sun, and the molecule with Earth. Every electron in my body is unalterably galactic, just as every atom is unalterably solar. The electron does not cease to be an aspect of the entire Galaxy, or the atom of the entire Sun, because it has become involved in later constructions. In the evolutionary story the rule is that the old is never destroyed: it is only overlaid.

Speculation concerning the simultaneous emergence and evolution of the galaxies and their primitive particles would be unprofitable. It is sufficient here to note that, pursuing into the past the history of the inferior series, we are led down to the Centre; of the superior series, up to the Whole. In other words, our history, involving the entire hierarchy, and conforming to the system of Pairs, is not simple, but bifurcated. As we descended from the highest units, so, simultaneously and symmetrically, we ascended from the lowest.

> "Magnificent out of the dust we came, And abject from the spheres." °

It cannot be said (or at least it can only be said metaphorically) of the ultimate Pair that they are genetically united. ϕ But united they certainly are --- not identical, indeed, like the highest and the lowest cards in the pack, but inextricably involved in one another. (Failure to make this distinction is a prolific source of such heresies as the materialistic pantheism of Amalric of Bena and David of Dinant, who sought to identify God and the prima materia --- since both are simple, they cannot be distinguished. × Bruno, also, in accordance with his doctrine of the identity of opposites, looked upon each infinitesimal particle of the world-ether as identical with the soul of the universe. "If we reflect," says Nicolas of Cusa, "we shall find that to a true maximum nothing can be added; from a true minimum nothing can be taken away; man can perceive therefore that, in Ultimate Reality, maximum and minimum coincide." + Here the highest truth and the deepest error are apt to pass into each other imperceptibly. There may be no difference, and there may be all the world of difference, between Eckhart's "Diess Fünkelein, das ist Gott," and the Lady Julian's "I saw God in a Point;" * between Traherne's "For being wholly everywhere, His omnipresence was wholly in every centre" † and Alexander von Suchten's "subtle substance, or intrinsic radical humidity, diffused through the elemental parts, simple and wholly incorruptible.... and called the Spirit of the World, proceeding from the Soul of the World, the one certain life, filling and fathoming all things". Ø Everything depends upon whether, in interpreting such statements, we make the necessary distinction (a distinction which could not be any greater than it is) between the receptacle and its Content, thus avoiding all "confusion of substance". Θ When we do this, we can safely speak

Eddington made the suggestion that "in the first stage only the rudiments of matter existed -- protons and electrons traversing the void -- and the evolution of the elements has progressed simultaneously with the evolution of worlds." <u>The Expanding</u> <u>Universe</u>, I. 1. For a classic hypothesis of the origin of the nebulae, see Jeans' <u>The</u> <u>Universe Around Us</u> (1944), pp. 218 ff. He regards the nebulae as condensations occurring within a featureless primeval cloud of particles --- particles which are mostly below the level of complete atoms.



° William Watson, 'Ode in May'.

φ Cf. Ward, <u>Realm of Ends</u>, p. 436.

× G. Théry, <u>David de Dinant</u>, pp. 132, 135; Etienne Gilson, <u>The Spirit of Mediaeval Philosophy</u>, p. 449; S. H. Mellone, <u>Western Christian Thought in the Middle</u> <u>Ages</u>, pp. 150, 151; C. C. J. Webb, <u>Studies</u> in the History of Natural Theology, pp. 239 ff.

+ <u>De Docta Ignorantia</u>, quoted in Boulting, <u>Giordino Bruno</u>, p.30. Few would find Cusa's argument convincing. As well say that ultimate reality is at once nothing and infinity because, when we reduce a fraction's denominator to zero the result is infinity, and when we increase it to infinity the result is zero.

* <u>Revelations of Divine Love</u>, III. St Teresa records a similar vision.

† Centuries of Meditations, II. 82.

ø Quoted in Benedictus Figulus, <u>A Golden</u> and Blessed Casket of Nature's Marvels, trans. A. E. Waite (1893), pp 71, 72.

Θ Gilson (<u>op. cit.</u>, p. 449) points out that the concept of the <u>divine image</u>, which "lies at the heart of so much mediaeval mysticism.... allows of a mystical deification without confusion of substance; man is here no more than a subject..."

"....of One who contracted His Immensity And shut Himself in the scope of a small flower," \otimes

and can even approve of the alchemist's hidden Divinity which sleeps at the very heart of matter --- the lapis, the stone which the builders rejected, and which is really the head of the corner.) If natural science witnesses to the evolution of the intermediate Pairs in due succession, the divine science (whether we choose to accept its credentials or not) witnesses to the ultimate Pair as the ground of that evolution. At the base of the hierarchy, at the Centre, there lies, not Plato's Receptacle or spacefilling formless substance, ° or Aristotle's <u>hyle</u> or 'first matter', or the outer darkness of the Manichean and Gnostic sects, but simply nothing. The world, St Athanasius tells us, "was not made from pre-existent matter, but out of nothing and out of non-existence absolute and utter God brought it into being through the Word.... For God is good --- or rather, of all goodness He is the Fountainhead, and it is impossible for one who is good to be mean or grudging about anything. Grudging existence to none therefore, He made all things out of nothing..." × And St Thomas: "The Catholic faith professes this truth, asserting that God created all things not out of His substance, but out of nothing." +

Now I take this doctrine with the utmost seriousness. My thesis is that here also, at the ultimate levels, the rule holds good that the earlier Pair is not superseded by the later, but remains as its basis: the world, that is to say, was not created ex nihilo once and for all at some remote date, but is for ever being created or recreated ex nihilo. Underlying all things at this moment is the Centre, the empty receptacle. In other words, if you still all motion you will not find something that moves, but nothing; * if you take away from a thing all its qualities you will not be left with the featureless substance that supports them, but nothing; if you abstract from your experience every objective element there will remain, not a subject that is something, but nothing; if you go back to your own true beginning at the base of the hierarchy and to the origins of physical evolution you will not come upon some primeval worldstuff, but nothing. In the beginning, and now, the Whole and the Centre --- the ultimate Pair, whose superior member finally ousts the inferior member --- are the ground of all things.

5. HIERARCHICAL PAIRS AND STRUCTURE.

While the hierarchy shows much significant pattern, a great deal of obdurately patternless detail remains. To take a rather superficial instance, the number of units of one level that go to make up a unit of the next level seems to be quite arbitrary. Why should the number of electrons and protons to the atom, and the number of atoms to the ordinary molecule, be so small compared with the number of molecules to the cell and the number of cells to the man? Again, while the geospheres may be counted on one hand and the planets (if the Asteroids are excluded) on two, it takes many thousands of millions of stars to build a galaxy, and (in all probability) a similar number of galaxies to build a cosmos. Does any reason underlie these seeming discrepancies? Ø \otimes Edith Sitwell, <u>The Song of the Cold</u>, 'The Two Loves'.

° <u>Timaeus</u>, 48 - 53. Plato describes this substance as amorphous, the invisible and all-receptive mother and nurse of all that becomes, the plastic mass that is shaped by all things that enter it. Aristotle's prime matter, on the other hand, as devoid of all form or determination, is the product of our minds rather than something objectively real.

× <u>The Incarnation of the Word of God</u>, I. 3. Athanasius cites <u>The Shepherd of Her-</u><u>mas</u>, "There is one God Who created and arranged all things and brought them out of non-existence into being;" and <u>Heb</u>. XI. 3:"The things which we see now did not come into being out of things which had previously appeared." Cf. <u>Rom</u>. IV. 17.

+ <u>Summa Contra Gentiles</u>, I. And, a century before, St Bernard (<u>De Diligendo</u> <u>Deo</u>, V) had said that man was called into being by God out of nothing. Many post-Reformation writers, however, reject the <u>ex nihilo</u> doctrine, declaring either (with Boehme and Law) that God created the world out of Himself, or else (with Milton) that He created it out of a primordial matter which is part of His substance.

* Movement, says Bergson, in <u>La Perception de Changement</u>, does not imply something that is movable. Cf. Whitehead, <u>Modes of Thought</u>, p. 200: "At an instant there is nothing." And H. Wildon Carr, <u>The Philosophy of Change</u>, pp. 15 ff.

ø lt should not be forgotten that (as I have argued in Chapter V) there is an important sense in which these vast numbers are unreal.

To begin with, let it be clearly understood that the hierarchical schema makes no pretence of doing justice to concrete reality. It is only one of many patterns (or rather, only a part of the total pattern) exhibited by the facts, and must not be taken over-earnestly. There is nothing sacrosanct about its details as I envisage them. Obviously they are bound to need revision as further empirical data come to light, and as knowledge more expert than mine is applied to them. I would go further, and say that the validity of the schema is to be judged, not so much by its capacity for survival unchanged in the presence of new facts, but rather by its elasticity, by its capacity for drastic adjustment to new facts without sacrifice of principle. Certainly I do not need to wait for new scientific advances to find weak places in the schema: enough are already to be seen. ° But, after all, there is the possibility (if not the likelihood) that weak spots are growing points. The price of the closed and thoroughly self-consistent system is the virtual denial of stubborn facts, and such a system is stillborn for the simple reason that it has no need to adjust itself or to grow: it is too good to live. Life is a matter of imperfection, of constant disturbance and readjustment to circumstances, in cosmologies no less than in organisms.

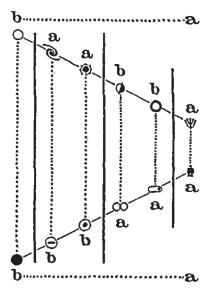
Moreover we have in the hierarchical schema, if not yet a means of tentative prediction, at least a source of abundant hypotheses. I believe that many of the seeming inconsistencies it contains will not only vanish on closer study, but will throw light on some of the dark places of nature. If, in the history of 'horizontal' science, it has often been the small awkward fact -- the piece that refused to fit into the picture -- which has furnished the clue to some new major pattern, in the history of 'vertical' science a similar procedure may well be followed

Bearing in mind these general considerations, let us return to the question of the number of units at each hierarchical level. I propose to distinguish (somewhat arbitrarily) two classes of individual --- (a) the 'numerous', many thousands or millions of which are required to build an individual of the next level, and (b) the 'not numerous', very few of which (in some cases even two) are sufficient for this purpose. And once this distinction is made, new patterns begin to emerge. We may note, for instance, that the human Pair (aa) constitutes along with the ultimate Pair (bb) a super-Pair; that the terrestrial Pairs (ba) (ba) are similarly matched by the celestial (ab) (ab); that the hierarchy thus divides itself into four vertical departments -- the divine, the celestial, the terrestrial, and the human -- with a marked central division between the concentric Earth, Life, and Humanity on the one hand, and the eccentric celestial units on the other. Here, at any rate, are hints of underlying order, of unsuspected cosmic polarities.

Or, leaving the question of number, we may look for some resemblance between the superior and the inferior member of a Pair --- if they are, in some sense, two aspects of one thing rather than two things, then it would be surprising to find no similarity.

(1) The members of the ultimate Pair, in spite of the fact (or rather, because of the fact) that they are absolutely different, are sufficiently alike to give plausibility to the recurrent heresy that they are identical.

° To give full weight at this stage to all possible objections to the schema, would (supposing I were capable of the task) not necessarily prove an advantage. The weather that strengthens the plant kills the seedling. Objections pressed too soon may prevent that very development which would in due season dispose of them. Henri Poincaré makes the point that if Newton had known as much as his successors about the motions of the planets we might still lack the law of gravitation. "The Truth", comments Whitehead, "must be seasonable." <u>Adventures of Ideas</u>, XVI. 3.



(2) Mach, Einstein, and others have suggested that when the physicist 'weighs' an electron (or similar particle) his measurements involve the mass of the universe: in fact it is perhaps as true to say that he is weighing the one as the other. \times (3) The likeness between the atom, with its nucleus and orbital electrons, and the Sun with its planets, is notorious. Rutherford showed that the ratio of the atom's diameter to the diameter of its nucleus is comparable with the ratio of the solar system's diameter to the diameter of the sun. Bohr found that the electron, in its journey round the atomic nucleus, like the planet in its journey round the sun, obeys the inverse square law; and soon was added the suggestion that, again like the planet, the orbital electron spins about its own axis. + It would be rash to say anything here about present atomic theory, but I think it is still true that (to quote Victor Hugo) the Sun and the atom "mutually attest each other". (4) Whether or not the molecule matches the planet in any significant respect, it is plain that Life or the Biosphere is like the cell in respect of the ceaseless and relatively free or irregular motion of most of its parts. Life as a whole and Life in miniature are alike in that each is a labile system, "a world of surfaces and streams". \otimes (5) As for the human individual and human society, their resemblance is striking and detailed enough to produce the elaborate analogies drawn by Spencer and Schäffle, by Hobbes and Swedenborg, and in fact by writers in every age.

These are no more than suggestions. But I have perhaps said enough to show that further work along these lines is likely to prove fruitful, even in the realm of 'horizontal' science. Once it is recognized that the members of a Pair may reasonably be expected to illuminate each other's nature, that the resemblances are by no means fortuitous, then many hints as to the direction of profitable future research are forthcoming. Science acquires a new instrument, of limited but appreciable utility. Mere analogy-hunting is worthless; but discerning the law that underlies the analogy, and employing one aspect of a thing to throw light upon a more obscure aspect, are nothing else than the well-tried methods of scientific research. Is it not likely, in fact, that a stratified science which continues to remain unconscious of (or at any rate to despise and neglect) its vertical correlate, will become progressively remote from reality, and so cease to advance at all? *

6. DIVERGING PAIRS AND THE REGIONAL SCHEMA.

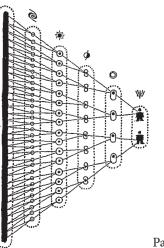
Leaving aside such speculations, there is much to be said that is reasonably certain. For example, the smaller end less inclusive the inferior member of a Pair, the bigger and more inclusive the superior member: the contrast between them -- the essential bifurcation of nature -- widens as we leave the familiar region of the human and of common sense, and go in search of something more fundamental. Always (it would seem) the law of symmetry holds: the greater we are, the less we are: our two aspects are perfectly counterbalanced. An invisible cord and pulley unite them, so that the ascent of the one is the descent of the other. Or, to change the figure, everything happens as if Alice were obliged always × Certainly we employ electrons to investigate nebulae --- a useful way of measuring the brightness of a nebula is by means of the photoelectric cell.

The following passage, though written long ago, is now truer than ever. "It is found that atoms give us information about the heavens, and that heavenly bodies, in their turn, give us further information about the atom.... Thus atomic astronomy has illuminated cosmic astronomy to a surprising and almost overwhelming extent. And cosmic astronomy is reciprocally beginning to teach us something about atoms.... Each (star) is a sort of cosmic atom." Sir Oliver Lodge, <u>Modern Scientific Ideas</u>, pp. 19, 72, 76.

In one of his last books, <u>The Astronomical</u> <u>Horizon</u>, Jeans drew several remarkable parallels between the very large and the very small. He attached significance, for example, to the fact that the ratio of the supposed original radius of the universe to the 'radius' of the electron (5.0×10^{39}) resembles the ratio of the supposed age of the universe to the time light would take to travel across an electron (4.2×10^{39}) . Other authorities, however, considered these parallels farfetched.

+ The spin of the electron, and of other particles, is a quantum-theory effect, and does not resemble in every respect the rotation of macroscopic bodies.

⊗ Cf. Sherrington, <u>Man on His Nature</u>, III. * I may add here that hierarchical individuals of integral status tend to reproduce in their structure the structure of the hierarchy as a whole. Particularly this is true of Earth: the interior is linked with the lower hierarchical grades, the surface with the middle grades, the atmosphere with the higher grades --- the regional system in miniature. The annular structure of the solar system is in some respects the reverse of this model: here remoteness means privation and inferiority. The structure of the human body, as Plato noticed, is hierarchical: what is higher in it tends to be higher in every sense. It is as if each level were necessary in order uniquely to show forth some peculiarity of the hierarchy as <u>a whole</u>.



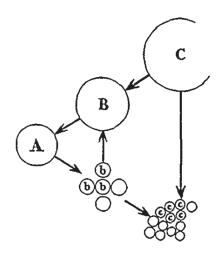
to take a bite out of <u>both</u> halves of the mushroom --- the half that makes her dwindle as well as the half that makes her grow.

Such is the order of our nature, whether we are considering it in a 'physical' or in a 'psychical' context. Thus the reason of which we are the vehicle is the faculty of (i) breaking up a concrete object (A) into parts or attributes (b,b,b,..) which, (ii) being common to a wider range of fact (B), (iii) link that fact (B) with the original object (A), thereby giving it new meaning. The more detailed the analysis (c,c,c,... d,d,d,...) the wider the synthesis (C,D,...): in short, they are a Pair. Whether it is a case of ourselves or our objects, growth means ungrowth. Our ungrowth is the discovery that we consist of infrahuman units; our growth the discovery that they are aspects of suprahuman units. In laying claim to our parts, we lay claim to their world, and the scope of the first is inversely proportional to the scope of the second. $^{\circ}$

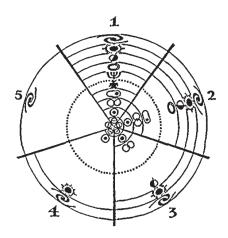
Alternatively, the superior member of a Pair may be described as the arena or field of the inferior members: it marks their boundary. Our lowest units, as thus linked with the highest, have the most extensive range. The sphere of our human activities is very restricted: beyond the narrow social field they are not legal tender. As molecular, we have more scope, and are in touch with Earth's molecules everywhere: by virtue of gravity, our slightest movement is of planetary scope. As atomic, we appear in a still wider context: for, as Faraday pointed out, "Each atom extends... throughout the whole of the solar system, yet always retaining its own centre of force." Finally, as at the Centre, we are ubiquitous.

(Let me translate these results into terms of our original schema of regions, by calling in traveling observers. In Part I, I employed a single observer, who started out from or approached my human body. But Part II has made clear the fact that my body is world-wide: here in Part III, therefore, it will be more appropriate to employ an unlimited number of traveling observers, to do justice to this greater body of mine by starting out from and returning to its Centres everywhere --- whether terrestrial, or solar, or galactic, or extra-galactic. Now these myriad observers, concluding their work and comparing their findings, discover that, while their maps of my regions are exceedingly varied, they are by no means chaotic. Generally speaking (there are, it is true, some exceptions) the maps reduce to five --- the first showing all my regions, the second all but the human Pair of regions, the third all but the human and vital Pairs, and so on to the fifth map, which shows only my electronic and galactic regions. Thus all five are symmetrical about the same axis, and all conform to the schema of hierarchical Pairs. The third, for example, shows no barrier between the molecular and planetary zones --- molecule melts into planet and planet into molecule directly, without any distinct intermediate stage. Similarly, the fourth map brings together atom and star; and the fifth, electron and nebula. In other words, each successive map records as a direct metamorphosis what in the previous map is shown as an indirect or mediated metamorphosis.)

There is still another way of formulating the facts --- a way which is of great importance for this inquiry. The hierarchy is a social organization, a society of societies of societies, in which membership is not



° Cf. William James, <u>Textbook of Psychol-ogy</u>, pp. 353 ff. Also W. E. Hocking, <u>The</u> <u>Self: Its Body and Freedom</u>, p. 122.

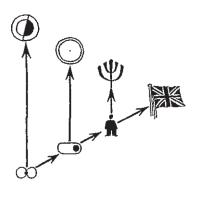


so simple as would at first appear. An inferior unit is primarily, and for the whole of its career, a member of the superior unit of the Pair (eg., an atom belongs to that great atom-society which is a star); secondarily, and perhaps for only a part of its career, it is also a member of its immediate hierarchical superior (as when the atom happens to belong to that small atom-society which is a molecule). Or, to reverse the description, a superior unit is in the first place a society whose members are the inferior units of the Pair; and in the second place a society whose members are its own immediate hierarchical inferiors --- thus Life is at once a community of cells and of species, and Humanity at once a community of men and of nations. And so there occurs throughout the hierarchy a fundamental and indispensable division of loyalties, a plurality of membership or of constitution, a service of two masters, in terms of which it is possible to account for a great variety of natural fact. * For instance, many complexities of human behaviour and experience arise from our double allegiance to the nation and to Humanity; again, our molecules are involved, not only in that vast system of social interchange which we call the cell, but also with that still vaster molecular society beyond the organism --- consequently we have weight as well as metabolism. This twofoldness lends interest and richness to hierarchical procedure, of course; but it is apt to lead to disaster, as on those occasions when loyalty to Humanity, involving disloyalty to the tribe, brings severe penalties; or as when a man falls over a cliff, and the Earth-loyalty of his molecules takes precedence over (and puts an end to) their cell-loyalty. Our parts are only temporarily subordinate, and are at any moment liable to show where their true allegiance lies. Indeed a human being is a veritable nest of Trojan horses.

7. THE PAIRS AND HIERARCHICAL PROCESS.

Throughout the previous chapters I have noted at every level what I have called the vertical two-way process, comprising a centrifugal (upward, integrating, anabolic) movement, and a centripetal (downward, disintegrating, katabolic) movement. But I have been deliberately vague about certain features of this process, postponing their discussion until all the members of the hierarchy had been reviewed, until the doctrine of the Pairs had been brought out, and the two-way process could be treated as a whole. And the chief question which I have put off till now is: do these centrifugal and centripetal trains of events always involve (so far as my own constitution is concerned) all my regions or levels, or is there instead some system of by-passing or short-circuiting, whereby regions or levels may be virtually abolished? And if such short-circuiting does occur, what are the laws and the limits of it?

This chapter has already supplied, in outline, the answer. Indeed there is abundant short-circuiting, and it proceeds between the members of a Pair --- vertically, net obliquely. It is a part of normal functioning, and anything but incidental. The reason for this is plain: two-way processes uniting the superior and inferior members of earlier Pairs remain as the necessary basis for two-way processes uniting the members of later



* Cf. Trotter, <u>The Instincts of the Hera in</u> <u>Peace and War</u>, pp. 47 ff, 57.

In the past 100 years or so, many philosophers have sought (and I think with considerable success) to interpret the universe along sociological lines. The concepts of law and freedom, of custom and initiative, have been most fruitfully transferred from the human social field to the cosmic. Charles Hartshorne (writing in <u>The Hibbert Journal</u>, Oct., 1945) in fact regards such 'social' interpretations as characteristic of the philosophy of our time. I would add that we have as yet scarcely begun to exploit them as we could. The 'law of double loyalty' which I propose here, is at any rate a minor contribution to the task.

It is a curious fact that science owes its success largely to its abandonment of the relatively scientific concept of vertical process for the relatively unscientific concept of horizontal process. The ancient notion of a stratified universe, with its divine upper layers united by descending and ascending processes to the baser levels, was (pace A. D. Ritchie, <u>Civilization, Science and Religion</u>, p. 44) true in essentials --- too true to be useful. What we now need to do is to take back to the old vertical science the knowledge gained by the horizontal method. Dante can furnish the general scheme:

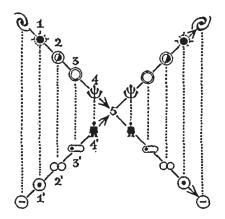
"Thus do these organs of the world proceed,

As thou beholdest now, from step to step; Their influences from above deriving, And thence transmitting downwards." (Par. II) But it is we who can, if we will, fill in the details. In this section, I begin the work; or at least provide a 'basis for discussion'. (Cf. Purg. XXX, on the "operation of the mighty orbs, that mark each seed to some predestined aim", and the "largesse of heavenly graces, which rain down from such a height as mocks our vision". Even in Hell there is vertical process: the infernal rivers, produced by human sins and tears, flow down the circles to Lucifer at the Earth's core. Inf. XIV.) Pairs. The recent depends upon the continuance of the less recent as its substratum: nothing is outgrown. The primitive physical processes must go on unremittingly beneath the biological, and the biological beneath the anthropological. In fact, it is somewhat of a rarity for a train of events in my greater body to emerge at the human level, instead of by-passing it. It is as if the extreme complexity of my physique were only possible because each Pair minds its own business, and lets the rest go by.

But common sense very justifiably calls for something less vague than this. What, in unambiguous language, are these vertical or Paired processes, and how do they -- how does their study -- help to co-ordinate our knowledge of natural fact? Now this is not the place for a long discussion of technical details belonging to many departments of science; but in order to show the kind of linked processes I have in mind, and to avoid the vice of abstractness, I shall in the remainder of this section furnish some illustrations.

I have already produced evidence to show that the Pairs follow a genetic order: the larger aspects of man's evolution may be described as the differentiation of the superior members in due succession, and the concurrent integration of their inferior members. I now add that it is one of the major theses of this book (a thesis which will be further developed in Part V) that the main stages of man's total evolution are recapitulated by the main stages of the processes whereby he is thereafter supported --- that, in brief, the order of development is the order of the maintenance of what is developed. The historical stages of my evolution are solar, terrestrial, vital, and human; and these also are the stages of the much swifter events by virtue of which I now live. Thus I am maintained by (1) the Sun's radiant energy, which, conditioned and absorbed by the outer planetary layers, becomes (2) Earth's; a proportion of this terrestrial energy is (thanks to chlorophyll) incorporated in (3) Life, and then (undergoing suitable transformation) in (4) Humanity which feeds on Life; finally a portion (still further modified) falls to me, (5) the individual man. But this account, paying regard only to the superior series, calls for its complement in terms of the inferior series. I am maintained by the energy exchanges of (1') solar atoms, in the course of which energy is liberated --- energy which is, in part, incorporated by photosynthesis in (2') certain complex terrestrial molecules; these go to build (3') plant and animal cells, some of which are eaten by (4') men, who thereby acquire energy to prepare that portion which falls to (5) the individual. Observe how the differentiation of the superior member and the integration of the inferior members keep pace.

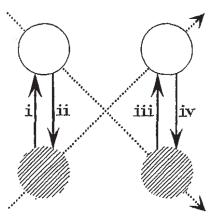
But the Paired processes do not come to an end at the point of their intersection. The incoming and convergent Pairs are matched by the outgoing and divergent Pairs, for there are no reservoirs for the storage of energy at the human level. I have to pass my energy on, in two directions simultaneously. It is taken up by my inferior cellular and molecular activities, and also by my superior activities as I further the development of Life and Earth and Sun. This study may perhaps be cited as a case in point: its double aim is the suprahuman one of enhancing the selfawareness of the superior series, and the infrahuman one of getting a living --- that is, of maintaining my cellular and molecular processes unMy treatment of process as at once hierarchical and regional has affiliations with Aristotle's regional scheme of the elements and their movement up and down, to and from the centre of the Earth. Each element (earth, water, air, fire, and, in the heavens, celestial matter) has its proper region; and vertical movement occurs when a body is out of its element --- it finds its own level. Of course Aristotle's details do not hold good now, but there is much more truth in his picture of vertical two-way process than this horizontally-minded age is ready to allow.



impaired. In other language, both series are metabolic: each hierarchical individual is at once the scene of upward or anabolic and of downward or katabolic processes. And metabolism (in this extended sense) proceeds by Pairs: the putting together of the inferior members is the division of the superior member, and <u>vice versa</u>.

The real nature of the connection between the upper and the lower series has still to be shown. What, precisely, are the links that bind the Pairs? The answer that is given depends upon which Pair -- physical or chemical, vital or human -- is taken as furnishing the clue to the others. Perhaps the simplest answer is in terms of energy exchanges. If the superior member is regarded as an energy system whose components are the inferior members, then their joint history may be described as the history of energy passing from the components to the system as a whole, and from the system as a whole to the components. The inferior members alternately supply their superior member with energy, and derive energy from it. On the converging side, the rule is that the simpler or more primitive inferior members, in the course of their integration, release energy to the superior member; but beyond a certain point of development this process is reversed, and further integration of the inferior member absorbs energy from the superior member. On the diverging side, the rule is that the more complex inferior members, in the course of their breaking down, release their stored energy to the superior member; but after a certain point is reached the process of further breaking down absorbs energy from the superior member. Thus a Pair may be said to show four energy phases, which, though they succeed one another in time, also coexist in time. I call them (i) the phase of energy-releasing integration; (ii) the phase of energy-absorbing integration; (iii) the phase of energy-releasing disintegration; (iv) the phase of energy-absorbing disintegration. Let me now proceed to some examples of these phases.

(a) <u>The Whole-Centre Pair</u>. The pattern of the religious life is one of alternating activity and passivity, of giving and of taking, of externally directed effort and of withdrawal. And, if we take outstanding saints to be safer guides than lesser men (whose natural religious development is likely to be arrested at one phase or another, and obscured by the irrelevancies of other interests) then we find that a characteristic sequence is: (i) a phase of immature outward activity; (ii) a withdrawal from the sphere of action and perhaps from all human society, a period of retreat and remarkable spiritual growth, of great progress in the inner life; (iii) a return to the world and to action --- the potential accumulated during the second phase is now expended; (iv) this third phase of active works is apt (particularly in the West) to continue as long as health and advancing age allow, but sooner or later, and if only at death's door, the most energetic saint has to accept the inertia of the fourth phase and the second withdrawal. These four phases succeed one another in the course of a lifetime, but they must also be near contemporaries, for the religious life demands their frequent recapitulation. If he is to renew his fund of spiritual power, the active who gives must at intervals become the contemplative who receives. And the contemplative who eschews all outward service eventually finds himself involved in the law of dimin-



Arnold Toynbee (A Study of History, iii. XI) makes much use of the concept of Withdrawal-and-Return, which he finds exemplified in such figures as St Paul (who, during the three years between his conversion and his ministry, retired to Arabia), St Benedict and St Gregory the Great (whose withdrawal, in both instances, lasted for the same period of three years), Gautama Buddha, Mohammed, and Dante. Other examples are the four years' mortification of St Catherine of Genoa, the ten years' solitude of Nietzsche's Zarathustra, the exile of Moses in the land of Midian, and, at a later stage, his withdrawal to mount Sinai. And there is, of course, Jesus' sojourn in the wilderness, before taking up his ministry. Whether the withdrawal is brief or extended, physical and obvious or psychical and unobvious, it seems to be an important prerequisite of the active religious life at its very best. "All great undertakings are matured in solitude," writes F. A. Gasquet. "It is not in the hurry and confusion and excitement which accompany execution, but in the stillness and calm silence of preparation, that the strength which does great deeds is accumulated and concentred." Introduction to C. de Montalembert, The Monks of the West, London, 1896. Cf. Dr Margaret Smith's Studies in Early Mysticism in the Near and Middle East, II; also John Macmurray, The Structure of Religious Experience, p. 88.

ishing returns.

We are all capable of the Whole, because we are all at the Centre. \times But since we are so slow to realize our capability, we need to go to experts for information about the ultimate Pair, just as we need to go to experts for information about the Galaxy-electron Pair. In so far as the lives of the greatest saints are a sharing in the divine life, they supply valuable evidence of the nature of that life and its rhythms. Doubtless the ultimate Pair with its 'processions' is out of time and therefore above all process and change; nevertheless for us it wears a temporal aspect and reveals itself historically --- whether on a cosmic scale as the descent-ascent of the creating Word and then as the descent-ascent of the saving Son; or on a microcosmic scale, as in the systole and diastole, or inbreathing and outbreathing, of the soul's communion with God. In short, however we consider the ultimate Pair, we find indications that our 'energy phases' apply to it, though in a unique manner. And indeed it would not be surprising to learn that the Whole-Centre is the ideal of the Pairs, exhibiting their essential characteristics super-eminently.

The phases of 'energy exchange' are found at every stage along the way to this goal. Poet and worshipper, scientist and philosopher, whatever the Pair into whose life they enter, are subjected to the rhythms of that Pair. Typically, a period of evident growth and creativity is followed by a period of retreat, of quiet absorption and integration without marked external results; and then by the main creative phase, the outpouring accumulated energy, * till the fourth phase -- the phase of final withdrawal -- sets in. Whether it is a question of scientific discovery, of poetic inspiration, of mystical illumination, or of philosophical insight, the procedure is alternating work and rest, energy-release and energyintake. And (following the rule of this inquiry) I take this alternating procedure to be true objectively rather than subjectively --- characterizing the known, and no mere idiosyncrasy of the knower. If, moreover, the physical and the psychical are two sides of one reality, we may expect to find our four phases exemplified in the processes of the physical world no less than in what we call the life of the mind. To these processes, then, let us now turn.

(b) The Sun-atom Pair. (i) When light atomic nuclei join forces to become heavier nuclei, the latter are, as a rule, of rather less mass than the total mass of the original particles; and the result is that there is energy to spare. The surplus mass appears as radiation. Thus it is believed that the solar light and heat are derived from the energy released as hydrogen nuclei are built up, by a round-about way, into helium nuclei. (ii) But there are the heavier atoms, of which many kinds are to be found in the Earth, to be accounted for. Presumably at some stage in its career, before the development of the solar system, the Sun -- whether by the explosion (as a supernova) of its companion, or by less cataclysmic means -- provided the conditions in which very heavy nuclei could be formed. Such nuclei tend to be more massive than the sum of the masses of the lighter nuclei out of which they are built; accordingly, in their making, energy has to be supplied from outside. ° (iii) And this energy is released when the nuclei disintegrate. For instance, it is supposed that the periodical heating of the planet's interior (giving rise to rhythmic adjustments of × The hierarchical symmetry of all real progress, as of its goal -- the ultimate Pair -- is well brought out in the following: "To every degree of ascent on the ladder of being corresponds subjectively a deeper psychological function, which apprehends the higher level and is united with it. The soul is therefore united with God through her profoundest function, or more truly the profound root of all her functions, namely, the centre." E. I. Watkin, <u>The Bow</u> in the Clouds, p. 144.

* For instances of 'incubation' followed by inspiration, see Graham Wallas, The Art of Thought, and Dr Rosamund Harding, An Anatomy of Inspiration. On the uniformity of the phases of the mystical life (including an initial phase of conventional piety and good works, followed by a phase of withdrawal) see Robert H. Thouless, An Introduction to the Psychology of Religion, pp. 206 ff. In William James' classic account of the religious consciousness, four principal phases are noted: (a) the religion of healthy-mindedness, of the once-born; (b) the sick soul, the divided self, and the process of unification; (c) conversion, followed by the mature religious life of the twice-born; (d) mysticism. These correspond roughly to our four phases of development by alternating action and withdrawal from action; but of course the majority of us are cases of arrested development, held up somewhere short of the fourth phase. The Varieties of Religious Experience, passim.

° For instance, a nucleus of oxygen, consisting of eight protons and eight neutrons, weighs roughly 1% <u>less</u> than the combined weight of the separate protons and neutrons. A nucleus of uranium, on the other hand, though it also (in common with all nuclei) weighs less than the sum of the weights of its elementary particles, weighs <u>more</u> than sum of the weights of the two fragments into which it can be broken. And these discrepancies of weight, or rather mass, are (on Einstein's theory) equivalent to very large discrepancies of energy. the crust) is due to the energy set free by spontaneously disintegrating atoms of high atomic weight. And now, in the fulness of time, this release of energies stored during the second phase has become a deliberate solar function, of immense importance for the future. (iv) But there are probably, in practice, strict limits set to the use which can be made of the higher elements as a source of power. They are difficult to collect in any quantity, and -- need I add? -- dangerous. And in any case the contribution of atoms to solar development will presumably be ended by the Sun itself, as Earth is engulfed again.

(c) <u>The Earth-molecule Pair</u>. (i) The synthesis of the simpler molecules is generally accompanied by the evolution of heat: that is to say, the sum of the energy content of the separate molecules is greater than that of the compound they form, and the difference is surplus. × For example, the majority of the elements combine directly with oxygen, evolving heat as they do so. × (ii) The building up of various very complex organic molecules, notably in the case of photosynthesis, absorbs energy from the environment, instead of releasing it. (iii) And it is, of course, for the sake of appropriating this incorporated energy that we feed on the molecules of vegetable matter, breaking them down into smaller and more stable units. (iv) But disintegration beyond a certain point is apt to take in instead of emitting energy: the process is, as the chemists say, likely to be endothermic and not exothermic. *

(d) The Life-cell Pair. (i) The lower, more primitive, organisms are extremely prolific of cells (whether in the shape of eggs or seeds, or in immense populations of larvae which never mature, or in vast surpluses of green leaves); and these cells supply Life with that overplus of energy which makes possible the differentiation of higher and less prolific species. + (ii) These later metazoa -- including the herbivores, the carnivores, and man -- are parasitic upon the earlier forms of life. They subtract energy from the living whole, and consequently (like the higher atoms and the higher molecules) they are relatively few -- a privileged upper-class minority. (iii) Yet the energy so withdrawn from Life is in large part returned: the course of evolution is changed, and the whole economy of Life is drastically reorganized, by the activities of the higher metazoa. (iv) But there are, it seems, limits to this contribution. The higher individuals and species disappear or become senescent; and this may happen to man himself. In any case, his piecemeal exploitation of Life is apt to prove self-defeating. At last he is coming to recognize that 'the intelligible field of study' is Life as a whole: and this recognition (notably in the new science of ecology) is nothing else than Life's unitary self-consciousness asserting itself. In the fourth phase, it is the superior member of he Pair which counts.

(e) <u>The Humanity-men Pair</u>. (i) The more primitive types of human organization, consisting of small-scale, scattered social units, of a population based on the land and without great distinctions of wealth and culture, have from time to time been stimulated to activity and growth. A civilization is born. Great energies are liberated as integration proceeds, and social units grow larger and more complex. In some respects society is organized more economically, as when the new grouping and division of labour make for increased productivity. (ii) The second phase is one

× Gold is an exception, its heat of oxidation being negative. There are a number of cases of the formation of fairly simple compounds with the absorption of heat (e.g., hydriodic acid HI, acetylene C_2H_2 , nitrous oxide N_2O); but in many instances the negative heat of formation is due to the fact that, before the compound can be formed, the molecules going to form it are broken down into their constituent atoms and the heat absorbed in this process is greater than the heat evolved in their resynthesis in the new compound.

* It is true that, to decompose ordinary compounds, it is often necessary to raise them to high temperatures; nevertheless the decomposition itself absorbs only a small proportion of the heat that has to be applied to bring about decomposition.

+ Elephants rarely breed before they are 20 years old, and a pair are not likely to produce in their full lifetime (of a century or more) any more than six offspring. On the other hand, a bacterium can divide every half hour.

The genesis of a civilization, according to Arnold J. Toynbee, is to be found in the creative meeting of a challenge --- the challenge of new ground or of a hard country, of life in the tropical jungle or the desert, of the sea or a river valley, of constant attack by neighbours or of a single crushing defeat. Once the original external challenge has been satisfactorily met, the obstacles which stimulate further growth are henceforth internal rather than external. of further growth, but also one of withdrawal: responses are now made to challenges which are internal rather than external. The processes of integration (which may take the form of increasing urbanization, the establishment of strong centralized government, the evolution of a large and cultured leisure-class, and great advance in the arts) absorb most of the available energies. (iii) Threats from outside, 'a time of troubles' (to use Toynbee's phrase), and failure adequately to meet new challenges, usher in the third phase, which is one of breakdown, loss of social unity, and the release of accumulated energy. This energy shows itself in the creation of vast empires or universal States --- "the mighty works that are the by-products of social disintegration". ° (iv) Empires are notoriously perishable. The fourth phase is marked by further breaking down, by uncreative disintegration: energy is now taken from the environment rather than expended upon it.

These four phases, which are most familiar to us in Roman history, are also exemplified (as Toynbee's great work has shown) in the history of numerous civilizations. But they are contemporary as well as successive: just as higher atoms and molecules and living creatures exist alongside the lower, so the culturally advanced exist alongside the culturally primitive. In fact, the necessary division of labour in society rests chiefly upon the fact that its members virtually belong to different stages in that society's history: the majority are extraverted and, energetic representatives of the first phase; a smaller number, introverted, withdrawn, and outwardly inactive, are highly developed and potentially powerful representatives of the second phase; the representatives of the third stage are actives, but of a far more complex type than the actives of the first stage; and finally there is the disillusioned, 'what's-the-good?' type, whose inactivity arises from exhaustion, and not (as in the second type) from the need to be rather than to do. As the four phases of social development succeed one another, each of these human types becomes the dominant type in turn, but all four coexist throughout --- in their rudiments, at least.

Let me now try to sum up the results of this investigation. In each of the Pairs I have examined, the four phases are discernible:---

(i) <u>The phase of energy-releasing integration</u>. The initial stages in the integration of the inferior members may be described as measures of economy and consolidation. + In the phraseology of physical science, they are the achievement of a new stability by releasing surplus energy. In everyday language, they are the growing child 'letting off steam'. In officialese, they are the merging of departments, leading to the release of redundant officials, and the more efficient organization of personnel. In the 'regional' terms of this book, they are the rearrangement of units in more compact patterns, so that their mutual range is, by and large, reduced, and there is energy to spare for external activity. *

(ii) <u>The phase of energy-absorbing integration</u>. But soon a law of diminishing returns comes into play, and the integration of the inferior members beyond a certain point ceases to make for economy within and energy without. Organization now becomes excessively centralized, top-heavy, and extremely complex; and internal energy builds up at the Gibbon, of course, regarded the Age of the Antonines as the peak of Roman civilization, but Toynbee looks upon it as already an age of disintegration: the external unity of the Empire is no substitute for lost social unity.

° Toynbee, <u>Op cit.</u>, Abridgement by D. C. Somervell, p. 559. I should make clear that, while I have made much use of <u>A Study of</u> <u>History</u> in this section, I have used it in my own way and for my own purposes: I do not pretend to give any kind of summary of Toynbee's argument.

The four phases are also abundantly exemplified in the life of the individual man. The externally directed energies of childhood are followed by the withdrawal and internal development of the adolescent; and the externally directed energies of the adult by the withdrawal and quiescence of the old man. The rhythm of work, rest, work, rest, is indeed a multiple one, applying alike to the day and the week, to the year and the lifetime.

+ Progress, in this phase, often takes the form of simplification, or what Toynbee calls 'etherialization'. Highly inflected languages are made workmanlike by the increasing use of auxiliary words; science economizes her hypotheses; dress and customs are made more practical.

* For instance, when an atom emits a quantum of energy, one of its electrons jumps to a smaller orbit; and when it absorbs a quantum of energy, one of its electrons jumps to a larger orbit. In Chapter IV I interpreted the atom's energy in terms of its electrons' estimate of the nucleus, and this estimate depends upon their range --- i.e., the radius of their orbits. expense of the energy of the environment. Instead of further integration leading to the redundancy and dismissal of functionaries, it calls for the engagement of still more; instead of the mutual range of units being reduced or remaining constant, it is on this average increased, as more and more gather round each nucleus and fill to saturation all the nearer regions of observation. The inferior member attains the peak of its development.

(iii) <u>The phase of energy-releasing disintegration</u>. Extremely complex units, nearing the upper limits possible within their hierarchical rank, have great stores of energy which is imperfectly incorporated. Whether they are radio-active atoms, protein molecules, giant aggregations of cells or of men, great human pioneers who have prepared themselves in retirement for their mission, or what we call very highly civilized men and women; they are essentially unstable, and in that instability lies their effectiveness. The liberation of their energies, sometimes with explosive violence, ° sometimes with the control of creativity at its finest, is inevitable, and it goes on until equilibrium is restored between the inferior member and the superior member of the Pair.

(iv) <u>The phase of energy-absorbing disintegration</u>. Or rather, just as the initial phase of the integration of the inferior members goes on, as if by its own momentum, far beyond the point when there is equal giveand-take between themselves and their superior member, so also the initial phase of the descent of the inferior members overshoots its mark, and goes on to the final phase when energy, instead of being discharged, is once more taken in.

This too-summary treatment of an immense topic (some aspects of which will be more adequately dealt with later on) is included in this place in order to illustrate how the concept of the Pairs, with their vertical processes, serves to coordinate data that are at present chaotic. It is true that the details I have furnished are incomplete, or (where not incomplete) vague, or (where not vague) disputable. But at least we have here some possible points of departure for the new hierarchical science. Doubtless no amount of taking thought can as yet patch up the weak places in the schema, or complete the evidence for its validity; but this fact -- provided always that the schema is accepted in principle -- so far from damning the schema, is a recommendation. If it were already a complete nest of pigeon holes, each filled to capacity with its appropriate empirical datum, then its value as an instrument would be negligible. The gaps that used to confront us in the Periodic Table of the Elements did not invalidate it: quite the contrary, they advised us what to look for, and even enabled us to predict in some detail the characters of the missing elements. In the valid general pattern, the hiatus becomes an organon. The table of the Pairs with their four phases (having, as I believe, proved itself true, on the whole and subject to minor adjustments) may be expected not merely to show up some of the blank spaces in our knowledge, but also to suggest the sort of thing which is likely to fill them.

° This third phase is typically one of chain reactions --- in nuclear physics (atom bombs, after all, are not 'unnatural' or 'wild' phenomena), in explosives of many kinds, from trinitrotoluene to high-octane fuel, in epidemics, in population growth, and in revolutionary movements. At all the levels -- atomic and molecular, cellular and human -- the same type of 'infectious' energy-releasing phenomena are prominent, and are capable of the same mathematical treatment.

The law of the four energy-phases may be regarded as a re-statement of the law of the spindle --- see Chapter IV. \$11, and Chapter X. \$3. According to the latter law, an observer retiring radially through a region finds the object increasing in scope or intensity, and then falling off; if he now changes direction and approaches the Centre, he finds the object first increasing and then decreasing.

8. MACROCOSM AND MICROCOSM.

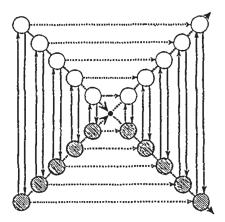
Where, exactly, do I stand with regard to the Pairs and their processes?

I stand at the confluence of the ascending and descending streams of events, at the very centre of the human region. Here I am like a policeman on duty at the central cross-roads of a town, directing up-traffic and down-traffic. The flow of vehicles here, however, is very small compared with the total, because the town is furnished with an elaborate system of by-passes to divert the traffic; all these by-pass roads and their crossings lie within the boundaries of the borough and are controlled by the borough police, but they are not the present concern of the constable on point-duty at the centre. Now let him be promoted to the rank of chief of police, and at once the whole traffic system is his concern. So with myself. I start off as conscious only of the two-way flow that is obviously my business here: the rest is external and not my business. But step by step I am promoted to a consciousness of that immense system of processes which is my total constitution. Of course this awareness is not my private property, or anything else than the Pairs' own self-consciousness.× My interest in human and vital and telluric history, and my hopes and fears for the future of Humanity and Life and Earth, are theirs --- mine also, no doubt, but not mine as a man. My description, in the previous section, of the vertical processes of the Pairs, is a series of inadequate excerpts from their autobiography. This inquiry into my nature is necessarily, in so far as it means anything at all, their inquiry into their nature. *

But common sense tells a very different story. I am, or at any rate I <u>include</u>, (says common sense) inferior members of every Pair, but I am <u>included in</u> the superior members. Thus, while all six Pairs are well represented in me, they are in the main external. I take a selection of the inferiors of the Pairs to be myself, and the rest to be my environment. If there is any question of an autobiography (common sense goes on) it is the work of these selected inferior members, and certainly not of the superior members.

It is the function of common sense to bisect the Pairs $^{\circ}$ --- a necessary function, so effectively performed that their very existence (which ought to be the most obvious thing in the world) is almost always hidden from us. But the bisecting line is an imaginary one: macrocosm and microcosm must be distinguished, but they can never be divided. For neither is anything without the other. There is a sense in which, when claiming for myself the inferior members of all the Pairs, I claim along with them the superior members, though I do not yet prefer my claim. It is not, in fact, untrue to say that to be a man is to be Humanity, and to be atoms is to be the Sun, and to be the Centre is to be the Whole --- like all profoundly important truths, it can be dangerous and lead to the wildest errors, but that is no excuse for suppressing or repressing it.

And, like all such truths, it is part of our ancient heritage, and, in some form or other, perennial. The doctrine of man the microcosm, of the detailed correspondence between the inner and the outer worlds (with the corollary that nothing is alien to the self) is one of those universal beliefs, at first little more than blind intuitions, which science



 \times The fact that our experience is closely linked (if not identical) with that of the suprahuman individuals is implied in the words of St Paul: "... to the intent that now unto the principalities and the powers in the heavenly places might be made known through the church the manifold wisdom of God." <u>Eph</u>. III. 10. (R.V.) The church is either cosmic or no church at all. It is just as truly telluric and solar and galactic as it is human; and its worship ascends through all the suprahuman hierarchical grades: its worship is theirs. When the sense of the cosmic importance of religion is lost, religion becomes trivial, selfish, parochial.

* "Nature tells everyone that we can only be heavenly by a spirit derived from Heaven, as plainly as it tells us that we can only be earthly by having the spirit of this world breathing in us." William Law, <u>Two</u> <u>Answers to Dr Trapp</u>, Hobhouse, pp. 31-2).

° "We divide

This apple of life, and cut it through the pips,--The perfect round which fitted Venus' hand Has perished as utterly as if we ate Both halves."

Elizabeth Barrett Browning, 'Aurora Leigh'.

Plato's Demiurge, having created the celestial bodies, leaves to the gods the task of moulding mortal bodies and the mortal parts of the soul. This they do <u>using as</u> model the revolving circles of the heavenly <u>bodies</u>. All I am doing in this chapter is to reinterpret this profound Pythagorean doctrine. See <u>Timaeus</u>, 42 E, 43.

does nothing but confirm and refine. Cosmic symmetry, and in effect the doctrine of the Pairs, was the guiding principle of the alchemist ---witness his favourite dictum: 'as above, so below'. It is prominent in the cult of 'signatures' in the 16th and 17th centuries. Paracelsus, Weigel, Sebastian Franck, William Law, and Sir Thomas Browne are representative of a host of writers who (at their worst childishly superstitious, at their best not unworthy disciples of Plato) were beguiled by 'the philosophy of Hermes Trismegistus' that this world is a picture of the other world; and indeed the same 'philosophy' survives to this day, though degraded almost beyond recognition, in certain varieties of occultism. If there is a doctrine which poets everywhere and in all ages are driven to celebrate and periodically to rediscover, it is this doctrine of correspondences.

> "What if earth Be but the shadow of heaven, and things therein Each to other like, more than on earth is thought?"

asks Milton's angel; ø and Meredith's command is that we shall "wing our green to wed our blue", $^{\circ}$ that our earthly part shall rise to union with its heavenly counterpart. Rilke puts the same thought the other way round×---

"O, the world's soul will never be united with mine, till what appears outside me, as though it always meant to be inside me, delightedly alights in me!"

It was the concern of the Yin-Yang experts (dating from the 3rd century B.C. and perhaps earlier) to observe how the complementary forces of Heaven and Earth mingle in a single cosmic harmony which sustains all things: thus in Spring "the vital energy of Heaven descends, the vital energy of Earth ascends, Heaven and Earth are united, and the plants and trees put forth their shoots". + This notion of universal symmetry, of duality-in-unity, has ever since had a profound influence upon Chinese thought and the Chinese way of life. And now, so far from dying out, it has spread to the West, where, notably in the Jungian school of Analytical Psychology, it is showing vigorous (if somewhat restricted) life. * (For example, Dr Gerhard Adler, † the well-known analyst of this school, having described a patient's dream of a riderless horse which the dreamer has not yet been able to mount, makes the following comment. "One part in the absence of the other is, in its deepest meaning, unfinished and in need of completion. Both parts possess a meaning of their own, but both together connote something other and greater than the mere sum of their separate entities; horse plus rider, ruler plus people, Yang plus Yin: something other and greater than their sum, namely the union of the two, an indestructible unity which is actually conditioned by their mutual interdependence.... The horse is seeking his master, the rider belongs to his horse. It is precisely this relationship which constitutes a dynamic force, i.e. when one component is posited, the other immediately springs to mind, even if it only exists as latent energy. And it is precisely when this state of dynamic tension occurs and each component is straining to join its other half that the critical moment has arrived when consciousness will produce a cure.") The fact is that (to revert to the language of this book) it is no mere intellectual exercise to erase the common-sense line bisecting the Pairs: so long as that division is allowed to remain, we are invalids and unwholesome. ϕ

The Egyptian astrologers made the various parts of the human body correspond with the constellations. Thus the Ram was lord of the head, the Bull of the neck, the Twins of the arms and the legs, and so on. Swedenborg develops the fantasy at immense length: "There is also a complete correspondence between heaven and man; for there is not a single community in heaven which does not correspond to one of the members, viscera, or organs in man." True Christian Religion, 65. Islam has the same idea: "An important part of our knowledge of God arises from the study and contemplation of our own bodies," says Al Ghazzali. "Man has been truly termed a 'microcosm', or little world in himself, and the structure of his body should be studied not only by those who wish to become doctors, but by those who wish to attain to a more intimate knowledge of God." The Alchemy of Happiness, I.

ø <u>Paradise Lost</u>, V.

° 'Wind on the Lyre'.

× <u>Later Poems</u> (trans. J. B. Leishman), p. 60.

+ The <u>Yüeh Ling</u> in the <u>Record of Rites</u>. (E. R. Hughes, <u>Chinese Philosophy in Classical Times</u>, p. 221.)

* Cf. C. G. Jung, <u>Contributions to Analyti-</u> <u>cal Psychology</u>, p. 123.

† <u>Studies in Analytical Psychology</u>,pp. 135 ff. Cf. p. 100 --- "The 'Beyond' is the repository of the ultimate secrets of heaven and hell, of light and darkness, above and below, positive and negative --- in other words it is the world of the collective unconscious from which we all originate."

φ It is instructive to note that Mr Christopher Dawson, whose field of study and point of view are so different from those of Jung and his followers, comes to a conclusion which is basically the same as theirs. Dawson writes: "For the progressive intellectualization of the material world which is the work of European science is analogous and complementary to the progressive spiritualization of human nature which is the function of the Christian religion. The future of humanity depends on the harmony and co-ordination of these two processes." <u>Progress and Religion</u>, p. 247.

Nor will it do to avoid the dividing line by attending only to what lies above it. The suprahuman is not enough. High, luminous, spiritual things are miserably insipid without their dark and subterranean counterpart, and it was no mere morbid fancy which led mediaeval man to invent a hell with as many storeys below earth-level as heaven had above it. * For he stands at every level. Because man himself is symmetrically as deep as he is high, ° the result of his denial of hell is his loss of heaven, and the general impoverishment of his nature. As above, so below --- to fill up the hollow is to bring down the height, and flatten out existence. It is exceedingly appropriate that the cathedral should have its crypt, and the city its catacombs. Mythologically, the ziggurat, or great pyramidal temple of Babylonia, was the lost ancestral mountain, built over a vast cave which was the abode of the dead, and the resting place of the sun and the fertility gods in their night or winter sleep. × Thus in a single edifice are included (we may venture to say) the superstructure of the 'conscious' and its equal and opposite substructure of the 'unconscious'.

Nowadays, our religious monuments are rarely cosmological. But that is not because we have learned to get round or get rid of the law of our symmetrical nature, but because our true temples are our laboratories --and laboratories are cosmological enough. For science, as I have pointed out, has to climb down in order to rise: her procedure, though not as yet her fully conscious procedure, is to work by Pairs, symmetrically. Even her equipment is bound to reflect this symmetry. Consider that method of growth called artificial, whereby man adds exterior organs to his body and so gains other levels of his nature. This growth is of two kinds --inwards, to the increasing fineness and precision of his lower levels, and outwards, to the increasing power and scope of his higher levels: and these two -- ingrowth and outgrowth -- keep pace. The scientist's apparatus, like his thought, like himself, is bifurcated: simultaneously it raises him to the status of the superior member, and reduces him to the status of the inferior member, of his chosen Pair. De Fonbrune's pneumatic micromanipulator, which actually scales <u>down</u> his movements from man-level to cell-level, has for counterpart the world-wide community of biologists in field and laboratory who, learning of and applying De Fonbrune's researches, scale up his movements from man-level to the level of Life. Similarly it is by means of the superfine adjustment of the Fraunhofer micrometer that the astronomer measures his vast distances. To step off this shifting planet on to some more stable platform, he goes by way of the diminishing circles of the gyroscope, no less than the increasing circles of the heavens. But it is unnecessary to multiply instances when the principle -- the principle of symmetrical ingrowth and outgrowth -- is so evident.

In fact, however, perfect symmetry is exceptional +: our balance is always being lost, and restored, and lost again. A great deal of the philosophical controversy of the past can be shown to have been an argument (I mean, in principle and not, of course, ostensibly) between those who stood for the inferior members (e.g., the nominalists) and those who stood for the superior members (e.g., the realists) and those who stood for the Pairs, doing equal justice to both inferior and superior members. For example, the nominalists believed that the 'universal' * Balance or counterpoise was characteristic of Egyptian cosmology. <u>Nut</u>, the Heaven above the Earth, had its <u>Naunet</u> or counter-heaven below the Earth; <u>Shu</u>, the airy region between Earth and Heaven, was balanced by <u>Dat</u>, the realm of the immortal dead, between Earth and the counter-heaven. Earth itself, <u>Geb</u>, rested on <u>Nun</u>, the primordial waters.

° Cf. Virgil:

"Quantum vertice ad auras Aethereas, tantum radice ad Tartara tendit."

<u>Aeneid</u>, IV. 445-6.

It was one of A.E's most persistent themes "that every ascent of the soul implies the power and willingness to accept a corresponding descent." <u>The Living Torch</u>, p. 40.

× The Gate of Horn, by Gertrude Rachel Levy, pp. 168 ff. The ziggurat may, in actual fact, have been built over a cave or tomb, which was symbolic of the womb of the Great Mother. It was a kind of Jacob's ladder giving access to the divine upper regions, "a true Tower of Babel, designed to reach the sky, 'coextensive with the earth' and founded upon the Abyss, for upon its summit was the booth or chapel in which the God communed with man A text from Sippar calls the temple-tower, with its culminating shrine, 'heaven-high', in a double sense, meaning also that it resembled the structure of the upper world. For the pattern of all temples was laid up in heaven; Gudea is shown in a dream the temple plan pricked out in stars ... " And in a footnote Miss Levy adds: "Classical authors describe the stages of the Ziggurat of Babylon as coloured to represent the various Worlds. The Ziggurat of Borsippa was called the seven rounds of Heaven ... " Cf. E. Burrows, 'Some Cosmological patterns in Babylonian Religion', in S.H. Hooke, The Labyrinth (1935), pp. 50 ff. Probably the pyramids, and the holy mountains of the Semites (e.g., Horeb, Sinai, Hermon, Sion, Lebanon) had a somewhat similar cosmological significance. Again, one of the Mexican emperors was said to have built a temple of nine storeys to represent the nine heavens. On holy caves and pits, see W. Robertson Smith, The Religion of the Semites, pp. 198-9.

+ "To cross that red mid-region between heaven and earth is to undertake labours greater and more painful than those fabled of Hercules." A.E, <u>The Interpreters</u>, p. 153. <u>mankind</u> has no existence outside our thought, whereas the realists believed that there is a single common nature of mankind in which all individual men somehow share. ^o These doctrines are apt to carry with them certain practical consequences. Thus the former tends to extreme individualism, to denial of the unity and brotherhood of man, to anarchy and schism; the latter to a denial of the individual's importance in favour of the community's. And each (more particularly in its extreme form) is a perversion of the truth for the same reason --- it neglects the symmetry of our nature, setting up the half of it as the whole. The doctrine of the Pairs is a political safeguard as well as a philosophical eirenicon.

But it is the mystic who, more than any other, needs to observe this symmetry, for the measure of his ascent towards the Whole is his descent towards the Centre. Whether he realizes the fact or not, he is obliged to work by Pairs, rising to the superior member by sinking to the inferior. By no means the easier half of his problem is how to make less of himself, how to approach, by degrees, his own nothingness. × The Sufi must pass over the fires of Hell by the bridge of Sirāt, which is finer than a hair and narrower than a knife-edge. To rise to the exalted station of immortality, says Attar, "Clothe thyself with the garment of nothingness and drink the cup of self-annihilation. Cover thy breast with nothingness, and draw over thy head the robe of non-existence. Set thy foot in the stirrup of complete renunciation and, looking straight before thee, ride the steed of not-being to the place where nothing is." * Mystics and non-mystics, we all find ourselves half way up the hierarchical ladder, with permission to climb to the top rung provided we go down to the bottom. In other words, the expanding superior units, cuckoo-like, crowd out the inferior units by degrees, till in the end there is no room left for them at all. +

In this contraction there is nothing forced and unnatural. On the contrary, seeing it is a descent into our own inmost nature, into the depths of the microcosm, we are not ourselves until we accomplish it. The inferior series, like its superior counterpart, holds nothing that is not intimately and inalienably ours, and nothing that can be spared from our complete fulfilment. It is an astonishing truth, of which the significance is not often grasped, that we feel the vital to be less alien to our real nature than the human, and the inorganic less alien than the vital. ϕ We enjoy moods of unquestionable power and authenticity when we are nearer to the child than to the man, to trees and grass and flowers than to the child, and to earth and sea and sky than to any growing thing. At such times it becomes evident that our descent into the realm of matter is not other than our ascent into the realm of the spirit.

9. THE PAIR AS SELF AND NOT-SELF.

Such reflections point to the fact that the proportion which the self bears to the not-self is not twofold, but threefold. In order of increasing adequacy, there are what may be called the one-level version, the two-level version, and the all-level version. (i) The one-level version states that, in our social life, our experience of one another is (by virtue of pro-

° The realists, generally speaking, were the spiritual descendants of Plato and Plotinus, favourable to mysticism (and sometimes pantheism) and to the angelic and ecclesiastical hierarchies. On the other hand, the nominalists, represented by Occam, were the precursors of the modern scientific spirit, with its rejection of authority, its individualism, its denial of the suprahuman and of the mysticism of the suprahuman. But the subtleties of the argument were endless. Views ranged from the extreme nominalism of Roscelinus (who held that the universal is no more than a name, a <u>flatus vocis</u>, and that even in the knower's thought there is nothing general) to the extreme realism of his ex-pupil William of Champeaux (for whom the individual has no independent existence, and is a mere accident of the universal).

× "We naturally believe ourselves far more capable of reaching the centre of things than of embracing the circumference.... And yet we need no less capacity for attaining the Nothing than the All....These extremes meet and reunite by force of distance, and find each other in God, and in God alone." Pascal, <u>Pensées</u>, 72.

* <u>The Persian Mystics: Attar</u>, by Margaret Smith, p. 57.

+ "In what measure we put off the creature, --- in the same measure we are able to put on the Creator: neither more nor less." <u>Theologia Germanica</u>, I.

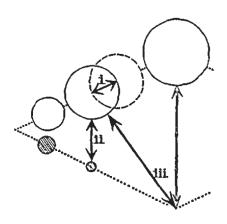
"Space is ample, east and west, But two cannot go abreast, Cannot travel it in two: Yonder masterful cuckoo Crowds every egg out of the nest, Quick or dead, except its own." Emerson, 'The Over-soul'.

 ϕ Wordsworth, of course, is the prophet of this descent. John Cowper Powys calls him an 'elementalist', several of whose greatest passages are concerned "purely and solely with the non-human processes of dawn and noon and twilight, and the passing of clouds across the sky, of birds across mountain valleys, and of all the turbulences and taciturnities of winds and waters. Over and over again Wordsworth will separate from every human association some primordial elemental event --- the fiery sun descending into the sea-waves, the grey light falling upon a single stone, the gulfs of empty air surrounding some promontory of bare rock." A Philosophy of Solitude, pp. 38-39. jection and reflection) experience of equals: between the self and the not-self as given, there is rough parity. (ii) The more adequate two-level version states that, in our life as lived in and by the Pairs, the self is one member of the Pair, while the not-self as given is the other member. (iii) The all-level version, which alone is wholly true, states that experience at any level is only possible because the experiencing self is nothing but the receptacle --- the empty vessel whose proper content is the Whole. Since the first and the third have already been fully discussed in earlier chapters, it only remains for me to say something here about the second version.

First, note that, as we descend the inferior series, so our object ascends the superior series. This is not mere theory, precariously based upon some remote and inaccessible pinnacle of mystical experience, but, in principle at least, a matter of common observation. The great make us feel small. ° The way to reduce the self is to enlarge the not-self. We are more likely to get rid of what we are by the method of crowding out than by the method of throwing out. Stars, galaxies, and <u>a fortiori</u> the Whole, diminish us absolutely as well as relatively: they do not leave us men, but progressively wear down all our pretensions. If we can look at the stars and remain human, we are not looking at the stars but at a lighting scheme. The Heavens are revealed to men in the dark.

On the other hand, the scientist who takes for his object the infrahuman expands into the suprahuman. It is a commonplace that scientific man is, in important respects, the superior of political man; and it is plain enough that the anthropological sciences are less rigorous -- less 'scientific' -- than the biological, and the biological than the physical.* That is to say, as man deals with increasingly inferior units, so his own capacity grows. + For, firstly, his knowledge is more exact, more extensive, and more thorough; secondly, he exercises a more intimate control over his material; thirdly, he tends to take a more objective and dispassionate view of his work, and to regard his fellow scientists and their work with greater tolerance, with admiration even. The tragic consequences of this disparity between levels of functioning --- for instance, the conduct of the moron in us who picks the brains of the intellectual giant in us --- are not the point here. All I want to establish is the hierarchical symmetry of the scientist and his subject matter. The increasing nicety of his discrimination, the exquisite delicacy of his touch, the refinement of his calculations, are the means by which he rises in the hierarchy while his object descends. The smaller the unit he knows, the bigger the unit he is. And, after all, it is common knowledge that the man who knows how to discriminate is the superior of the man who doesn't.

Our task, then, (or at least a part of it) is to know more and more about less and less, to pare down our object, to divide and refine it, till at the base of the hierarchy it is nothing. This is the path that science is patiently following, and even common sense has nothing but approval for the first part of the journey. Is religion alone in condemning the entire enterprise, and in calling upon us to turn our eyes upwards instead of downwards, to see at the higher levels and be at the lower ones? The answer is that religion, on the contrary, insists (and insisted long before



° There are plenty of familiar instances. When the Queen of Sheba saw the glories of Solomon, "there was no spirit in her". The leviathan "is a king over all the children of pride", says Job; and the consequence of his seeing God was that he abhorred himself.

* At one extreme are the two distinctively modern schools of psychology, which do not even speak a common language, much less agree upon any basic doctrines. Compare this total lack of agreement with the vast mass of data upon which all chemists and physicists are agreed. Midway, among biologists, (neo-Lamarckians and neo-Darwinians, vitalists and mechanists) there is, in spite of great differences, much common ground.

+ The fact that subject and object are inversely proportional is evident already in the animal world. The lower animal cannot afford to be fastidious, neither has it the necessary equipment; the higher animal is more expert at selecting classes of objects, and may come to recognize some individuals. Man narrows down his field still further: in respect of his fighting and eating and sex, and every other propensity, the object, the occasion, and the manner are all very strictly limited. His advance is measured by his ability to exclude the irrelevant, to fasten upon the significant detail and treat all else as though it were not.

Relevant to the view I am suggesting here (that the self and its object are inversely proportional, that the self is the rest of its object) is a discussion of Bradley's. He asks: "What are we to say then becomes of that remainder of the not-self which clearly has not, even for the time, passed wholly from my mind?" His answer is that the features sunk below the level of definite objects pass into a general background of feeling, and become a part of the self, of its 'undistinguished core'. <u>Appearance and Reality</u>, pp. 90 ff. science began to do so) upon the necessity for the reduction of the object. The negative theology, following the tradition of Dionysius, teaches that we can approach the Absolute only by discarding one after another our notions about it. Thus Eckhart: "Thou must love God as not-God, not-Spirit, not-person, not-image, but as He is, a sheer, pure, absolute One, sundered from all twoness, and in whom we must eternally sink from nothingness to nothingness." And Proclus goes even further (if that is possible), with his doctrine that the One can only be called <u>One</u> figuratively. We have come, in short, to the Centre, where the view inwards has vanished. "For when there is as it were duality, then one sees the other, one smells the other, one tastes the other, one salutes the other, one hears the other, one perceives the other, one touches the other, one knows the other; but when the Self only is all this, how should he see another, how should he smell another, how should he taste another, how should he salute another, how should he hear another, how should he touch another, how should he know another? How should he know him by whom he knows all this? That Self is to be described by No, No!" +

But having thus distinguished two modes of the Pair, or two aspects of its self-knowledge (the first, in which the superior member confronts the inferior as its object, and the second, in which the relationship is reversed *) I must hasten to point out the artificiality of the distinction, and assert once again the unity of the members. They are poles apart, yet indissolubly one; they face each other, yet interpenetrate; they are contrasting extremes, yet the same. They arise -- to use theological language -- from internal 'processions' which distinguish the 'persons' without dividing the 'substance'. For each successive Pair, with the two-directional processes that unite superior and inferior, is a finite, less-holy trinity, a decreasingly adequate version of the ultimate Pair and Holy Trinity. × No doubt the high gods are only a second best, but (inasmuch as they are contained within and epitomize the highest) they are, in principle, adequate and true: if it had been otherwise they would never have kept their hold upon humanity. Man is by no means to be pitied or wondered at for making a god of Mankind, of Life and the spirit of fertility, of Earth and Sun, of the starry heavens; for each of these in turn is a transcendent god-the-father, whose son comes down and is born in us and amongst us, and in the ministrations of whose spirit -- uniting father and son in bonds of mutual loving knowledge -- we all share. The entire structure of the hierarchy, the architectonic principle of the universe, is trinitarian: all process, in the last resort, is trinitarian 'procession'; all worship, no matter how unitarian in theory, is trinitarian in practice. ° It was no heathenish aberration to find wonderful and numinous the annual dying and rebirth of the Earth Mother, and the daily ascension and downcoming of the Sun on our behalf. Indeed, so long as the higher religion of the ultimate Pair leaves out the lower religions of the lesser Pairs, instead of incorporating and transforming them, it must always fail to fulfill the needs of the whole personality, and remain thin, half empty, abstract. The gods are true, and will not be denied. If we refuse to christianize and rehabilitate them in the ninefold ranks of the angelic hierarchy, we have not thereby dismissed them for ever; we have only invited them to reappear in more questionable and less beautiful guises. If (pace Emerson) the half-gods go when the Gods arrive, they are liable to return as demons. *

As an example of the <u>via negativa</u>, take this typical passage of the Areopagite's: "Unto this Darkness which is beyond Light we pray that we may come, and may attain unto vision through the loss of sight and knowledge, and that in ceasing thus to see or to know we may learn to know that which is beyond all perception and understanding (for this emptying of our faculties is true sight and knowledge), and that we may offer Him that transcends all things the praises of a transcendent hymnody, which we shall do by denying or removing all things that are..." <u>The Mystical Theology</u>, II.

+ Brihadaranyaka Upanishad, IV. v. 15.

* Cf. Avicenna's doctrine of the process of knowledge. Man (he says) has a rational soul with a lower and a higher aspect: one facing the lower world of the body and acting as practical understanding, the other facing the higher world of intelligible forms. Stöckl, <u>Geschichte der Philosophie</u> <u>des Mittelalters</u>, ii, pp. 23 ff. Averroes' Aristotelian doctrine of one Intelligence in the human race, through which we think in so far as we think rationally, really applies to each Pair, and not merely to the human: in each instance, the superior member may be regarded as the common Intelligence of the inferiors.

× Cf. the Triads of Proclus --- an elaborate and fantastic hierarchy of gods ('hegemonic' gods, 'liberated' gods, star-gods, element-gods, etc.) and angels, arranged in threes, thereby reflecting the structure of the neoplatonic Trinity. Proclus had the framework without the filling; we have the filling without the framework.

° Cf. William Law: "There is nothing that is supernatural in the whole system of our redemption. Every part of it has its grounds in the workings and powers of nature..." <u>The Spirit of Love</u>.

St Bonaventure taught that the beings which constitute the universe are built and ordered according to the divine model of the Trinity --- God who is the origin, the Son who is the image, the Spirit who is their love and intercourse. Gilson, <u>The</u> <u>Philosophy of St Bonaventure</u>, pp. 213-4.

* Origen uses the same language of God as of angels -- He is a beneficent and creative 'power' (<u>De Prino</u>. I. 4). This fact, writes Dr Prestige, "emphasizes the close connection of subsidiary spiritual forces with the supreme Governor of the universe, and indicates the similarity of function which they shared with Him. Hence, as we assert the existence of God, says Athenagoras (<u>Supplicatio</u>, XXIV. 1 ff), Father, Son, and Holy Spirit, united in power, so we apprehend the existence of other powers

10. ANALYSIS AND SYNTHESIS.

Religious man may be described as the infrahuman series seeking its counterpart, the suprahuman; scientific man as the suprahuman series seeking its counterpart, the infrahuman. Complementary enterprises, their joint business is the self-consciousness of the Pairs in their living unity, by participation in the vertical processes that unite them. But there are further complications: religion and science alternate rather than coexist on equal terms. While the religious attitude survives alongside the scientific, it is now altogether overshadowed by its partner: that is to say, the suprahuman units that used to be our chief interest have for the most part been replaced by the infrahuman units. We look down upon the universe, where before we used to look up to it. In the course of the last five hundred years or so, the world has, almost literally, been turned upside-down.

It is true, of course, that the scientist takes account of the very large as well as the very small. Yet the trend of his study is always analytic; his bias is always in favour of the part as against the whole. \times Indeed, it was only when, having invented the microscope and the differential calculus, man's interest shifted from the superior series to the inferior, that science began in earnest. There could be little real biology before the discovery of the cell, or chemistry before the discovery of the elements. No doubt (as I have already said at length) the scientist cannot altogether ignore the superior series: astronomers do consider whole stars and galaxies, just as biologists recognize the existence of Life, and sociologists are not unaware of the human species. But note what it is that they study --never the concrete reality which includes the scientist; never the Galaxy and the Sun and Earth as alive and intelligent and suprahuman, but as in every respect except size infrahuman; never Life and Man as individuals of integral status, in their wholeness and concreteness, but as mere aggregates of cells and organisms and species. ° Science (and all of us in so far as we come under its influence) is by nature and function incapable of recognizing a single suprahuman unit as such, no matter what the grade. Nor is this to be deplored or wondered at. Science is no more in a position to appreciate the higher series than religion is in a position to appreciate the lower series: and the value of their several contributions to the total picture would be lost if either forsook its own standpoint for the other's. The scientist and the man of religion are not only concerned with different halves of the world: they are different halves. And in that immense discrepancy lies their importance for one another. +

The business of the philosopher is to bring together the halves, to bind the sundered Pairs, to take up the increasing tension between the upper and the nether worlds, to heal the wound between the over-body and the under-body, to reconcile the holy world-order with the secular world-order and show that they are one. \emptyset

If any doubt remains that our thought, taking its cue from science, ignores the macrocosm, it will be enough to recall how universal is the interpretation of the more integrated in terms of the less integrated; of the end in terms of the beginning; of religion and art in terms of repressed sexual urges; ϕ of morality in terms of economics and class-

functioning in and through matter.... for God made the angels in order to exercise providence over the things ordained by Him, that He might maintain a universal and general providence over everything, while the angels exercised a particular providence, according to their appointment, over their several spheres." In the same work, Athenagoras "proceeds to distinguish from this primary triad (the Holy Trinity) a host of 'other powers' concerned with material nature. The actual word Triad is not yet employed, but there is no doubt about the thing signified." <u>God</u> <u>in Patristic Thought</u>, pp. 68-9, 89.

× The recipe of Marcus Aurelius for bringing a pleasant and affecting experience to naught was to divide it and consider the parts separately. Taking one by one the sounds in the musical composition, we become ashamed that the whole has moved us. Remember thus to divide (he says) "and by this kind of division, in each particular to attain unto the contempt of the whole". Meditations, XI. 2. The aims and the results of science are of course very different from those of the Stoic philosopher, but they share the same recipe. As we divide, it is always the highest quality that is the first to go. A movement of a symphony is not a symphony, but it is still music; a single chord is not music, but it is still sound; a single sound-wave is not sound....

° Life, says Sir Charles Sherrington, is a reshuffling of atoms and molecules. And if it seems odd that an unreasoning planet should have shuffled them to such extraordinarily good purpose, we must recollect that it has had plenty of time. <u>Man on his</u> <u>Nature</u>, V.

+ I am of course using the term science in the modern restricted sense, and not in the old sense which made the word synonymous with knowledge. A second point is that I am referring to the methods and achievements of the scientist as scientist, and not to his conscious and expressed philosophy, which may well tell a different story. On this see Dr F. Sherwood Taylor, in Philosophy, Nov. 1947, pp. 195 ff. ø Reconcile, but not confuse --- "Thus it is that only if a man be clear as to the relative spheres of Heaven and man may he be called a man of consummate understanding. "Hsun Ch'ing, XVII. (Hughes, Chinese Philosophy in Classical Times, p. 227.)

"Alas! man's knowledge reaches to the hair on a hair, but not to eternal peace," laments Chuang Chou. (Giles, <u>Musings of</u> <u>a Chinese Mystic</u>, p. 108.)

 φ See, e.g., Ernest Jones, <u>Papers on Psycho-Analysis</u>, p. 606.

warfare; of the highest human achievements in terms of hormones, or conditioned reflexes, or genes, or anal erotism; of philosophy in terms of mental disorder * --- to say nothing of the interpretation of all life and mind in terms of the aimless commerce of innumerable disembodied electrical charges. ° For us, to render intelligible is to degrade in rank; to elucidate is to show that there is nothing worth elucidating. Almost instinctively -- so perfect is our conversion to this faith -- we refer from the high to the low, from the whole to the part, from the epochal to the momentary; and just as instinctively we dismiss as unscientific, woolly-minded, and irrational (sic) the upward reference which is the counterpart of this downward procedure. According to this mystique it is self-evident that, while living things "are extrapolations from the inorganic", + the relationship is irreversible, and the reality of our object is inversely proportional to its hierarchical status. To discern in the configurations of the space-time continuum, or in the minimal physical events, the ground and explanation of matter and life and mind --- this, to our modern mind, is the hallmark of intellectual probity and good sense. But to look for the source of these things in the Whole instead of the Centre is (so obviously that argument is superfluous) a case of misdirected reverence --- to put it as politely as possible!

Truly science, as Tagore remarked, is a kind of mysticism × --mysticism in the realm of the infrahuman. "The most irrational theory of all", says Plotinus, "is that elements without intelligence should produce intelligence." At least it is an article of faith, a case of credo quia absurdum, that the lowest should conceal the highest. By comparison, the opposite belief, which sees in the living Whole, through living star and planet, the source of every life, is hard-headed realism, cautious and commonsensible. We are visionaries, whose profound insight is matched by equal blindness --- the Sun, we say, is dead, and its counterpart the atom is the source and shrine and substratum of all our life. We are like the man in The Pilgrim's Progress, "who can look no way but downwards, with a muck-rake in his hand" --- with this all-important difference: the muck is transformed into a beautiful divinity who is the potentiality of all things. Our materialism extends only to the upper half of the hierarchy: the gods have come down to dwell in the lower half. For science, proceeding as if materialism were true, is the very activity which proves it untrue: her aim is to render the infrahuman wholly transparent to thought, to take up all matter without residue into mind. The truth is that, though historically the scientific and the religious moods are apt to alternate, each conceals the other, and gradually transforms itself into the other. In the end, the lower series turns out to be the higher series under another name, and all that religious man finds in the Whole, scientific man begins to find in the Centre. We are still Sun-worshippers, serving that deity with fanatical and horrible rites, † only our Sun turns to us his inferior side --- the atom; \oplus we have not ceased to revere the Earth-Mother, only what earlier man attributed to her larger aspect we attribute to her smaller aspect --- to herself in miniature, the molecule-mother. And the cell is our latter-day fertility god. Our faith is not less firm because we are standing on our heads; besides, if we stand on our heads for long enough, the world has a way of proving to be the right side up after all. ° In other words, the Pairs are self-righting in the end. The process

* It has been well said that certain contemporary philosophers, who indeed might be described as Therapeutic Positivists, undertake by means of Analysis to cure persons suffering from metaphysics. See B. A. Farrell in <u>Mind</u>, vol. lv (1946), pp. 25 ff, and 133 ff.

° For a well-known version of the view that all which man holds dear is the "outcome of accidental collocations of atoms", see Bertrand Russell, <u>Mysticism and Logic</u>, pp. 47, 48.

The classical argument for interpretation by reference to the whole, as against interpretation by reference to the part, is Plato's in the <u>Phaedo</u>. Anaxagoras is made to explain the cause of Socrates' actions in terms of bones and muscles; Socrates, on the other hand, finds the real explanation in his own intention --- the will of the whole man and not the tendency of the part. Plato was interested in the world as an organic whole and in final causes, Anaxagoras in the laws governing the parts of the world, and in efficient causes. See <u>Phaedo</u>, 98; also Aristotle, <u>Parts of</u> <u>Animals</u>, IV 10.

+ The phrase is Joseph Needham's, in <u>The</u> <u>Sceptical Biologist</u>, p. 247; <u>Materialism</u> <u>and Religion</u>, p. 14.

× <u>The Religion of Man</u>, p. 119. It is true that science <u>inherits</u> faith from a pre-scientific age, as Whitehead has persuasively argued. J. W. N. Sullivan also (<u>The Bases of Modern Science</u>, I.),attributes science's faith in the order of Nature to "an inheritance from a system of thought (the mediaeval system) of which the other terms have been discarded." But such reflections should not blind us to the fact that science has a faith of her own, as fervent if not as rational as the faith it replaced.

Science's business is taking and correlating measurements, and the typical act of measurement is to apply a meter-rod to an object to find out its 'real' size --where 'real' means non-regional, central. A regional dimension is dismissed as an appearance. Modern physics, it is true, has had to discard to some degree this denial of the regions and concentration upon the Centre, but still the whole enterprise of science, to be true to itself, must make the Centre its goal.

† Cf. Mgr Knox: "It (the force lurking at the very root of matter) stirred restless currents in the depths under the surface of the mind; it called to that instinct of idolatory which still lies hidden in the most sophisticated of us. From the old Roman augurs down to Henri Bergson, we have had the temptation to worship the <u>numen</u>, the Life-Force at the back of things. And Hiroshima was its epiphany." <u>God and the</u> <u>Atom</u>, p. 14.

 \oplus D. H. Lawrence (<u>Pansies</u>, p.104) refers to "... the sun within the atom which is god in the atom."

called debunking, or conversion from faith to scepticism, is ultimately nothing of the kind: rather it is a process of displacement, whereby the infrahuman and the suprahuman are transposed. For the qualities which the agnostic strips from the superior member of the Pair cannot remain disembodied and floating in mid-air indefinitely, but sooner or later must come to rest upon the inferior member. While the materialist is busy demonstrating that the God of the Christians is a myth, and (what is worse) one that is on the wrong side in the class-struggle, he is also busy erecting the shrine of the Centre, the holy of holies of the physical substratum, the ultimate repository of that divine determinism which is always on the right side.

This is not the place to speculate about the future of the mysticism of the infrahuman --- as to whether and when it will (by degrees, or with dramatic suddenness) complete its transformation into the mysticism of the suprahuman. Our present concern is clear enough: though interest migrates from one half of the hierarchy to the other, and religion and science show a curious tendency to change places, * the hierarchy as an indivisible whole remains, and the business of philosophy is to assert it. It is not enough that all our angels should be fallen ones. For our own integrity and completeness, we need (with Shelley's Demogorgon) seriously to address the "great Republic" above ---

> "Ye Kings of suns and stars, Daemons and Gods, Aetherial Dominations, who possess Elysian, windless, fortunate abodes Beyond Heaven's constellated wilderness;"

no less than the counterpoised nether world ---

"Ye elemental Genii, who have homes From man's high mind even to the central stone Of sullen lead; from heaven's star-fretted domes To the dull weed some sea-worm battens on." ×

Nothing short of the entire hierarchy of heaven and earth will do, for that is what we are. + It is one Body, vivisecting which we vivisect ourselves. \oplus

11. <u>HIERARCHICAL PAIRS AND THE REVERSIBLE REGIONS --- EVO-</u> <u>LUTION AND EMANATION</u>.

The doctrine of the Pairs indicates certain modifications in (or refinements of) our regional schema. It may be said, for instance, that the regions are reversible, that the schema is virtually capable of being turned inside-out. † Thus when, in projective-reflective commerce with my friend, 'I' advance through his infrahuman regions to their Centre, and 'he' in the same way through mine, each of us is also, in effect, advancing through the other's suprahuman regions to the Whole. Or, as some would phrase it, we know each other in God, who alone is the ground of all experience; but only rarely do we know that we know each other so.

The regional schema, then, may be envisaged in two forms --- as the now-familiar system of concentric circles with the Whole at the circum-

° This revolution has, of course, advanced much further in scientific than in popular thought, which is still infected with what may be called the <u>`inter faeces et urinas</u> <u>nascimur</u>' mood: there is still plenty of the Manichean and Gnostic attitude to the flesh and to matter in us.

Can physics and chemistry account for life? asks Sherrington. They account, he replies, "for so much which the cell does, and for so much to which years ago physical science could at that time offer no clue, that it is justifiable to suppose that the still unexplained residue of the cell's behaviour will prove resoluble by chemistry or physics.... The cell's doings are affairs merely in routine conformity with ascertained ways of 'energy." But, he is careful to point out, "The wonder is there still. It rests on different ground." Man on his Nature, IV. In other words, wonder moves down the hierarchy; and where wonder goes, religion goes.

* Cf. Victor Hugo: "To sum up all, let it be known that science and religion are two identical words. The learned do not suspect this, no more do the religious. These two words express the two sides of the same fact, which is infinite. Religion-Science, this is the future of the human mind." <u>Intellectual Autobiography</u>, 'Life and Death'. --- A confused and dubious pronouncement, no doubt, but containing a profound truth.

× <u>Prometheus Unbound</u>, IV.

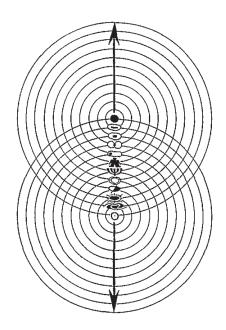
+ Cf. Fechner, <u>Tagesansicht</u>, p. 19 (Lowrie, <u>The Religion of a Scientist</u>, p. 250).

⊕ The pre-scientific mind, asking <u>why</u>?, asks for a suprahuman explanation; the scientific mind, asking <u>how</u>?, asks for an infrahuman explanation. The complete explanation, answering both questions, unites the sundered Pairs.

† Dr Karl K. Darrow (<u>Atomic Energy</u>, p. 20) has called the proton, the electron, and the neutron, the "three gods of our pantheon". And indeed I think a plausible case could be made out for the view that we have in this infrahuman Trinity a model of the suprahuman Trinity, complete with 'processions'. ference, and as this same system reversed, with the Whole at the centre. And the truth is, not merely that both systems are valid, but that they are complementary. The many rival cosmogonies may be divided into two great classes --- the evolutionary, which makes the lowest hierarchical grades prior in time, and the emanative, which gives priority to the highest. According to the former, the observer who retires in space and in time from a Centre experiences increase in quality and value: fluctuations there certainly are, but the mark of each new region is that it commands a more impressive view than the last. According to the latter, the retiring observer experiences only decrease in quality and value: each successive region, as more remote from the Source of all, is more impoverished and degraded, and the outermost fades into nonentity. The evolutionary cosmogony regards all lesser individuals as contained within the supreme individual, as the parts of the Whole which embraces all space and time --- their final fulfilment, their goal, and even (in some sense) their product. The emanative cosmogony is just the opposite of this: lower grades of being are not contained within, but projected from, the divine Source, which is from the beginning perfect and complete and infinitely superior to all that flows from it. All things radiate, region by region, from this One, like the concentric ripples on a pond or rays of light from the sun. As the ripples become feebler and the light becomes dimmer the further they go, so do we suffer diminution as we leave our Source. And as the light relies upon the sun in a way that the sun does not rely upon its light, and as the ripples are more dependent upon the falling stone that excites them than the stone is upon them, so is the Source independent of all its emanations, self-contained, perfect in itself.

In principle, though not of course in detail, this is the doctrine of Plotinus, whose infinite One gives forth, by a kind of effortless and inevitable overflowing, series of existences that are less real and more imperfect the further they are removed from the central Source. ° The Good or the One, he says, "as it were overflows, owing to its excessive fulness of reality, and so produces another than itself." * The schema of Plotinus is essentially a regional one, but it is our second or emanative schema, in which status is <u>inversely</u> proportional to range. "Thus fire produces heat, and snow does not retain its cold in itself. And above all, things that are sweet-smelling are an evidence of this; for, as long as they exist, they send forth a scent into the surrounding air which is enjoyed by all beings that are in the neighbourhood. Everything in its perfection generates another, and that which is eternally perfect has an eternal generation, producing ever something lower than itself." +

At the end of the previous chapter I suggested that the theology of extreme immanence and the theology of extreme transcendence, though superficially irreconcilable, actually require and supplement each other. Here the same interdependence is seen from another point of view. The two basic cosmogonies which I have distinguished are, in principle, our rival theologies. In the first, God (to speak metaphorically) is peripheral, and in the second, central; in both, man is half way between God and nothingness. Which way, then, has man to go to find God --- towards the peripheral Deity of the first school, or the central Deity of the second? The answer is that they are not two directions and two goals but



Hegel, comparing the respective merits of evolution and emanation as an interpretation of nature, prefers the latter: "To proceed from the more perfect to the less perfect is better, for then we have the type of the completed organism before us." But each of these interpretations by itself, he says, is one-sided and superficial. Encyclopaedia, 249. For a more recent version of the doctrine of emanation, see Ravaisson-Mollien, De l'Habitude, pp. 255 ff., where nature is described as a voluntary refraction or dispersion of the divine spirit: God wills that nature shall fall away from His perfection, in order that it may find the way back.

° The order of this descent is: the One, then the Pure Intelligence whose object is the intelligible world, then the World-Soul --- a trinity of subordination; the World-Soul in turn produces the material world, in which there is a descending scale of life down to the level of the plants, then inorganic things and the realm of formless matter. In man, all these grades of reality (says Plotinus) are represented.

* Enneads, V. ii. 1;

+ V. i. 6. The system of Proclus is similar, but more complicated: for him, emanations take the form of an elaborate descending system of triads. one direction and one goal, which is reached through the same regions of the suprahuman. † But (as previous discussions have made abundantly clear) this is only half the journey: man has simultaneously to travel in the opposite direction, through infrahuman regions, to the Centre of the evolutionary system and the periphery of the emanative. Truly speaking, the two systems are simply two ways of regarding the same thing. +

They are, in fact, the final exemplification of the great law of elsewhereness, out of which arises the duality of the ultimate Pair and of all other Pairs. The object is never really mine or simply here. It is characteristic of the Centre that it shall not only contain the Whole, but shall project it yonder, and project it moreover to the furthest possible limit: though it is there-from-here and here-from-there, all its reality depends upon its thereness, its sublime remoteness. This Centre, by a projective effort which is the origin of all 'range' and all regions, establishes a second and immensely distant Centre having its own system of regions: the original Centre is now peripheral, and its regions are now read the other way round, commencing from the new Centre. × The last Copernican revolution is accomplished. Or rather, the Ptolemaic and Copernican types of cosmology, the evolutionary and emanative types of cosmogony, and the theologies of immanence and transcendence, are seen to involve each other. Indeed it is no accident that the regions are Paired, and reversible.

The two diagrams, or the two halves of the one diagram, furnish the plan of the <u>Divine Comedy</u>, with (i) its here-centred (or geocentric) sensible world, and (ii) its there-centred (or theocentric) intelligible world.

(i) At the centre of the universe is the Earth (itself containing the nine circles of Hell) round which revolve the nine heavens or celestial spheres --- the spheres of the 'planets' (the Moon, Mercury, Venus, the Sun, Mars, Jupiter, and Saturn), the sphere of the Fixed Stars or the firmament, and finally the sphere of the Crystalline Heaven or <u>Primum Mobile</u>, which imparts motion to all the others. Each of the nine heavens is the province of one of the nine angelic orders, -- the higher the heaven the more exalted the rank of its governors -- through whom the divine ordering of the universe is mediated. Knowledge and love and blessedness advance region by region from the sphere of the Seraphim), and the progress of Dante's ascent is marked by the increasing bliss of the saints who inhabit the spheres, as well as by the increasing beauty of Beatrice.

(ii) The goal of the Poet's journey is not the ninth heaven, but the Empyrean, the true intellectual paradise, beyond space and time. "Now of the region beyond the sky", says Plato, "no earthly bard has ever yet sung, or will ever sing in worthy strains." \oplus Here is an altogether new order, which nevertheless includes all that the ninefold heavens include.^o For here all the saints whom Dante encounters in his ascent have their seats, in the heaven that is unbodied light, light intellectual and full of love .* But already in the ninth heaven the Poet is granted a preliminary vision of the intelligible order. × The nine ranks of angels appear as nine circles of fire revolving about a Point of extreme brilliance; and the more

† Here we have an answer to the query, how can the Centre of the regions be both hell and Heaven? By itself, it is the very abyss of hell, as in the <u>Divine Comedy</u>; but united with its counterpart, the circumference or Whole, it is Heaven. Hell is the consequence of severing the Pairs, heaven of joining them. Cf. William Law, "It is, therefore, exceedingly good and beneficial to us to discover this dark, disordered fire of our soul; because when rightly known and rightly dealt with, it can as well be made the foundation of Heaven as it is of hell." <u>Christian Regeneration</u> (Hobhouse, p. 14).

+ Plotinus himself was by no means unaware of the need for both points of view, and did not neglect the truth of immanence. "God", he says, "is external to nothing and to no one, but is present even with those who do not know him: though they escape out of him, or rather out of themselves...." <u>Op. cit.</u>, VI. ix. 7.

× Cf. the perspectivism of Robert Grosseteste, who taught that 'light' (lux), which is the essence of all corporeity and the source of all natural activity, is propagated from a centre to the limit of its rarefaction which is the firmament. Reflected thence back to the centre -- the Earth -- it generates on its way the celestial spheres and the spheres of the elements. Grosseteste's doctrine was largely taken over by his pupil Roger Bacon, and it is analogous to St Bonaventura's theory of light, according to which the rank of all beings depends upon the degree of their participation in the common form of light. Gilson, The Philosophy of St Bonaventure, IX. S.H. Mellone, Western Christian Thought in the Middle Ages, pp. 225, ff. Richard McKeon, Selections from Mediaeval Philosophers, i. p. 261.



 \oplus <u>Phaedrus</u>, 247.

° "This is the sovereign edifice of the world, in which all the world is included, and outside of which there is nothing; and it is not in space, but was formed only in the First Mind." Dante, <u>Convivio</u>, II. 4.

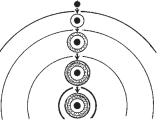
* <u>Paradiso</u>, XXX; × XXVIII.

excellent the angelic order the nearer it approaches the Point, which is God Himself. In the sensible world, Beatrice explains, each sphere is swifter and more divine the farther it lies from the centre, whereas in the intelligible world this arrangement is reversed ---- for instance, the innermost circle of angelic fire is the circle of the Seraphim, whose heaven, the Crystalline, is the outermost; while the outermost circle of angelic fire is the circle of the Angels, whose heaven, that of the Moon, is the innermost. The regions are reversible. Dante is not one-sided: he recognizes two Centres, each with its own concentric system of regions which is the other reversed.

Dante's paradise is no isolated tour de force, but a compound of the Ptolemaic astronomy, the angelology of Dionysius the Areopagite, St Gregory, and St Bernard, and the Poet's own imagination; * moreover it has countless analogues in the philosophy and poetry of the age. We have here a picture, uniquely representative because uniquely complete, of the mediaeval mind. But it would be a mistake to suppose that the picture is only mediaeval, and not, in its essence, perennial. Let me give two instances. The first is modern and not far to seek: the cosmology of this book might (echoing a phrase of Whitehead's) be described as little more than a series of footnotes to the Divina Commedia. The second is ancient. A common version of the geocentric Graeco-Roman universe had seven planetary spheres, through which the soul was supposed to pass on its way to Earth and incarnation. Each sphere contained its own metal (the sphere of Mercury quicksilver, of Venus copper, of Mars iron, and so on) with which the soul-spark became coated in turn (as if in a series of electro-plating vats); and the thicker the metal coating the soul thus acquired, the stronger would be the influence of that metal's sphere over the soul's destiny in this life. The soul, then, was not simply a replica of the universe: it was the universe turned inside-out, with inner and outer transposed. + Once more, the reversible regions. \oplus

For the mystic, this reversibility is of the utmost importance. His experience takes two forms, described by Evelyn Underhill as "(a) the long pilgrimage towards a transcendent and unconditioned Absolute, (b) the discovery of that Absolute in the 'ground' or spiritual principle of the self." And "it has been possible to Christianity, by means of her central doctrine of the Trinity, to find room for both of them and to exhibit them as that which they are in fact --- the complementary parts of a whole. Even Dionysius, the godfather of the emanation doctrine, combines with his scheme of descending hierarchies the dogma of an indwelling God: and no writer is more constantly quoted by Meister Eckhart, who is generally considered to have preached immanence in its most extreme and pantheistic form." $^{\circ}$

By Milton's time there are many signs of the growing rift between the upper and the lower series. Though in the twelfth book of Paradise Lost he describes a certain pit in Babylonia, as the mouth of Hell, his general argument is that, since Earth was created after the fall, Hell cannot be terrestrial; accordingly he locates it outside the created universe, in another region of Chaos. The same doctrine is to be found in Luther (De Doctrina Christiana, I. 23). * Though Dante was not the first to identify the sphere-moving intelligences with the angels, their detailed identification with the celestial hierarchy of Dionysius was perhaps the Poet's own doing. St Thomas Aquinas makes only the Virtues responsible for the celestial motions. See Edmund G. Gardner, Dante and the Mystics, p. 129; C.C.J. Webb, Studies in the History of Natural Theology, p. 67.



<u>The schema of the soul's descent</u>. E. Graham Howe (<u>The Triumphant Spirit</u>, p. 89) has a very similar diagram --- "The Holy Mountain'--- illustrating 'the descent of the soul', which surrenders at each barrier more of its heavenly splendour, and obtains a new instrument or garment. The lesson is that we must accept our descent, willingly embracing earthly limitations, otherwise psychological troubles are likely to develop.

+ This myth has many variations, and many echoes. Thus Plato's God puts gold into the rulers, silver into the auxiliaries, and iron and copper into the farmers and craftsmen. Republic, 415. Sir Thomas Browne writes: "Whilst I study to find how I am a Microcosm, or little World, I find my self something more than the great. There is surely a piece of Divinity in us, something that was before the Elements, and owes no homage unto the Sun." And "I was born in the planetary hour of Saturn, and I think I have a piece of that Leaden Planet in me." Religio Medici, II. 11; cf. Christian Morals, III. 7. Robert Eisler's The Royal Art of Astrology, pp. 248 ff. gives much interesting information on this and linked topics.

⊕ Cf. al-Makki's doctrine that God created our hearts 7000 years before our bodies, our spirits 7000 years before our hearts, and our consciences --- or innermost part --- 7000 years before our spirits: He imprisoned the conscience in the spirit, the spirit in the heart, the heart in the body. See Margaret Smith, <u>Studies in Early</u> <u>Mysticism</u>, p. 201.

° Mysticism, p. 105.

Chapter XIV

THE ORGANIZATION OF THE HIERARCHY

Man A messenger between the creatures, Lord of inferior things, and familiar to those above.... the golden link or tie of the world, yea, the Hymenaeus marrying the Creator and His creatures together; made as David witnesseth a little lower than the angels God infuseth the seeds of every kind of life into man: whatever seeds every one chooseth those spring up with him, and the fruits of those shall he bear and enjoy. If sensual things are chosen by him, he shall become a beast; if reasonable a celestial creature; if intellectual an Angel and a Son of God; and if being content with the lot of no creatures, he withdraws himself into the centre of his own unity, he shall be one Spirit with God He was ... the comprehensive head and the body of all, and in that more excellent than all the Angels. As for whom the visible and invisible worlds were made, and to whom all creatures ministered: as one also, that contained more species in his nature than the Angels.

Traherne, Centuries of Meditations, IV. 74, 77, 79.

Monkey hurriedly tidied himself and went to the door. 'I am the Spirit of the Planet Venus', the messenger said, 'and I bring an order from the Jade Emperor that you are to come up to Heaven and receive an Immortal appointment.' 'Old Star,' said Monkey, 'I am much obliged to you for your trouble', and he told the monkeys to prepare a banquet. 'With the sacred command about me, I dare not linger', said the Star. 'After your glorious ascension we shall have ample opportunity for conversation. 'I will not insist' said Monkey..... And the Monkey King, following the Star Spirit, mounted the cloud and soared up.

Wu Ch'eng-ên, Monkey (trans. Arthur Waley) pp. 42, 43.

The higher or spiritual region of the human mind is a heaven in miniature, and the lower or natural region is a world in miniature. This is why the ancients called man a microcosm; he may also be called a micro-uranus.

Swedenborg, True Christian Religion, 604.

All things which have a soul change, and possess in themselves a principle of change, and in changing move according to law and the order of destiny: lesser changes of nature move on ground level, but greater crimes sink into the abyss.... And whenever the soul receives more of good and evil from her own energy and the strong influence of others --- when she has communion with divine virtue and becomes divine, she is carried into another and better place, which is also divine and perfect in holiness.... In every succession of life and death you will do and suffer what like may fitly suffer at the hands of like.

Plato, Laws, V.

The end is the realization of ourselves as the will which is above ourselves.... In the realized idea which, superior to me, and yet here and now in and by me, affirms itself in a continuous process, we have found the end, we have found self-realization, duty, and happiness in one --- yes, we have found ourselves, when we have found our station and its duties, our function as an organ in the social organism.

F. H. Bradley, Ethical Studies, pp. 162, 163.

The living being is above all a thoroughfare.

Bergson, Creative Evolution, p.135.

All natures lean,

In this their order, diversely; some more, Some less approaching to their primal source. Thus they to different havens are moved on Through the vast sea of being, and each one With instinct given, that bears it on its course: This to the lunar sphere directs the fire; This moves the heart of mortal animals; This the brute earth together knits, and binds. Nor only creatures, void of intellect, Are aimid at by this bow; but even those, That have intelligence and love, are pierced.

<u>Paradiso</u>, I.

A vast similitude interlocks all,

All spheres, grown, ungrown, small, large, suns, moons, planets, All distances of place however wide, All distances of time, all inanimate forms, All souls, all living bodies though they be ever so different, or in different worlds This vast similitude spans them, and always has spann'd And shall forever span them and compactly hold and enclose them.

Walt Whitman, 'On the Beach at Night Alone'.

Let us honour if we can The vertical man Though we value none But the horizontal one.

W. H. Auden, Poems (1933): Dedication to Christopher Isherwood.

1. ARGUMENT FROM THE HUMAN TO THE NON-HUMAN.

I have described the scientist and the poet and the mystic as expert hierarchical explorers, pioneers of the heights and depths of their own nature and of ours. But few of us have the gift or the passion for such discovery: we are content to remain more or less at the merely human level, attending to what is, after all, our proper and most important business --- the business of making man's own contribution to the many-levelled totality. Are we not justified, then, in taking the view that the totality is unknowable except by initiates, esoteric, and anyhow no concern of ours? $^{\circ}$

We certainly are not justified. For, firstly, to be only human is to be less than human: not only has every man the freedom of the hierarchy as his birthright, but be is obliged to exercise that freedom, however cursorily. And, secondly, he has already at his hand a most abundant source of knowledge --- namely, the organization of the human level itself, which epitomizes the entire hierarchical organization. Here the vertical processes of nature emerge briefly for his inspection, before passing upwards or downwards beyond his field of view: and he is entitled to take what is thus presented seriously, as a fair sample of all that is not presented. Accordingly I shall, in this chapter, return to the plane of practical common sense, in order to show how it also is eloquent of the whole to which it belongs.

But common sense is by no means flattered, and disapproves of the entire venture. It is the mark of the savage (common sense points out) to project human modes of behaviour and human institutions upon the universe: I shall soon find myself three-deep (so to say) in fallacy --- in false analogy, in that division of false analogy called anthropomorphism, and in that division of anthropomorphism called the pathetic fallacy.

Before going any further, this criticism must be met. My first point is this: surely it is a vain imagination -- at once a silly over-estimation, and a silly under-estimation, of himself -- by which man supposes that the events called human are miraculously insulated from more general events, or are at any rate of a unique order. As well might Xenophanes' cattle × distinguish the science of their own behaviour from that of other beasts. Man is not a freak, a monstrosity, a foreign body that has somehow crept into Nature: there is every reason to suppose that, on the contrary, he is one of Nature's best-accredited representatives; that the more artificial he is the more natural; that the awareness which separates him from Nature is itself a particularly significant function of Nature. In this solidarity with, and insight into, the world, lies his great opportunity --- an opportunity which he has already used with immense effect in science. Indeed it would be absurd if man, instead of taking advantage of his direct knowledge of what is going on, of his inside information, were instead to grope for ever in the dark, a blind and beggarly outcast knock° Indeed the first tendency of modern man, when at last he gets the better of his hierarchical insularity, is to look upon the non-human, and particularly the suprahuman, as mysterious and inaccessible. Doubtless, says Douglas Fawcett, "there exists a hierarchy of super-human agents, some sufficiently wise, powerful and benevolent to be called gods", but he fails to discover their solidarity with man, their immense importance for him, their immanence in him. See <u>Oberland Dialogues</u>, pp. 370, 385.

"To say that we are not to think anthropomorphically," says Macneile Dixon, "is no more than to say we are not to think at all." The Human Situation, p. 66. --- True enough, if two provisos are added: (1) that anthropomorphism in the narrower sense is valid because the human is continuous with, and relevant to, the non-human; (2) that anthropomorphism in the wider sense is valid because man thinks, by this means, at all levels. It is primarily with (1) that I am here concerned. Cf. Samuel Butler's enlightened anthropomorphism: "I would, therefore, strongly advise the reader to use man, and the present races of man, and the growing inventions and conceptions of man, as his guide, if he would seek to form an independent judgement on the development of organic life." Life and Habit, p. 256.

× Diels, <u>Vorsokratiker</u>, p. 54.

In <u>The Nature of the Physical World</u>, III, Eddington draws attention to the paradox that we imagine we understand the nature of a table, but not of human personality. The fact is, however, that to understand the latter would be to understand the former. ing at every door, in the vain hope of one day gaining admittance. Science knows better than this, and so, up to a point, does common sense. The truth is that man owes his knowledge of the world and his power over it to the light which his own nature sheds upon Nature in general. * Nor is this illumination restricted to anthropomorphism in the stricter sense of the word --- at least four varieties may be distinguished:--

(i)	Mechanomorphism.	in physical science.
(ii)	Biomorphism	in biological science
(iii)	Anthropomorphism	in psychology
(iv)	Sociomorphism.	in philosophy

2. <u>MECHANOMORPHISM, BIOMORPHISM, ANTHROPOMORPHISM,</u> <u>AND SOCIOMORPHISM</u>.

(i) Mechanomorphism. Man has first-hand experience which gives rise to his notions of materiality, causation, motion, work, force. \times He knows what it is like to be a mechanical contrivance, to cause events to happen, to put forth his strength, to push and to pull, to resist and to give way, to feel energetic and feel tired. And precisely as he prolongs his ever-active limbs into the world (in the shape of other tools and more machinery) so he prolongs into the world the feelings of muscular exertion in those limbs, describing his environment as the locus of stresses and strains, forces, resistances, energy, power, and the like. The same words do for the human core and the furthest astronomical extremity: the heat, the inertia and the mass, the action and reaction, the compression and tension, the causation + and the materiality, are thought of as essentially the same, whether they occur in the flesh-and-blood body of the nearer regions or in the cosmically extended body. The concomitant is not only the invention of ever more efficient machinery, but also the Newtonian interpretation of the world itself as a machine. (Admittedly physical science, in these its later stages, qualifies and refines and even negates its Newtonian mechanomorphism, defining its function as the furnishing of 'shorthand descriptions' of events, ° without any pronouncements upon their inner nature; nevertheless official scientific theory and the scientist's actual habits of thought are not the same thing, and it is exceedingly doubtful whether even the most expert physicist can attain in practice to that ideal of agnosticism which he professes. And even if he could, he would owe his achievement to a past -- personal as well as collective -- of unbridled mechanomorphism. Without such a basis, physical science is wildly improbable, if not actually unthinkable.) And certainly no one can say that the mechanomorphic interpretation of the universe does not work. It has proved itself by abundant results, and even in the sciences of life and of man it is not valueless. Canon Streeter† scarcely does justice to mechanomorphism when he calls it a "useful and illuminating myth", an instance of "the illuminating metaphor, the picturesque analogy, the symbol or the myth, which will help us to apprehend some aspects of the truth". No useful fiction is so solidly based

* Cf. William James, <u>A Pluralistic Universe</u>, pp.8 ff. "All philosophers, accordingly, have conceived of the whole world after the analogy of some particular feature of it which has particularly captivated their attention. Thus, the theists take their cue from manufacture, the pantheists from growth....."

× "The very idea of Force is.... an anthropomorphism, that is to say, it ascribes the behaviour of inanimate objects to causes derived from the behaviour of human beings. We have come to associate the motion of matter with somebody or something pulling or pushing it. When one body is observed to move towards another, like a stone falling to the ground, it has been supposed that, though no agent is visible, something must be pulling it." F. Soddy, <u>Matter and Energy</u>, p. 20. Cf. A.M. Fairbairn. <u>The Philosophy of the Christian Religion</u>, p. 34.

+ Cf. Kant's doctrine that the notion of a cause is one of the <u>a priori</u> principles which are the indispensable basis of the possibility of experience itself. <u>Critique of</u> <u>Pure Reason</u>, Introduction, II. In effect, the concept of causation is necessarily an anthropomorphic principle of explanation.

° See, e.g., Karl Pearson, <u>The Grammar of</u> <u>Science</u>, IV. 1.

† <u>Reality</u>, pp. 8, 9. The whole of Chapter I is relevant. On the ancient belief that the useful arts are a clue to the obscurer operations of nature, see Benjamin Farrington, <u>Greek Science</u>, p. 129. upon our unmediated experience of the 'go' of things, or has so often and so brilliantly passed the pragmatic test.

(ii) <u>Biomorphism</u>. Man knows what it is to develop as he wants to develop. Θ He knows what it is like to contend, not only against mechanical forces, but against living creatures. He wins and loses in the struggle for survival and dominance. Such experience of life he projects upon a larger screen, arguing from his own case to the world in general. Similarly he breeds domestic animals, and argues from his own practice to the great law of natural selection. + Again, he argues from his own experience as a neighbour to universal neighbourliness, mutual aid, symbiosis. × Along these lines, the living environment is in part explained, and attempts are also made to explain the inorganic. * Whether we are thorough-going vitalists or not, to enjoy the state of being alive is, inevitably and very properly, to attribute to much of the world a similar enjoyment.

(iii) Anthropomorphism. Man is no stranger to pleasure and pain, love and hate, hope and fear, joy and sadness; he thinks; he organizes the movements of his members so as to compass some end which he has in view. And by the wholesale use of analogy (by what, in particular, is called the pathetic fallacy) he credits similar experience to other persons of his own age and sex and class and nationality, † and even (with appropriate modifications) to persons who lack these qualifications. In all probability he goes further, and is prepared to attribute similar experience to other grades of being --- perhaps to suprahuman grades and to the Whole itself. "With J.W.N. Sullivan ϕ we may believe that 'the science of mind, at present in such a rudimentary state, will one day take control and the differences between the sciences of mind, life and matter, in their present form, will be seen to be unreal'. A higher anthropism utilizing the knowledge of our mental processes will illuminate cosmic processes." o But, after all, there is nothing new in this: on the infrahuman side, McDougall's hormic physics and chemistry is only animism brought up to date, while on the suprahuman there is the perennial practice of attributing to deity all that is most admired in humanity. And what, indeed, could be more fitting? To live is so to project: our only choice is between projections worthy in quality and variety of the hierarchical orders, or some inferior substitute. God, Freud tells us, is "the father, clothed in the grandeur in which he once appeared to the small child". \emptyset But, as John Macmurray points out, Θ the doctrine of God as a father-projection, so far from damaging religion, is a valuable clue to the understanding of it, since "what is reflected in our religion is the general forms and attitudes of our personal relationships with one another". The function of religion is precisely to project the affection and emotional unity found in the family upon greater units, and upon the Whole itself.

However we view it, anthropomorphism is indispensable. If, said Dilthey, the ancients interpreted man's life from their conception of the world, it is our task to reverse the procedure, and interpret the world in the light of human nature. \oplus In fact, however, every age has undertaken just this task. Of the countless instances, none will serve better here than Al Ghazzali's: \otimes "we come to understand God's method of working and government and delegation of power to angelic forces, etc., by observing how each of us governs his own little kingdom." He goes on to liken

Θ Cf. Lamarck's second law: "The production of a new organ in an animal body results from the supervention of a new want (besoin)...."

+ Darwin begins <u>The Origin of Species</u> with a chapter on selection as practised by man. And both he and Wallace were stimulated to develop the theory of natural selection by reading Malthus' <u>Essay on the</u> <u>Principle of Population</u>.

× It is possible, of course, to argue in both directions, as Prince Kropotkin does in <u>Mutual Aid</u>: having borrowed the notion of co-operation from human relations, and attributed it to organisms, he re-applies it to humanity in the form of his own brand of communism.

* E.g., Karl du Prel's <u>Der Kampf ums Das-</u> <u>ein am Himmel</u>.

Bertrand Russell (<u>Outline of Philosophy</u>,
p. 9) does briefly entertain the idea that he may be wrong in attributing minds to other men.

φ The Limitations of Science, p.246.

 • The Rebirth of Christianity, p. 206, by Dr Stanley Cook. Cf. the well-known remark by William James, that "the recesses of feeling, the darker, blinder strata of char- acter, are the only places in the world in which we catch real fact in the making."

ø <u>New Introductory Lectures on Psycho-</u> <u>Analysis</u>, pp. 207 ff.

 Θ The Structure of Religious Experience , pp 56 ff

 \oplus <u>Introduction to the Humanistic Sciences</u>.

 \otimes <u>The Alchemy of Happiness</u>, II.

Paulsen writes: "I know reality as it is in itself, in so far as I am real myself, or in so far as it is, or is like, that which I am..... This is the truth contained in the old saying of Greek philosophy: The like is known only by the like." But he goes on to say that human life is the only thing we understand perfectly, while biological, and <u>a fortiori</u> physical facts are hidden from us: the more calculable, the less understandable. This is, as I believe, a mistake. See <u>Introduction to Philosophy</u>, pp. 373, 374. the hierarchy of events in a man's body (e.g., when his intention to write issues in the motion of his fingers) to the hierarchy of events in the cosmos when God puts an intention into effect --- "by the mediation of the forces called 'angels' it assumes actuality, and appears on the earth in the form of plants, trees, and animals, representing the will and thought of God, as the written letters represent the wish conceived in the heart and the shape present in the brain of the writer." Nor is the likeness an accident. "No one can understand a king but a king; therefore God has made each of us a king in miniature, so to speak, over a kingdom which is an infinitely reduced copy of his own." Just as, thanks to the fact that we are energy systems, we can go on to appreciate the world as a similar system; and just as, knowing what it is to live, we are entitled to speak with some authority of a living universe; so, as having first-hand acquaintance with all that is called human, we gain still more insight into the nature of things. ° We may, and indeed we should, refine without limit this most valuable instrument of anthropomorphism, but we can never do without it while we are men. The light of reason, passing through the film of our nature, throws a clearer pattern on to screens whose number and distance increase as the light shines more brightly. And it is not some bowdlerized version of ourselves, some carefully chosen attribute, which alone is admissible here, but the tragic, petty, magnificent, pitiful, comic, amazingly improbable whole. All our experience, as Whitehead says -experience drunk as well as sober, sleeping as well as waking, religious as well as secular, emotional as well as intellectual -- is relevant to what the world is. If we are not to take seriously the world-samples that we are and know, how shall we take seriously those that we are not and do not know?

(iv) Sociomorphism. × Man knows what it is to co-operate with his fellows in the running of innumerable organizations --- States, economic systems, armies, trading corporations, government departments, churches --- from the most comprehensive federation of nations to the smallest family. And the human society provides the clue to the world society. ϕ Thus a matriarchal society is likely to conceive the Deity as the Great Mother, and a patriarchal society as the Great Chief or as the Old Man in the Sky. * Thus, as Mr Arthur Waley tells us, + "the idea that the hierarchy in Heaven is a replica of government on earth is an accepted one in China. Here as so often the Chinese let the cat out of the bag, where other countries leave us guessing. It has often enough been put forward as a theory that a people's gods are the replica of its earthly rulers. In most cases the derivation is obscure. But in Chinese popular belief there is no ambiguity. Heaven is simply the whole bureaucratic system transferred bodily to the empyrean." Thus, in the fulness of time, there are devised elaborate philosophies of the universe as a social organization: for example, the systems of Lotze and James Ward and J. M. E. McTaggart. † Thus Marx and Engels are able plausibly, and with much truth, to argue that modes of production and exchange in society are the master determinant of man's outlook upon the world, instead of vice versa: Engels, for instance, is certain that "the economic structure of society always furnishes the real basis, starting from which we can alone work out the ultimate explanation of the religious, philosophical, and other ideas of a given historical period."

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° As Canon Streeter says, "The whole basis of Christ's practical religious teaching is just one great anthropomorphic thought." <u>Reality</u>, p. 142. God as King, Judge, Law Giver, Friend, Shepherd, and above all as Father --- what is religion without these, and what are these but the confident assertion of the unity of the hierarchy? Once this unity is grasped, anthropomorphism (suitably refined into something like the Thomist doctrine of Proportionality --- see Gilson, <u>God and Philosophy</u>) is seen to be a necessary virtue instead of an unnecessary vice.

× This word calls for some apology: but all I can say is that it is no worse a hybrid than <u>sociology</u>.

φ Thus Epictetus (<u>Dissertations</u>, II.15) asks how the vast and beautiful world can lack a governor, seeing that even a house and a city have one.

* On the effect of social relations upon man's idea of deity, see Dr. Paul Radin's <u>Primitive Religion</u>.

+ Preface to <u>Monkey</u>, by Wu Chềngên. This delightful 16th century Chinese novel, so admirably translated by Mr Waley, might well be called a comic yet profound essay in sociomorphism. But for us the classic text is Ulysses' speech on the cosmic and social hierarchies in <u>Troilus</u> <u>and Cressida</u>, I. 3; in both, degree and subordination are "the ladder to all high designs."

† According to Alfred Fouillée, all metaphysic is grounded on analogy and chiefly on the analogy of social relationships: our life, which is social through and through, is found to be one with a universal life of the same character. God is an idea derived from human relations, signifying the ground and the aspiration of the universal community. L'Avenir de la Métaphysique. If you could take any all the arguments (overt and hidden, ancient• and modern) which proceed from the social order to the cosmic, and with them all the parables of the moralist and the metaphors of the poet which imply the same argument, it is doubtful whether any trace of a cosmos would remain for us: indeed, the very word <u>cosmos</u>, in its original meaning, is nothing else than the discipline of an army and the hierarchy of the State. × Heraclitus might well have reversed his saying to: fed are all divine laws by one --- the human. In an earlier chapter I have described the laws of the State as those laws of Nature which are the first to become intentional in us, undergoing change in the process. Here it remains to add that in our human laws, as in our social order generally, we have the rough draft of universal law and order. *

Whitehead sees in the organization of the human body a key to the organization of the world at large. He finds a hierarchy of degrees of 'creative emphasis' such that acts of lesser creativity are subordinated to acts of greater creativity: accordingly he proposes a new science of 'psychological physiology'. And of course it is true that the hierarchy of the human nervous system, with its higher and later centres co-ordinating the activities of the lower and earlier centres, is a most illuminating excerpt from the entire hierarchy in which man has his station. (For instance, just as the higher units of the cosmic hierarchy influence the general pattern of a man's behaviour without giving rise to any new particular movements, so the frontal lobes are, it would seem, concerned with a man's long-term plans, with his ability to synthesize, with the restraint of impulses in favour of general considerations, but endow him with no new specific 'faculty'. It would not be altogether wide of the mark to say that, as the spinal cord is to the forebrain, so is man to God.) Nevertheless we know very much less about our nervous systems than about our systems of government and economics. In fact, the trouble with the latter is their very obviousness --- if Whitehall were a mysterious object with a Latin name, and only visible under a high-powered microscope, we should doubtless be much impressed with its cosmic significance: as it is, a piece of Nature rich with information, conveniently large-scale, and wide open to our inspection, it fails to attract the natural philosopher.† But this inquiry, at any rate, cannot afford to neglect such a source; and in this chapter I shall deliberately adopt the method of sociomorphism. The method being, in one way or another, unavoidable as well as full of promise, let it be consciously applied and controlled.

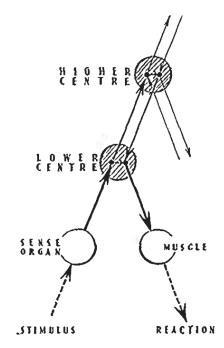
We have, then, not one variety of what is called anthropomorphism, but four at the very least --- the mechanomorphism of man the machine, the biomorphism of man the animal, the anthropomorphism of man the human being, and the sociomorphism of man-in-community. Here are four tools of knowledge, each indispensable in its proper sphere (as mechanomorphism in physical science, biomorphism in the sciences of life, anthropomorphism in the study of human nature, and sociomorphism in the study of what transcends the individual man), and each extending the sphere of its usefulness to include the others. A wellequipped man knows how to handle them all: in fact, they fit together into a single instrument.

Analogy has a bad name, which is not altogether undeserved. The

• The classic instance is Aristotle's analogy of the general and the army: "If it be asked in which of two possible ways the nature of the universe contains the good and the best, whether as something separate, existing independently in itself, or as the order of its parts, the answer is that, as in the case of the army, it must be in both ways at once. For the excellence of an army lies in its order, and it is separately embodied in the general. It lies, however, more in the latter than in the former; for the general does not exist because of the order, but the order because of him. Now all things in the universe are somehow ordered together " Metaphysics, XII.

× See Burnet, Early Greek Philosophy, p. 9.

* Cf. Ward, Realm of Ends, p. 110.



† This was not always so. To the Mesopotamian (and in some degree to most ancient peoples), human society was a subordinate unit in the society of the universe, a State within a State, subject in every way to the control of divine officials. Indeed the earthly city is the god's estate, and not primarily for man at all. Yet, through rites, man could identify himself with the gods and so draw upon their power. Cf. Thorkild Jacobsen, in <u>Before</u> <u>Philosophy</u>, V.

When Canon Streeter, in <u>Reality</u>, defends anthropomorphism, as distinct from mechanomorphism and vitalism (which he calls anthropomorphism at second hand) he overlooks our direct experience of what it is to be a machine and an animal. But his main point, that we should know the proper use of all these tools, and cease pretending we don't need them, is just what I am saying here. mediaeval disputant's practice of arguing from any part of the universe to any other part, as fancy or prejudice dictated, was relevant only in so far as it underlined the unity of a world which lends itself to limitless analogies. Similarly the poet's even more fanciful metaphors, bringing together things hitherto separated and insulated, so that a spark of beauty passes between them, witness to an underlying oneness. In a sense, even the worst analogy is true, and even the best is untrue. For, on the one hand, all levels and individuals recapitulate or somehow reflect one another; and, on the other hand, each is unique, so that it is improper even to draw an analogy between what I am at this moment and what I was a year ago or ten minutes ago. Quite clearly, if I am to use language (with its free-and-easy application of the same word to objects that are never the same), or to assume the unity of my experience today with my experience yesterday, or to infer similar experience and similar unity in others, or to count upon the continuity of physical objects which I cannot always keep under inspection, or to entertain the concept of natural law which is superior to all the variety of particular instances --- in other words, if I am to think at all and live anything like a human life, then I must rely unceasingly upon the use of analogy. The only question is not whether, but how, it shall be used, and how far it shall become explicit and deliberate instead of surreptitious. And indeed there is no lack of thinkers who have honestly admitted as much. "The procedure of rationalism is the discussion of analogy", Whitehead tells us. ° Bain, the Scottish psychologist, defines genius as the power of drawing analogies; and Maine, the great jurist and legal historian, calls analogy "the most valuable of instruments in the maturity of jurisprudence". A recent writer has called it the staff of the mind. × And it is widely admitted that analogy is as fruitful in scientific discovery as it is valid in moral instruction, + and evocative in literature.

The validity of analogical ways of thinking has a twofold basis. First, it arises from the fact that the individuals of one hierarchical level reflect one another, that the hierarchical levels reflect one another, and that the hierarchical Pairs reflect one another: and this is only to be expected if they are all parts or aspects of a single ordered Unit, if they are all, as branches and twigs of a single evolutionary Tree, genetically continuous, and if they are all held together and sustained by a single two-way vertical Process. Second, it arises from the fact that, in so far as analogical thinking (using such methods as proportionality, and consistency, and empirical verification) is successful, * it ceases to be merely analogical or indirect, and becomes direct acquaintance. Our efforts to explore other levels than 'our own' are, as I have shown again and again, much more than arm-chair exploration, or dreams of conquest. We have right of entry everywhere, and analogy, properly driven, is our vehicle. In other terms, analogy is no longer the projection of the directly known upon the indirectly knowable, but is instead participation in the processes which unite the directly known with the directly known. It neither copies nor lies outside the hierarchical train of events which link its terms, but is part of their self-consciousness. To imagine otherwise is to overrate our powers.

"I declare unto you", says Boehme, "that the eternal Being, and also the world, is like man. Eternity bringeth to birth nothing but that which is like itself; as you find man to be, just so is eternity. Consider man in body and soul, in good and evil, in joy and sorrow, in light and darkness, in power and weakness, in life and death: all is in man, both heaven and the earth, stars, and elements; also the threefold God." <u>Confessions</u>, pp. 87, 88.

Miss Dorothy Emmet's thesis in The Nature of Metaphysical Thinking, is that "metaphysics is an analogical way of thinking. That is to say, it takes concepts drawn from some form of experience or some relation within experience, and extends them so as to say something about the nature of 'reality' " (p. 5) Maxwell pointed out that the validity of the concept of number rests on analogy, and the mathematical treatment of nature is an analogical procedure. Again, Mach says that economy of thought in science demands the constant use of analogy, which makes possible the uniform apprehension of dissimilar facts. See Harald Höffding; Modern Philosophers, pp. 118 ff.

° Modes of Thought, p. 134.

× Joshua C. Gregory, 'On Knowing One Another', in <u>Philosophy</u>, Nov., 1945, p. 247.

+ Cf. Archbishop Trench, <u>Notes on the</u> <u>Parables</u>.

Maritain (<u>True Humanism</u>, pp. 25-6) regards the Cartesian revolution as a forsaking of analogical for geometrical reasoning and the ideal of the clear idea; this leads eventually to anthropocentric humanism, Nietzsche's "death of God", and the deification of the infra-human.

* As an example of failure in analogical thinking, I may cite the almost universal belief that the broody hen sits on her eggs 'in order to hatch them'; whereas (so we are told) she does so in order to allay a local inflammation. A dubious example, perhaps --- but then I suspect that the <u>entirely</u> fallacious popular analogy is itself a fallacy.

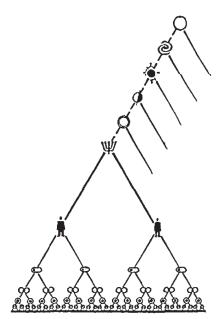
3. HIERARCHICAL ORGANIZATION.

So much for the theory of the method. I come now to the application.

In the cosmic organization I am an official of middle rank, with as many grades above me as below. It would seem that my functioning in my own grade depends upon the proper functioning of the immense hierarchy of my subordinates, whose numbers rapidly increase as their status decreases; and depends also, though in another fashion, upon the proper functioning of my superiors, of whom I recognize six. How, in outline, is this vast organization run? What does it do? Above all, how and where does my ordinary experience, what I perceive and strive for, fit in?

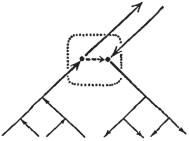
It is as if I were sitting at my desk in a private office. I never leave this room, neither does anyone enter it. However this is no inconvenience either to me or to the staff which I never see: with admirable efficiency my assistants pass through to me a continuous stream of reports on the situation in 'the outside world', so far as I am concerned with it. I have to rely implicitly upon these reports, because my room is windowless and doorless: my only channel of communication with what lies beyond is the hatch through which my subordinates push their papers --- files, cases, minutes, and so on -- for my attention, and through which I hand back the papers with my comments or decisions. In due course reports come through to me describing the effect of the orders I have given, with details of the new situation that has arisen. Again I settle what shall be done and what shall be left undone, and again my instructions are more or less faithfully carried out. For as long as I can remember, these have been the conditions of employment in the mysterious Office in which I serve, and there is no prospect of their changing so long as I live. In this organization all appointments are for life, there are no holidays, and everyone seems to work a 24-hour day.

I am very far from being the head of the organization, and when I find myself incompetent to deal with a situation, I collate and comment upon the papers before me, and then refer the case to higher levels. Even when I do make a decision on my own, I generally do so in accordance with standing instructions which have been instituted by my superiors: I apply their general rules to my detailed cases as seems to me proper. ° In any case there is no personal contact. Though I may feel their authority I cannot see the officials who direct me. Their orders are often puzzling, their general policy obscure: so that I am obliged for the most part to work in the dark. What is apparent is that information from below and directions from above -- the former particular and small-scale, the latter general and large-scale -- somehow find their way on to my desk, and have there to be reconciled. My problem lies in front of me, vividly presented, compelling, urgent, perhaps very difficult and disturbing. But its history and destiny, how it got here and the part my work upon the problem will play in the work of the whole organization, the why-andthe-wherefore of there being any problem at all --- these are not presented. I have to carry on, in the belief that my efforts are a necessary contribution to the general effort - or simply because I am made that way, and cannot help myself.



"In proportion to the breadth of the spiritual substructure the spiritual height erects itself, and above the little mountains or pyramids of human consciousness rises the highest, all-encompassing peak..." Fechner, <u>Tagesansicht</u>, p. 21. (Lowrie, p. 222) But before we can come to such a view, we have to face up to our isolation, as Matthew Arnold does in his poem 'To Marguerite' ---

"Yes: in the sea of life enisl'd, With echoing straits between us thrown, Dotting the shoreless watery wild, We mortal millions live <u>alone</u>." Nevertheless we feel that beneath the separating sea is that "single continent" of which each island of consciousness is a mountain top.



° Of course I am not necessarily, or even normally, aware of this control from above. Whether it is conscious of its condition or not, "an individual entity," to quote Whitehead, "whose own life-history is a part within the life-history of some larger, deeper, more complete pattern, is liable to have aspects of that larger pattern dominating its own being, and to experience modifications of that larger pattern reflected in itself as modifications of its own being." <u>Science and the Modern</u> <u>World</u>, p. 134.

Ward (<u>The Realm of Ends</u>, p. 193, footnote) supposes that there is more direct rapport between man and higher beings, than between men.

For the curious fact is that, as a rule, I take no interest in the procedure of the immense organization in which I find myself: the speed and sureness of its working, its unspeakable grandeur and mystery, even the bare fact of its existence, leave me quite unimpressed. Rarely does it occur to me that a great deal of preliminary working-up has gone to the making of the reports that appear with magical ease and regularity in my 'in-tray'; nor do I pause to wonder how it is that the orders which I place in my 'out-tray' come to be executed so promptly and so precisely, in spite of the miracles of organization which they must involve and in spite of my failure to give any detailed instructions whatever. Ordinarily, I take it to be 'natural' for an accurate and vivid and well-knit account of the world to arrange itself on my desk, and 'natural' for my plans to adjust the world to be put into effect --- these things are inevitable and obvious, and that is the end of the matter. But it so happens (by reason of some hitch in office routine, some evidence of failure, and some reading-between-the-lines of reports) that I come to ask what is going on outside the walls of my cubicle. I make an attempt, gathering hints here and there from the information on my table, to piece together the entire structure and its routine at all levels.

For example, I come to the conclusion that each of my fellow functionaries, whether his rank is higher or lower or the same as mine, is confined to his office cubicle just as I am to this one. Like me he gets from his assistants the information about 'external reality' (already worked up to the appropriate standard of completeness) upon which to base his decisions. Like me he carries one stage further the co-ordination of these data, and submits them to his immediate superior for guidance. Like me he receives broad directives from above, applies them to the concrete situation, and hands down the needful instructions to his subordinates. That is to say, each official has two functions: the first is to play his part in the upward movement by receiving, integrating, and passing up the data presented from below; × and the second is to play his part in the downward movement by receiving, analysing, and passing down the data presented from above. But there are not two sets of data. Lying on the official's desk is one changing report of one situation; and the elements in it which are contributed from above, and those which are contributed from below, though distinguishable in theory, are in practice unified.

To this proviso must be added another which is just as important: in reality it will not do to speak of the cubicle as containing <u>two</u> things -- the official and the correspondence that he studies are inseparable. He <u>is</u> the converging and diverging data, in one sense; and in another sense he is nothing but their empty receptacle, mere room for them. It may indeed be said that not one of the countless millions of cubicles which the structure contains is inhabited, except by cases undergoing analysis and synthesis, and that the functionaries which perform these duties are mythological. But this is only half the story. While there is, so to say, no room in <u>his own</u> cubicle for the official in addition to his cases, there is room enough for him in the cubicles of <u>other</u> officials. For, in his external or bodily aspect, he forms a part of the reports which lie on the desks of his colleagues of the same grade: he is one of their cases, an element in the problems which confront them. In fact, the great office rule of else-

It is interesting to observe, when one is talking, playing the piano, playing pingpong, or performing any other complex and rapid set of actions, how all that matters is the general intention. I do not know in advance the particular words I shall use, or the way I shall play the ball: in fact, the more I bother with such details the worse my performance is likely to be. It is the same with other functions. "From man is the seed", says Marcus Aurelius, "that once cast into the womb, man hath no more to do with it. Another cause succeedeth, and undertakes the work, and in time brings a child.... to perfection. Again, man lets food down through his throat; and that once down, he hath no more to do with it ... ' Meditations, X. 26.

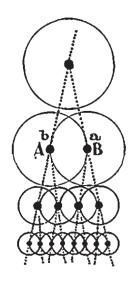
The difference between our normal horizontal outlook and our rare vertical outlook is admirably described by Al Ghazzali: "There are many degrees of knowledge. The mere physicist is like an ant who, crawling on a sheet of paper and observing black letters spreading over it, should refer the cause to the pen alone. The astronomer is like an ant of somewhat wider vision who should catch sight of the fingers moving the pen, i.e. he knows that the elements are under the power of the stars, but he does not know that the stars are under the power of the angels.... Those whose eyes never see beyond the world of phenomena are like those who mistake servants of the lowest rank for the king." Alchemy of Happiness, II.

× W. E. Hocking, <u>Human Nature and Its</u> Remaking, pp. 68 ff, 116 ff, expounds the doctrine that sin is the deliberate failure to integrate our conflicting impulses. Certainly successful living is largely a matter of reconciling our heterogeneous tendencies, and of bringing our contradictory motives together into a single motive. What is this task of reducing the many to the one but an organizational task, and a fair sample of hierarchical organization in general? To abstract a small portion of this vertical process, label it 'sublimation' (say), and treat it as if it had no significance beyond the life of the individual man (or human society at the most) is itself an instance of organizational failure, of failure to integrate the data.

whereness lays it down that the only place where an official may never venture is his own cubicle: in so far as he is something more than a mere point of confluence of the ascending and descending streams, or mere office accommodation for the business of the office, his proper place is in the cubicles of his equals, as theirs is in his. Which is only another way of saying that each of us as 'mind' (or view-out) knows himself in terms of the others as 'body' (or view-in). $^{\circ}$

To much that I have said there are plainly two exceptions --- the head of the organization, and its humblest members. In the former, all the scraps of information which subordinate officials possess are brought together into a final unity. Only the highest authority, upon whom all the proper channels of official procedure converge, can take in the whole situation, and consequently it is only this authority who is in a position to settle policy as a whole. At the apex of the pyramidal structure the ultimate decisions are made --- decisions which (unlike all others) are free without qualification, subject to no guidance from above. Clearly the head is not in the same class as the mere official, no matter how exalted his rank. Clearly also the functionaries of lowest rank, herded together at the base of the pyramid, are in many ways peculiar. Having no subordinates to supply them with information, they are obliged to get it for themselves; moreover the information so collected cannot come from below (seeing that they are already at the lowest level of all) but must come from their own grade. In other words, the general office rule of vertical communication is here countermanded, and replaced by a rule of horizontal process --- if process it can be called. Here, at any rate, is the sole source of that 'information' which the entire hierarchy of officials make it their business to piece together, till it forms a single complete picture at the apex; here, again, is the sole scene of that real action which is the outcome of the decision taken at the apex, and analysed by the entire hierarchy of officials until, at the base, the very last detail of what shall actually be done has been settled. These two extremes are the real head and the real hands of the organism: all the rest is by the way, intercommunication, internal procedure. The task of the intermediate officials as such is not to act, but to take decisions (already made) one step nearer to finality and execution, by working out some of their implications; × neither is it their business to gain information, but to take the fragmentary information (already collected) one step nearer to unity. To decide, it is necessary to see the whole picture; to follow up decision with action, it is necessary to have dismissed all the alternatives that present themselves, to have determined down to the minutest detail what shall be done. And the hierarchical organization may be described as means to these ends.

My duty then, as a functionary of middle rank, is to serve as a conduit through which the rising and descending streams may flow without hindrance into their proper channels, in accordance with the accepted rules of procedure. And this duty covers the whole range of my activity, for I am allowed no holidays, no private interests, no time off for my own pursuits: all my experience, down to the most trivial impulse of the moment and the vainest, most ephemeral day-dreaming, is caught up in the vast business of the organization. For there is no other business: no



The official (A), in his regional aspect (a), exists as an item under consideration by (B) in his cubicle. Similarly (B) is present as (b) at (A).

° Cf. Lloyd Morgan, <u>Mind at the Cross-</u> <u>ways</u>, pp. 49 ff: There is in the body a hierarchy of physical processes of which the other aspect is "a like number of modes of awareness which play their part in mental fellowship in such wise as to constitute an organized or integrated system of subjective awareness... With each item of physiological process we may hyphen an item of subjective awareness." Cf. C. A. Richardson, <u>Spiritual Pluralism</u>, p. 217, where he describes the objects presented to my subordinate monads as consisting of aspects of their fellows, or as including such aspects.

× "Solitary men in moments of contemplation receive, as I think, the creative impulse from the lowest of the Nine Hierarchies, and so make and unmake mankind." Thus does Yeats (<u>Essays</u>, p. 195) picturesquely describe a part of this downward transmission. experience lies outside it.

What, in that case, is the 'situation' that each official studies so assiduously? What is this immense effort about?

All very large organizations tend to become, and this organization actually is, self-contained. It finds in itself everything that it requires. The situation which is its constant concern is an internal situation, which at each level reveals itself in terms of that level. What is ultimately one and the same problem is presented to me as the problem of my colleagues (what they are, and have done, and will do), and to my subordinate as the similar problem of his colleagues, and to my superior as the similar problem of <u>his</u> colleagues. \times Thus the strict office regulation that each assistant shall confine his activities to his own grade, and shall deal only with the case of his equals, is altogether fitting: for each in so minding his own business is minding the general business, conducting it through that stage of its development which he is qualified to supervise. No wonder, then, that the cases of one level are reminiscent, of the cases of other levels: they are the same thing, more unified or less unified. The autonomy of the grade at which we happen to find ourselves, its uniqueness, the horizontal web of its self-causation, are deceptive appearances. The overwhelming importance, the concern, the whole spectrum of our emotions, the loving and hating and hoping and fearing, the urgent striving, the intense reality and vividness of life at this level, ° --- these reflect, and proceed from, and issue in, and are one with, the same life as it is lived at levels above and below our own. Indeed we are not alone, and the hierarchy in which we belong is as far as possible from being that soulless corporation and bloodless monstrosity which my description may suggest.

We are prone to two opposite errors. First, oblivious to the solidarity of our own level with those above and below, to the immense sweep and richness of those vertical movements which make and save us all the while, we imagine that the whole weight of the organization rests upon our shoulders, that everything depends upon <u>this</u> level of action. We become over-anxious, exaggerating our own importance, hierarchical busy-bodies: and our hypertrophied sense of personal responsibility by no means helps us to bear that responsibility which is properly ours. This is the vice of the West. The vice of the East has been the contrary one of relying too exclusively upon the sustaining processes of other levels, and neglecting the essential contribution of this level. The ideal official is one who neither (like the idiot) hands up to his superiors all problems which his staff cannot solve, nor (like the worried Jack in office) imagines himself competent to solve them all.

4. HIERARCHICAL INTERCOMMUNICATION.

Only at the lowest level of all (as I have already argued in Chapter V) does real interaction occur --- in the sense that the official is no longer insulated from his fellows, but is able to open the door of his cubicle and

× It is a fact of first importance, and one not easily held on to, that experience of the nearer object of lower status is, when suitably worked up, experience of the more distant object of higher status. For me, a man is a developed version of what my cells make of one another, not of what my cells make of his cells. Similarly, what I make of other men determines what I make of suprahuman individuals, for the reason that my view of the latter is my view of the former, more fully developed. In so far as the data of a lower level are adequately known, they are the data of a higher level. The lower is more true, more itself, in the higher, than upon its own plane.

° Dewey, in common with many recent philosophers, has stressed the view that consciousness arises when difficulties arise: no problems, no awareness. Similarly, for R. G. Collingwood, thought is essentially the asking and the answering of questions. For me, the hierarchy is a system of awareness and therefore of 'problems' (however rudimentary) at every level: everywhere there is striving, and the alternation, of something like pain and joy. "Everywhere", says St Augustine, "a greater joy succeeds a greater pain.... What means this, that this portion of things alternates betwixt ebb and flow, betwixt offences and reconciliations? Is this their portion, and didst Thou appoint this only for them, when from the heights of heaven to the depths of earth, from the beginning to the end of the ages, from the angel to the worm, from the first motion to the last, Thou wert setting each in his own place ..?" Confessions, VIII. 3.

meet them face to face. Here alone in the office is there horizontal communication: everywhere else the proper channels run vertically, and the walls of the cubicles are impenetrable. † Though the officials of my own grade bulk large in the data before me, they do not arrive here as a result of a direct or horizontal movement: I have no immediate dealings with them, but only with officials of other grades than my own --- namely with my own subordinates of highest rank, and my own superior of lowest rank. To get into touch with my equal, or to be approached by him, it is necessary to call in the help of our assistants of the very lowest grade,° for only they know how to bridge the gulf that separates us. As his and mine, yet abolishing these demarcations, as an innumerable company, yet one throughout the entire organization, as different from one another, yet basically the same, as becoming something, but as being nothing --- as thus contradicting itself at every turn, the lowest hierarchical grade is the ground of all hierarchical interaction. Every official of every grade has on his personal staff a number of these curious and invaluable subordinates, and the higher he ranks the more he owns --- only their chief value to him lies in the fact that he does not really own them, because they belong to the organization as a whole.

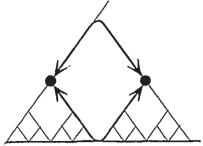
An official's subordinates are his own in a sense in which his superiors are not his own; and accordingly it is permissible to say that, when my fellow official and I meet at our lowest common level, it is <u>we</u> who meet there. But when, instead of calling upon our respective staffs to find a basis of unity by descent, we seek unity by the opposite method of ascent to our common superior, then it is more difficult to claim that it is <u>we</u> who mingle in him. In this case our unity is transcendent, achieved over our heads. Nevertheless it remains a fact that the most direct route between us lies through the office of our immediate chief, in whom we arrive at a kind of unity. We are able, then, to get at each other by two methods -- by the way of ascent as well as the way of descent -- and in fact we use both methods continually.

Leibniz taught that the monads are windowless, and devised the doctrine of pre-established harmony to account for what seems to be communication between them. + Like the Leibnizian monads, my officials are walled in, and have no doors or windows opening on to the world of their own level. But they are furnished with trap-doors.

The structure which houses them -- which they are -- is <u>vertically</u> planned: the cross section, the vertical arrangements, are what count here, and not (as in most other office-buildings) the horizontal arrangements of the plan. I imagine an immense windowless building twelve storeys high, each storey of which is given over to officials of a single grade. My own office is on the fifth floor, and directly overhead is the very much larger office of my immediate superior, while directly below are the numerous and very much smaller offices of my immediate subordinates. All the information I receive from the latter comes to me (by means of the tubular inter-office communication system) through holes in the floor, and all the instructions I pass back travel downwards by the same route. I am similarly connected with my chief overhead, and he with me. And every other cubicle in the building, with the exception of those in the basement (where the walls, instead of the floors, are perfo-

† "For this universal ordinance is divinely established, that the Divine Light is imparted to secondary natures through primary natures." "For that superessential harmony of all things has provided most completely for the holy regulation and the sure guidance of rational and intellectual beings by the establishment of the beautiful choirs of each hierarchy." Pseudo-Dionysius, <u>The Celestial Hierarchy</u>, VIII, X.

° Whitehead thus describes part of such a descent: "In the case of an animal, the mental states enter into the plan of the total organism and thus modify the plans of the successive subordinate organisms until the ultimate smallest organisms, such as electrons, are reached." Science and the Modern World, p. 98. But so long as these smallest organisms are many and not one, their dominant organism, the animal, cannot 'get across' to another animal. Something like Lotze's One, underlying the Many, is required, in order to account for what he calls 'transeunt action'. This is, in essence, the occasionalism of Geulinox. Ward writes, "The existence of an indefinite number of such (ultimate) monads would provide all the 'uniform medium' for the intercourse of higher monads that these can require, without any need for such divine intervention as occasionalism assumes." (Realm of Ends p. 257) But Ward overlooks the unity of the apex and the base of the hierarchy: the lowest as well as the highest is the scene of 'divine intervention'.



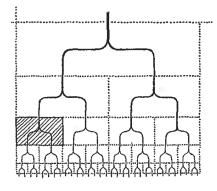
+ "Monads have no windows, by which anything could come in or go out." "The natural changes of monads come from an <u>internal principle</u>, since an external cause would be unable to influence their inner being." Leibniz, <u>Monadology</u>, 7, 11. Cf. Dr Inge, "Our relations with other finite spirits are not direct, but are mediated by the intercourse of the soul with what is above itself." <u>Contemporary British Philosophy</u>, First Series (Ed. J. H. Muirhead), p. 202. And Thomas R. Kelly, <u>A Testament of</u> <u>Devotion</u>, pp. 74-5. rated) and the attic (where the ceiling is unperforated), is like mine: it is a junction and an intermediate station on the vertical system of intercommunication. Thus there is a way from every room in the building to every other. The remotest officials are linked, at the very least, <u>via</u> the attic and the basement.

But my business is with my own colleagues, whom I contact from above and below. With an insidious thoroughness that amply makes up for my want of direct access to my neighbour, I simultaneously instruct my staff to incite his, and go over his head to our superior officer: never by any chance are my dealings with him 'on the level'. A proviso, however, is needed here. It is not quite true to say that we come together in our common immediate superior. When a situation arises between two individuals of the same grade, who put it up to their chief, the ruling that in due time they receive comes through him rather than from him. If he does not refer that particular question to still higher levels, till it reaches and is settled at the highest level of all, at least his decision is made in the light of standing instructions which ultimately proceed from the head of the organization. My superiors owe all their authority over me to the fact that they are appointed by and represent the one authority whose power is inherent and not delegated. ° Thus there is some reason -- and even a very good reason -- for the astonishing illusion, current among the officials of my own grade, that (though each has an immense staff of many grades) they have no superiors whatever, except perhaps the supreme head of the office. The fact that, in spite of such a belief, they continue to work with moderate efficiency is some indication that the belief is not wholly mistaken. There is a true sense in which the organization above me is always singular, just as the organization below me is always plural.

But whether I recognize them or not, my superiors are in many ways involved in my functioning at lower levels. For instance, my communication with my colleagues is a matter of breaking down the barrier between my set of lowest subordinates and his: and this can only be done in virtue of the fact that both sets belong to our common superior. As his, they are one; as unifying them, we do so in him. Thanks, to the immanent unity which his transcendent existence implies, we who exist in him can communicate. The more remote our transaction the more extensive its base and the more exalted the authority in whom and by whom it is brought about. In short, my commerce with another brings in a third official, on whose staff we both serve, and for whom our lowest subordinates are one. But commerce means unity, which derives ultimately from the head of the organization. * "Unity with man is a byproduct of union with the One and will only be accomplished in that way. For only in the intense focus of utter Being can the atomic hardness of our egos be fused." •

5. HIGHER AUTHORITY.

Common sense can form some idea of the conduct of the organization from the human level downwards. And indeed, on no other hypothesis



"The complete intimacy of the <u>rapport</u> between the dominant monad and its subordinates" is sufficient, according to Ward, "to account for the fact that the organism has 'windows', --- is, so to say, diaphanous for its own subject and yet opaque to all subjects besides." To the objection that we have no direct knowledge of this <u>rapport</u> or intersubjective relation, he replies that, so long as all goes well, we remain unaware of the <u>rapport</u>, which pain (or some other failure in functioning) shows to have been present all the while. <u>Op. cit.</u>, pp. 466, 467.

° Unlike ourselves, St Paul achieves a nice balance between the proper recognition of the suprahuman powers, and their subordination to the One. "Let every soul be in subjection to the higher powers: for there is no power but of God; and the powers that be are ordained of God." On the other hand, "I am persuaded, that neither death, nor life, nor angels, nor principalities, ... nor powers, nor height, nor depth, nor any other creature, shall be able to separate us from the love of God ..." (Rom. XIII.1; VIII. 38, 39; cf. Col. 1. 16 ff.) As Mr C. S. Lewis says, "We are prepared to believe either in a reality with one floor or in a reality with two floors, but not in a reality like a skyscraper with several floors..... We feel quite sure that the first step beyond the world of our present experience must lead either nowhere at all or else into the blinding abyss of undifferentiated spirituality, the unconditioned, the absolute. That is why many believe in God who cannot believe in angels and an angelic world." But the Christian story requires that those who believe it accept the idea of intermediate levels. Miracles, pp. 184, 185. * "Essentially it is the God-relationship that makes a man a man." Kierkegaard, Concluding Unscientific Postscript, p. 219. • Gerald Heard, The Creed of Christ, p. 32. Cf. Leibniz: "And one created thing is more perfect than another when there is found in it that which explains a priori what happens in the other; and it is because of this that we say that it acts upon the other. But in simple substances the influence of one monad over another is ideal only; it can only have effect through the intervention of God." Monadology, 50, 5D.

than the one I am putting forward here (or something of the kind) is it possible to make sense of the psycho-physical facts. How otherwise can I begin to account for my sense experience, or for the simplest of my responses? × Either they are miracles of organization, or plain miracles. Here are tasks which, by reason of their inconceivable complexity united to utter simplicity, call out for organization, for a great hierarchy of officials attending each to his own little problem, for the wholesale delegation of responsibility, for finer and finer specialization and subdivision of effort under a single supreme authority. How would we run a gigantic robot, whose performance was as close as possible to human standards? If I could be transformed into a large-scale engineering problem and let out to contract, the firm which built and ran me would of necessity develop an organization not unlike that which I now am: only the functionaries would be human instead of infrahuman, and the total performance would be unspeakably inferior to that of the prototype.

All this, common sense is disposed to admit. But the suprahuman levels are another question. Do I really refer difficult questions to my superiors? Am I in any case dominated by them, just as my subordinates are dominated by me? If so, it is a curiously rare thing for me to be aware of the fact. † Certainly I seem to do very much as I please.

Plato, at any rate, had no doubt on this score. "All things", he says, "are ordered by him whose providence is over all with a view to the preservation and goodness of the whole; and every part of the universe, in acting and being acted upon, observes so far as is possible the fitness of things; and over every department down to the least are set rulers to order what they do and what is done to them." + The government is all-embracing: and how, indeed, could it be otherwise? If the world within me is conceivable only as a highly organized hierarchy, is the world without any less remarkable, any less ordered or less complex, any less in need of a very similar interpretation? It is true that, by human standards, the suprahuman has a coarseness of texture, a largeness of scale, a slowness of procedure, which is apt to conceal the intricacy of its organization and the ends for which it is organized. This is not surprising: what is surprising is that man should come to realize that his actions are in some degree overruled, that even when he does as he pleases higher ends are served, that there is a viewpoint from which the chaos of his history takes on pattern and intention, that he is fortunately not exempt from the 'heterogony of ends' (as Wundt called it ϕ) whereby the hierarchical functionary accomplishes what he neither foresees nor intends. "Knowest thou the ordinances of heaven? canst thou set the dominion thereof in the earth?" * Very likely not; but it is something to know that there are such ordinances, and that man is subject to such dominion. No doubt Shelley exaggerates when he says "Our most imperial qualities are the passive slaves of some higher and more omnipotent Power"; but Whitehead's guarded suggestion "that we can detect in ourselves direct aspects of the mentalities of higher organisms" ° surely errs in the opposite direction. If all my activity were simply a matter of pain-avoiding and pleasureseeking response to immediate stimuli, and duty or suprapersonal ends meant nothing to me, then I should indeed be much less than human: I should, in fact, resemble a cell of mine who regarded my elaborate

× Or (I might add) for a great mass of psychopathological data? We have trouble with our staff. A neurotic is said to suffer from an autonomous complex, an unconscious mental content which is not subject to the conscious will, but follows its own law. The aim of the analyst is to restore free communication between ourselves and our subordinates. Again, psychic research points in the same direction. Dr G. N. M. Tyrrell writes, "It is this view of personality as extended and also graded in some hierarchical fashion, now emerging from psychical research, which seems to be so important. The facts, when we look into them, not only support this view; they demand it." The Personality of Man, p. 159. † For Aristotle, the Primum Mobile communicates its motion to each lesser sphere in turn, till terrestrial motions are produced. And St Thomas followed Aristotle to the extent of believing in the control of terrestrial phenomena by the stars, in such a way that there is a field left open for chance. Many schoolmen, however, and notably Roger Bacon, took their Aristotle with a large a mixture of Arabian doctrine, according to which the celestial hierarchy, embodied in the fixed stars and planets and moon, rules and informs all sub lunar nature; moreover the rational ideas and universals which regulate our thinking are derived from the heavenly Intelligences. Seldom do we realize how our ancestors lived, almost literally, under the very eyes of higher Authority.

+ <u>Laws</u>, 903.

On the one hand there is the view of philosophers like J. E. Boodin, who writes: "Just as in the hierarchy of the organism, the reflex centres owe their definiteness of function -- their graduated and localized response to stimuli -- to the control exercised by the higher levels of the cerebrum.... so matter in the cosmos owes its definiteness of function, its mathematical laws, to its existing as an integral part of the cosmic hierarchy of control." Cosmic Evolution, p. 110. On the other hand there is the great company represented by Spencer, of whom Ward well says that he ignores "the direction of the lower by the higher altogether. The universe for him is like a vast egg which hatches out perfectly by what he was once pleased to call 'a beneficent necessity." Realm of Ends, p. 113. φ System der Philosophie, 1889, 337. Cf. Hegel, Philosophie der Geschichte, 1837, 30.

° <u>Science and the Modern World</u>, IX. It is a long way from this tentative recognition of suprahuman influence to the monopsychism of, say, Avicenna, whose hierarchy of celestial intelligences shed their light, level by level, down to the Active Reason and man; in particular, they inspire the prophet and the philosopher. But once

^{* &}lt;u>Job</u>, XXXVIII, 33.

control of him (exercised, for example, by means of the hormones of the ductless glands) as nothing but changes of the weather. The peculiar glory of men is that they can say, "It is God who worketh in us both to will and to do of His good pleasure," \times --- God, and the suprahuman powers that He ordains.

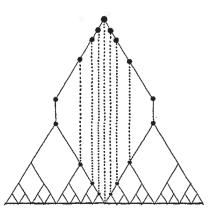
In its main lines, this ordering from above has been described in the previous chapter: the invariable rule is that everything proceeds by Pairs. I am obedient, not superficially, but in the depths of my being, to suprahuman control. The more exalted the superior from whom I receive my instructions, the humbler the rank of the inferiors in me who are required to comply with them. Thus each grade of my subordinates (as I have already noticed) has a double loyalty --- to its immediate superior within me, and to the superior member of its Pair beyond me. To an almost overwhelming degree I am dependent upon this rapport between my inferiors and my superiors, without which I could not last a moment: no belief is more ridiculous than that which attributes to man the power of self-maintenance. + Just as the head of any very complex human organization must be largely unaware of two things -- first, the specialized knowledge and qualifications of his staff, and secondly the learned societies and universities, the professional associations and trade unions, which are responsible for their initial training and present conduct -- so am I largely unaware of the performance of my subordinates, and of how it is made possible by their unity with my superiors. The essential symmetry of the organization, its reversibility, is lost on me. But I cannot keep my staff and repudiate my superiors, for they are inseparable. That is to say, though my direction is from above and external and by others, it is also from below and internal and (in a sense) my own.

6. PROMOTION AND DEMOTION.

If each official may attend only to the business of his own grade, how is it that I, who am an official of middle rank confined to his cubicle on the fifth floor, am nevertheless able to draw up this account of the whole organization? Is all that I have written in this chapter internal to my windowless and doorless private office, or at any rate to my own grade and storey, and without any relevance to what lies beyond? I cannot think so. Is my schema then a diagram of the whole, but contained here in the part? Not if the principle holds good, that what treats of a level occurs at that level. The steel frame of a building is not a superfluous model of the structure exhibited on the fifth floor; neither is this diagram a local peculiarity of the organization, or any kind of accident, but a structural and fully distributed aspect of the whole. Its extreme inadequacy arises from its lack of detail and concreteness, rather than from any lack of scope, or remoteness from its subject-matter.

The more I am alive to, the more I live. ° And if I am alive <u>to</u> several hierarchical grades, this can only mean that I am alive <u>in</u> them. \oplus I am not only an official of the fifth grade: quite the contrary, I am for ever being promoted and demoted, so that in effect I have the run of the entire

having admitted even the smallest breach in the walls of the ego, there is nothing to prevent its widening indefinitely.



+ Al Ghazzali realizes the important truth that a man's control of his limbs is a not untypical instance of that great system of the control of the lower by the higher; "Just as angels preside over the elements, so does the soul rule the members of the body." <u>Alchemy of Happiness</u>, I.

See Herbert Butterfield's lecture 'Providence and Historical Process', printed in <u>The Listener</u>, May 5, 1949, for a persuasive statement of the view that, in practical politics no less than in theory, it is a profound mistake for man to leave Providence out of account, and fondly to imagine that he can direct history just as he pleases.

"But such a life", says Aristotle of the contemplative existence, "will be higher than mere human nature, because a man will live thus, not in so far as he is man but in so far as there is in him a divine Principle and therefore, if pure Intellect, as compared with human nature, is divine, so too will the life in accordance with it be divine compared with man's ordinary life. Yet must we not give ear to those who bid one as man to mind only man's affairs, or as mortal only mortal things ... In fact this Principle would seem to constitute each man's 'Self', since it is supreme and above all others in goodness: it would be absurd then for a man not to choose his own life but that of some other." Nicomachean Ethics, 1177, 1178. --- A most fitting text for this chapter, and in particular for this section.

° Cf. Henry Drummond, <u>Natural Law in</u> <u>the Spiritual World</u>, pp. 149 ff.

⊕ A man, Philo taught, not only can but "ought to transform himself from being a man into the nature of the cosmos". With Walt Whitman he should say, "From this hour I ordain myself loos'd of limits and imaginary lines" ('Song of the Open Road'). organization. And as I rise and sink in the scale I conform perfectly to the requirements and routine of each new post, taking nothing alien to it and bringing nothing away. (For example (as Eddington has remarked) the physicist must shed his sense-organs one by one -- ears, nose, tongue and skin -- before he can get into touch with his world. \times He has to descend to its level. * The 'senses' of molecules or atoms become his, as when he inquires of a body what it makes of Earth -- weighing is just this -- and abides by the body's decision. The physicist must break down towards the oblivion of the Centre. Or, to take an example from day-today life, consider the curious ambiguity of the self, its vertical distribution. Thus of my unworthy impulse I say, 'that isn't like me', or 'I wasn't myself?[†] Either I rise to the occasion, or sink in my own estimation; either my better self is in evidence, or my worse; either I am up to the mark, or below par; I fall, and know that my base behaviour is unworthy of my true or higher nature. And so on indefinitely --- whatever theory I profess, I have only to start describing it, and my phraseology will show that, in practice, I take for granted the many-levelled self, and the vertical oscillation of the 'I' of the moment about the human axis.) ϕ

The organization is one and indivisible, not a vast corporation of units each of which is a substantial thing in itself. All the same, the illusion of the separateness of each official in his windowless compartment is not altogether an illusion: no limitations, no organization in which limitations maybe transcended. Doubtless distinctions are made only to be overcome, but it is of the first importance that there shall be an immense variety of distinctions requiring such treatment. "Though we are all made one for another, yet have our minds and our understandings, each of them their own proper and limited jurisdiction." ° A judicious narrow-mindedness is the cement of the structure, and universal broadmindedness would wreck everything. If everyone knew his own mind -namely, the mind -- it is questionable whether there would be anything definite in it to know. Liberate each official, show him that he is free to go anywhere he likes and is not tied to his desk after all --- and the result would be a chaos in which no-one was free to do or be anything. Even a system of orderly promotion (such as certain theosophists speak of) would soon make the organization top-heavy. From every point of view the acceptance of limitation is a necessity. • And indeed the higher the official the lower the place he is content to fill: we do not abandon the inferior grades as we gain promotion, but, on the contrary, discover them. The law of symmetry ensures that the lower posts are well manned. All promotion means equal demotion. As in the social hierarchy of the East the meanest servant is often given the noblest title, and as in the military hierarchy of the West ascending rank is coupled with descending, so in the cosmic hierarchy of Heaven and Earth the humble and the grand are inseparable.

It is an ancient belief that the true end of man is to <u>climb</u> --- to leave his manhood behind and mount the heavens. Jack climbs his beanstalk which is the world-tree Yggdrasil, just as "the spider taketh hold with her hands, and is in kings' palaces"; * the ancient Egyptians equip their dead with miniature bronze ladders to help their ascent to heaven, and the Mithraists use in their ceremonies a seven-step ladder, made of the × Max Born (<u>Einstein's Theory of Relativ-ity</u>, pp. 2, 3) makes much the same point.

* The same movement, but from a different point of view, is described by D. H. Lawrence in his poem 'Shadows' ---"Then I must know that still I am in the hands of the unknown God, he is breaking me down to his own oblivion

to send me forth on a new morning, a new man."

† Cf. C. G. Jung, <u>Contributions to Analyti-</u> <u>cal Psychology</u>, p. 298.

φ I take it that, in the last resort, the 'repressive forces of the superego' are not external but endopsychic; and, further, that an ideally thorough analysis of any individual would disclose him as functioning at every hierarchical level. In the very different language of Boehme: "If thy spirit does but co-operate with God, then as to that part thou art in heaven and thy soul is in God." (<u>Confessions</u>, p. 38)

° Marcus Aurelius, <u>Meditations</u>, VIII. 53. Heraclitus was faced with the problem of how, in the upward and downward flux, things preserved the appearance of stability. His answer was that each 'level' (fire, water, and earth) had its 'measures' --- material is taken in to compensate for what is given out. The aggregate bulk therefore remains roughly constant. (See Burnet, <u>Early Greek Philosophy</u>, p. 150.)

• "Man has access to the entire mind of the Creator" declares Emerson ('Nature', 1836, VII) and Eunomius bishop of Cyzicus, who "changed theology into technology" is said to have claimed to "know God as well as He knows Himself". (Kidd, <u>History</u> <u>of the Christian Church</u>) These statements are really more self-contradictory than shocking, for the simple reason that the most exalted level is also the humblest.

* Pro. XXX. 28. Cf. Epinomis 988: "And let none of the Greeks ever be apprehensive that being mortals we should never have dealings with divine affairs; they should rather be of the quite opposite opinion." Matching this ascent, is the descent of science. The faith on which science is based, says Whitehead, "springs from direct inspection of the nature of things as disclosed in our own immediate present experience.... To experience this faith is to know that in being ourselves we are more than ourselves: to know that our experience, dim and fragmentary as it is, yet sounds the utmost depths of reality " Science and the Modern World, I. In Swedenborg's phrase, "the understanding flies upwards and downwards" between the highest and the lowest regions. True Christian Religion, 602.

metals of the seven heavenly spheres. No belief is more ancient or more widespread --- or more unobvious. But it may not be divorced from its counterpart, the much more obvious belief that man has to go down to the very depths. True progress is symmetrical, and its goal is the realization of the entire hierarchy in its unity and concreteness --- wholeness, not mere height. When we lose touch with our lower self, instead of holding it in the unity of the total self, we are lost. × For, as Browning says so admirably, there are

"in each man, Three souls which make up one soul: first, to wit, A soul of each and all the bodily parts, Seated therein, which works, and is what Does, And has the use of earth, and ends the man Downward: but, tending upward for advice, Grows into, and again is grown into By the next soul, which, seated in the brain, Úseth the first with its collected use, And feeleth, thinketh, willeth, --- is what Knows: Which, duly tending upward in its turn, Grows into, and again is grown into By the last soul, that uses both the first, Subsisting whether they assist or no, And, constituting man's self, is what Is ---And leans upon the former, makes it play, As that played off the first: and, tending up, Holds, is upheld by, God, and ends the man Upward in that dread point of intercourse, Nor needs a place; for it returns to Him. What Does, what Knows, what Is; three souls, one man." +

Yet even here the tendency is to underrate the soul that "ends the man downward". Franz Kafka, in his queer way, has a juster appreciation of our essential symmetry when be says that man "is fettered to a chain which is long enough to give him the freedom of all earthly space, and yet only so long that nothing can drag him past the frontiers of the world. But simultaneously he is a free and secure citizen of Heaven as well, for he is also fettered by a similarly designed heavenly chain. So that if he heads, say, for the earth, his heavenly collar throttles him, and if he heads for Heaven, his earthly one does the same." *

7. ABSTRACT AND CONCRETE ASPECTS OF THE HIGHER ORDERS.

The truth is that the higher without the lower is not the higher at all. That is why ascent above the level of the human looks curiously like descent. Are not Life's vital processes inferior in quality to the processes of Humanity, and superior to the merely physical ordering of the astronomical units? Even when, restoring to each suprahuman unit its infrahuman counterpart, we recognize the symmetrical Pair, we have done nothing to enrich it. The suprahuman is only suprahuman when it is a Pair which includes all lesser (and later) Pairs, while to be its fully concrete self it must in some sense embrace the entire hierarchy.

Take, for example, Earth. There are no fewer than four ways of looking at her, each of which is less abstract and more in accordance with reality than the last. <u>First</u>, there is Earth by herself, as science and common sense look upon her --- a subhuman, mindless clod. To regard her × E. Graham Howe's <u>The Triumphant</u> <u>Spirit</u> is a particularly stimulating essay, from the point of view of psychological analysis, on the necessity for coming down to Earth, and for ceasing to resist our inevitable sinking to the depths of the hierarchy: infantile clinging to the higher spheres which are our source brings on mental depression, and even madness.

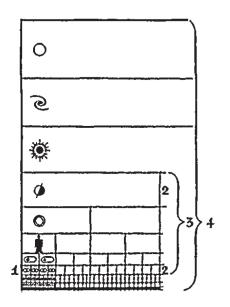
+ 'A Death in the Desert.' Cf. Eckhart: "What the eye sees or the ear hears is straightway seized by desire, provided it pleases, and conveyed to the critical faculty which considers it well and, if lawful, passes it on to the superior powers which take it and carry it up to the chief power, without likeness.... It is called sinderesis, and is all one with the soul's nature, a spark of the divine nature.... Anything that enters here must first be freed from multiplicity and sensible affections." <u>Works</u> (trans. Evans), ii. p.109, 110.

* The Great Wall of China, etc., p.151.

Tennyson perceives something of the concreteness of the hierarchy when he writes: "For all we thought and loved and did, And hoped, and suffer'd, is but seed Of what in them is flower and fruit." (<u>In Memoriam</u>, CXXXI) But the idea of the living unity of all the levels is best conveyed by the ash tree Yggdrasil, which binds together heaven, earth, and hell. Ratatöskr the squirrel runs up and down the tree, between the eagle at the top and the serpent Nithhöggr at the roots. thus abstractly is, in effect, to reduce her to the level of her molecules. Second, there is the Earth-molecule Pair: her macrocosmic and microcosmic aspects are at once distinguished and conjoined; her essential symmetry, her polarity, and the two-way vertical processes which maintain her, come into evidence, but there is no hint as yet of her vitality. Third, there is the Earth-molecule Pair as including the later and lesser Pairs Life-cell and Humanity-man, which are now seen to be her own, as inalienably hers as my face and character are mine. The planet is not only alive, but human: or rather, she is more-than-alive, and suprahuman. Fourth, there is Earth completed; Earth as nothing less than the entire hierarchy regarded from a particular angle, or as organized with respect to a certain part of itself; Earth together with all that is needed for her to be herself; Earth as wholly concrete and wholly real; Earth as the home of those institutions and activities --- religious, aesthetic, intellectual --which are in her but not of her, in so far as they belong to the still greater and more ancient and more inclusive Pairs. ---- None of these four versions of Earth can be spared from a proper appreciation of what she is: though each version is truer than the preceding ones, it is so because it includes them. The concrete mode does not abolish, but gathers up and fulfils, the abstract. °

The foregoing applies to all grades of individual except those of the least Pair (Humanity-man) and the greatest (Whole-Centre). (a) In the case of the former, the second and the third versions merge, with the result that we are unable to eviscerate the human as we eviscerate the vital and the terrestrial --- we do not, for instance, tear out of the body of Humanity all society's organs from the family to the State, in the way that we pluck from our Earth-mother's body every particle that shows a sign of life. (b) In the case of the latter, the third and the fourth versions merge, for the supreme individual has three and not four modes: namely, the mode of the Whole, of the Whole-Centre, and of the Whole-Centre as embracing all the other Pairs. Thus Julian of Norwich records "the high, marvellous words where He said: I it am that is highest; I it am that is lowest; I it am that is all." \times

(The much-criticized Via Negativa of Dionysius in fact faces up squarely to the problem of the abstract and concrete aspects of the suprahuman. Dionysius admits that the higher, as the more general, appears to be the lower; but points out that once we realize that the higher includes the lower, it is seen to be truly higher. He distinguishes four grades of decreasing generality --- (1) the Good (including and transcending existent and non-existent things), (2) the Existent, (3) the Living (angels, men, animals, and plants), (4) the Wise (angels and men); and the first of these titles is the most applicable to God, the second more applicable than the third, and the third than the fourth. Thus we reach God by a process of abstraction. + "But this abstraction", C. E. Rolt* comments, "is not mere abstraction nor this negation mere negation. Existence in God subsumes and so includes all that is real in Life; and Life in Him subsumes all that is real in Wisdom. Hence the creatures, as they advance in the scale of creation, draw from Him more and more particular qualities and progress by becoming more concrete and individual instead of more abstract. All the rich variety of creation exists as a simple Unity in God,



° Note two points: (1) we may not mix levels; (2) we may not separate them. (1) As at star level there are no planets, so at Earth level there are no men: I do not stand on a globe, with Australia under my feet -- for me as man, what there is of Earth is flat. It is no accident that a planet and its inhabitants, or a star and its planets, are not simultaneously visible: the data of one level are not compresent with those of another, for every level has, so to say, a fresh cosmology of its own. (2) But Earth would not be her self-conscious self if the astronomer were only terrestrial, if he were not also vital and human. It is essential that, in his leisure hours, he shall be no more aware than a weevil in a boomerang of the fact that he is embedded in a missile whirling through space. In such ways is Earth dependent upon her own subsidiary Pairs, her concrete filling, for what she is qua Earth.

× <u>Revelations of Divine Love</u>, LXXII. Cf. Fr. P. Erich Przywara, <u>Polarity</u>, pp.68 ff. The concept of Deity, he says, "does not set an immediate primacy upon spirit or body or community or individual, but deals with all four essentially as held in a <u>balanced tension</u>." On the one hand, the ascending hierarchy seems to culminate in God; on the other, no grade is nearer than another to Him, but it takes the entire hierarchy, with all its unifying vertical interconnections, to approximate to Him. See also Dorothy M. Emmet, <u>The Nature of Metaphysical Thinking</u>, pp. 178 ff.

+ <u>The Divine Names</u>, V. 3.

^{* &}lt;u>Dionysius the Areopagite</u>, p. 134, footnote.

and the higher a creature stands in the scale, the more does it draw fresh forces from this simple Unity.")

While it is one of the chief functions of the philosopher to rediscover the concrete suprahuman, there is also the concrete infrahuman to be considered. The lower levels are anything but merely themselves: they carry the hidden impress of the higher, and indeed fully to understand any of them would be to rise to the level of the Whole. The code of behaviour of a low-grade unit, though exceedingly monotonous, is yet elastic enough to allow each of its superiors to exercise over it an influence which, for all its slowness and imperceptibility does not fail to achieve its end. Atoms are engaged in writing this sentence about themselves, without doing any violence to their rigid and circumscribed customs, because their time-scale is such that the deed is spread over ages of atomic history, and the momentary effect upon the individual atom's conduct is negligible. On account of this change of tempo from level to level, an atom in me (if it were miraculously endowed with powers of reflection) would find no more reason to suppose itself under human guidance than I find reason, on first inspection, to suppose myself under suprahuman guidance. But from the higher point of view nothing could be more obvious than the plasticity of subordinates. In the long run, the electrons of the saint behave very differently from the electrons of a criminal, and from those of a stone. The molecules of this planet have three main phases -- the terrestrial, the vital-terrestrial, and the human-vital-terrestrial -- and innumerable sub-phases besides, each of which involves a slightly different behaviour-pattern though the chemical formula remains the same. In addition there are, of course, evident structural distinctions: in Life, and by human agency, all manner of new and extremely complex molecules are developed. Even the individual man has molecules which are as unique and as characteristic, perhaps, as his fingerprints °. It seems that the ideal chemist, from an examination of my proteins, would be able to deduce this book, for it is in a sense their book. But this is no more than a single instance of that mutual immanence of levels by virtue of which man is what he is. Emerson + understates rather than overstates the case when he says that "Man.... is placed in the centre of beings, and a ray of relation passes from every other being to him. And neither can man be understood without these objects, nor these objects without man." *

8. <u>THE RECONCILIATION OF THE HIERARCHICAL SCHEMA WITH</u> <u>THE REGIONAL</u>.

Throughout this inquiry I have made use of two basic diagrams or schemata --- the regional or circular, and the hierarchical or triangular. And while in many places they have come together into a single pattern, it cannot yet be said that their union is complete. In fact, this chapter so far, with its pyramidal organization of office-bound functionaries, seems largely to ignore their regional relationships. It remains for me therefore to correct this discrepancy, and finally to reconcile the two systems.

St Augustine, considering the things below ("earth, dragons, and all deeps, fire, hail, snow, ice, and stormy wind", plants, creeping things, birds, beasts, and men) does indeed long for the things above ("all Thy angels, all Thy hosts, sun and moon, all the stars and light, the Heaven of heavens ..."); but he does not make the mistake of rejecting either. On the contrary, he says, "I did not now long for things better, because I conceived of all: and with a sounder judgement I apprehended that the things above were better than these below, but all together better than those above alone." Confessions, VII. 13. Cf. Inge, Christian Mysticism, p. 128, 129. This theme of concreteness finds its greatest modern exponent in Hegel, and it is prominent in the neo-Hegelians Bosanquet (The Principle of Individuality and Value) and Croce. Croce stresses the fact that the concrete is the special province of philosophy, while the abstract is the province of science. For him the concrete alone is real, and scientific analysis takes us ever further from living reality. See H. Wildon Carr, The Philosophy of Benedetto Croce, pp. 6 ff. For a statement of the contrary view -- that analysis is a "method of knowing which discovers entities or parts which are real in quite the same sense as are the wholes which are analyzed" -- see E. G. Spaulding, 'A Defense of Analysis', in The New Realism (1912), p. 155.

° According to J. S. Haldane, "the constitution of the proteins, including haemoglobin, which can be separated from the bodies of different individual men, varies appreciably between different individuals; and this is no mere accidental circumstance, but is as characteristic for the individual as the shape or size of his hands or face, or the colour of his hair." <u>The Philosophical Basis of Biology</u>, p. 22. See also Joseph Needham's Appendix to <u>Creator Spirit</u> by Canon C. E. Raven, and his <u>Order and Life</u>, pp. 43 ff.

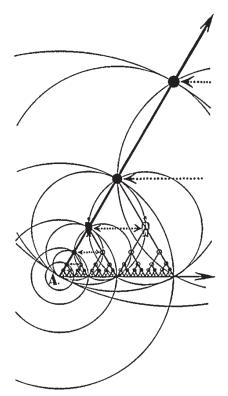
+ 'Nature' (1836), IV.

* A curious indication of the interdependence of the higher and lower grades of functioning, is the fact that, if the sensations we continually receive from our bodies (e.g., sensations of touch, pressure, and movement), and our hearing, are cut off, we become unconscious, even though sight remains to us.

What is indubitable is my experience of such objects as men and stars --- experience which is clear and compelling. But the questions arise: how, and where, and as what, do I enjoy these intuitions of things? According to the regional schema, I experience them here at the Centre where they belong and I do not belong (seeing that in this place I am reduced to nothing); and from this spot I project each object to what I conceive to be its proper region. According to the hierarchical schema, on the other hand, I entertain my objects in various places and capacities, as is befitting to their various ranks: for instance, when it is a question of studying a human problem, I use my windowless office cubicle on the fifth or sixth floor, and when stellar affairs are in question I move up to a more commodious office. According to the first picture, I am permanently housed in the basement, where nevertheless I seem able to enjoy objects of every grade; according to the second, I have my own room half way up the building, but I am allowed to move up and down to other floors as my object moves, and to occupy temporarily the offices of my superiors and inferiors. Which of these accounts is true? Where am I really stationed?

The answer is that, along with every other hierarchical functionary, my true place is at the lowest level. However exalted the station I seem to occupy, it is really my object's, and I can never gain the slightest promotion on my own merits. There is a sense in which the entire organization is housed in the basement. It does not follow, however, that the great multi-storeyed structure erected upon that foundation is a fiction: on the contrary, it is the indispensable realization, as transcendent and remote and altogether other-than-self, of that which is, at the lowest level, immanent in and coincident with the observer; it is the projection into space, by degrees and level by level, of the basement's concealed treasure. The ground of all is the plane of the subjects (who are ultimately one Subject), but there is necessarily erected upon this base the vast pyramid of the objective hierarchy, extended, plural, multiform. For the organization of officials is nowhere purely psychical and non-spatial, and nowhere purely physical and spatial, but psychical and physical throughout. Thus it is essentially a regional system, whose 'proper channels' run through space, and whose 'office cubicles' are set out in just those spatial patterns which their several functions require. In short, the triangular or hierarchical schema and the circular or regional schema are two versions of the same thing: the difference, at its briefest, is that whereas the first considers the radii, the second considers the circumferences.

Let me illustrate their unity. When I observe a man, I may be described as looking up from the lowest level (at A), along the 'proper channels' and through the various intermediate 'office cubicles' electronic to cellular, right into my cubicle on the fifth floor, so that what is presented there is presented to me. I am at once the official in that cubicle, considering the problem of one of my human colleagues, and the same official's most menial assistant, whose nonentity confines him to the lowest storey: only by being the latter can I be the former. We are used to impressive officials who are nobodies in private life, but here is an extreme instance of the type: everything depends upon the immense discrepancy between my official status and that to which I am intrinsically entitled. It is precisely I mean filled space as it is actually presented, concrete, non-uniform, and hierarchical, whose vistas end in Heaven; not empty space swept clean of all regional distinctions and qualities, space theoretical and abstract, mere comminuted vacuity which is lifeless and even Hellish everywhere because it is never allowed to build up to the least wholeness. Looking out upon the former kind of space, men used to see right into the sphere of the divine fifth element, into the realms of imperishable beauty and intelligence and superabundant life, into their own bright and immortal country, into Paradise itself; and now, looking out upon the latter kind, we see, notwithstanding our superb telescopes, no further than the ends of our noses.



this gulf which is my chief qualification: its widening is my promotion. And the reason for this is that the gulf is not a mere gulf, but the locus of ascending and descending hierarchical processes.

But there is a difficulty here. From the point of view of a single functionary or observer of the lowest rank, who may be likened to a point, space has no depth and projection is impossible. ° (Alternatively -- what amounts to the same thing -- all space is infinitely deep, and once an object is launched into space there is nothing to bring it to a stop, to mark the terminus of the projective activity.) All the content of the hierarchy lies here, imprisoned in a point, and it can only be set free as this point is united with other points in the series. The base of observation must be broadened, for projection is only possible by the method of triangulation, the binocular method: that is to say, it is always the work of cooperating observers whose distance apart is comparable with the depth of their joint projection. Viewed from one angle, the object might be at any distance, but viewed from two, it is definitely located. Each higher grade of individual, then, as more remote from the base of observation, requires a larger staff of observers, whose points of view are sufficiently different and, at the same time, united into a single point of view. Their plurality is overcome to the extent that the higher levels are projected: thus the unification of the observing subjects has for counterpart their convergence upon an ascending hierarchy of common objects, culminating in that Object which finally closes every vista. × It takes every subject to realize the Whole that each contains.

(The traditional formula of body, mind, and spirit, is more or less applicable here. Spirit (A) involves the object as unprojected, as contained in the subject; * mind (B) involves the object as projected; body (C) involves the observer's view of the subject (A). The self (A-C) keeps pace with the not-self (A-B), and is at the same time the unchangeable central receptacle (A).)

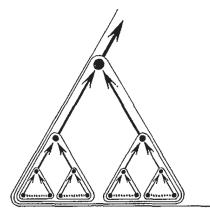
In the early chapters of this book I had much to say about mutual projection and reflection between observers; later on, vertical two-way processes -- anabolic and katabolic -- were discussed; finally, there are the 'office procedure' and 'proper channels' of this chapter. Now these are not separate activities, but three complementary versions of a single activity, a single all-inclusive system of events in space: or rather, they are space itself, not as abstractly conceived by science and common sense, but as organic. For real space is not a neutral and uniform medium -featureless, unfeeling, mindless, dead -- in which alien objects are here and there embedded, so much as the totality of living subjects, each of which is active in all the others. On the one hand, it is the most lethal of corrosives; on the other, the very elixir of life. In its concreteness, it is the hierarchy itself at work. And as such it is structured along two lines -- the radial or pyramidal, and the circumferential or zonal. No wonder light (which is one of the most notable of our abstractions from filled space) reveals itself under precisely these two guises --- as radial volleys of photons, and as globular systems of waves. \oplus

Here, then, am I, paradox of paradoxes --- at once an inhabitant of the middle region, and of every region, and of the Centre or no region; at

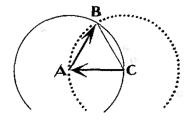
° There are moods whose value depends upon our <u>not</u> projecting the object, but realizing instead its presence here. Hence Rilke's beautiful lines,

"Prodigal heavens, overflowing with stars, flame above your affliction. Leave off weeping

into your pillow, and weep into them, where, close to the weeping, close to the fading face, increscent ravishing cosmic-space begins." <u>Later Poems</u>, p. 113.



× In the words of Mgr. Ronald Knox (<u>God</u> <u>and the Atom</u>, p. 99), "We see his (God's) face looking down at us from the end of every avenue of our thought" --- provided we really see to the end of the avenue.



* "Spirit is a unity of the manifold in which the externality of the manifold has utterly ceased." F. H. Bradley, <u>Appearance</u> and <u>Reality</u>, p. 498.

The questions to ask concerning space are: in whom does it lie and to whose body does it belong? As the space of my human body is altogether transformed, organic, a living net of prehensions, inspired, so also is the space of each of my greater bodies. The more lifeless it seems to the low-level outsider, the more alive it is to the insider, the occupant. And the whole of it, as a whole, and as fully inhabited, may fitly be called 'spirit'.

⊕ The modern theory (of De Broglie and others) that light behaves in some respects as though it were waves, and in others as though it were particles, is not altogether new. Newton had a very similar theory. once a functionary of the fifth grade, and of all grades, and of the meanest grade; at once a point, and the whole of space with its inexhaustible riches, and their bare receptacle.

> "Although there were some forty heav'ns or more, Sometimes I peer above them all; Sometimes I hardly reach a score, Sometimes to Hell I fall.

> > O, rack me not to such a vast extent, Those distances belong to Thee; The world's too little for Thy tent, A grave too big for me.

Wilt Thou meet arms with man, that Thou dost stretch A crumb of dust from heav'n to hell? Will great God measure with a wretch? Shall he Thy stature spell?" °

9. 'THE COMPOUNDING OF CONSCIOUSNESS'.

I cannot close this chapter and this part of the book without meeting one last and very insistent common-sense objection: namely, that the hierarchical schema violates our selfhood.

Selves and the contents of selves (so runs the objection) are immiscible. Whether we are on opposite sides of the globe or in the same room makes no difference: your thought cannot mingle with my thought, nor your feeling with my feeling. As James puts it, + there are in this room many thoughts, some of them cohering in a group called my thoughts, and others cohering in a group called your thoughts; and the breach between the two systems is "the most absolute in nature". Each of us has to bear his own pain, and each of us holds the key to his own store of memories. Everything goes to show that our consciousnesses cannot be compounded to yield a higher synthesis, as if they were chemical substances. McTaggart's dictum holds true, that selves cannot overlap or form part of one another. ×

The history of William James' thought on this question is instructive. In his <u>Principles of Psychology</u> he took it for granted that "every complex mental fact is a separate psychic entity succeeding upon a lot of other psychic entities which are erroneously called its parts, and superseding them in function, but not literally being composed of them." * The result, as he says, is that we "have to deny Fechner's 'earth-soul' and all the other superhuman collections of experience of every grade so far at least as these are held to be compounded of our simpler souls." But eighteen years after the <u>Psychology</u>, he has come to the conclusion that the whole philosophical situation produced by this denial "is almost intolerable. Loyal to the logical kind of rationality, it is disloyal to every other kind. It makes the universe discontinuous." "In my heart of hearts," he says, "I knew that my situation was absurd and could be only provisional." "Sincerely, and patiently as I could, I struggled with the problem for years, covering hundreds of sheets of paper with notes and memoranda and discussions with myself over the difficulty. How can many consciousnesses be at the same time one consciousness?" And at last, giving up what he calls his "intellectualistic logic", he decides for Fechner and "the

° George Herbert, 'The Temper'.

+ See <u>Textbook of Psychology</u>, p. 153. But in <u>The Psychological Review</u>, (1895), ii. pp. 119, 120, he withdrew his objection to the view that fields of consciousness are composed of simpler parts.

 \times <u>The Nature of Existence</u>, 401 – 404. It is worth noting that McTaggart's doctrine that no content of spirit can fall within more than one self leads him to a kind of atheism; and further that it is, on his own admission, impossible of proof.

* The quotations in this paragraph are from <u>A Pluralistic Universe</u>, pp. 205 – 208.

Poets are not necessarily wise; but if we admire Yeats' poetry, his account of its origin cannot be altogether irrelevant. He believed: "That the borders of our mind are ever shifting, and that many minds can flow into one another, as it were, and create or reveal a single mind, a single energy... That our memories are a part of one great memory, the memory of Nature herself. That this great mind and great memory can be evoked by symbols." To dwell upon a subject is gradually to become joined to all who have done so in the past. And some of the world's evil comes from the slow perishing of these beliefs. Essays, pp. 33, 510.

compounding of consciousness".

But I think that the objection generally arises, not so much out of genuine intellectual scruples, as from a more or less blind attachment to the dogma that the self is a separate something, a substance, a Cartesian res cogitans, an impenetrable soul-atom. Christianity itself has gradually come to neglect the clear implication of so many of its own basic teachings. Θ (I mean such doctrines as the indwelling Christ, \circ the one Spirit that unites all believers, \times and the God that works in them to do His will; \bullet the divine presence when "two or three are gathered together" in Christ's name; + the angels that warn and inspire and strengthen; † the gift of prophecy and tongues, with its obverse --- possession by evil spirits and by the Devil.) ϕ Indeed it is doubtful whether any miserable fragment of Christianity can survive the belief that the self is impervious to the direct influence of all other selves, and incapable of mingling with them. \emptyset

But it is to the empirical evidence that we must appeal. Consider, for example, telepathy, the existence of which cannot reasonably be denied --- unless in ignorance of the work of Rhine, Carington, Soal, and many others. Quite plainly, as Professor H. H. Price tells us, "the phenomena of telepathy show that one mind is not separated from another by any sharp and clear-cut boundary". But if there can be a little mingling, there may well, in other instances, be a great deal. "Imagine", Professor Price goes on, "two minds which were in a state of. complete and continuous telepathic rapport, so that every experience of either directly affected the experiences of the other. Would there any longer be any sense in calling them two minds and not one? If the causal connection between two sets of mental states were as close as this, we should have to say that there was one mind in two bodies; just as, if there is a sufficient degree of disconnection between two groups of mental states both of which are associated with the same body, we have to say that the mind animating that body has been split into two separate personalities. It comes to this: both ad intra and ad extra (if I may so put it) the unitariness of the human mind seems to be a matter of degree, and not a matter of all or none." Θ

It is not as if telepathy stood alone in its criticism of the insulated self: several other types of psychical phenomena add their support. And then there is the great mass of indisputable evidence concerning schizophrenia and multiple personalities: the facts force the psychiatrist to speak of the patient's self dividing, of the two or more selves overlapping to this degree or that, and of their eventual reunion. If consciousness can be 'compounded' and 'uncompounded' in a single instance, the principle is established, and it is clear that the 'compounding' does not necessarily stop at the level of the well-integrated individual man. And in fact Jung (followed by Freud in his later phases) finds it impossible to account for the phenomena of individual consciousness without postulating some kind of supra-individual mind, or racial unconscious, of which all our minds are tributaries. \oplus The many instances of simultaneous but independent discoveries and inventions point in the same general direction. And certainly it would not be surprising to learn that the reason why the great religious or artistic genius seems to reveal us to ourselves, to be nearer to our real selves than we are, is that he gains a higher common

Θ Averroism (particularly the doctrine of the unity of the intellect in all men) became, in the eyes of the Dominicans, the arch-enemy of truth. But either extreme is deplorable. It is equally false always to lose the individual in the common soul, and never to lose it. The 'compounding of consciousness' no more abolishes the individual than a symphony abolishes its notes; on the contrary, it at once guarantees and completes his selfhood.
^o John, XIV. 20, 23.

× John, XIV. 17; <u>Acts</u>, II. 4; I <u>Cor</u>. VI. 17,

- 19; XII; <u>Eph</u>. II. 18; I <u>John</u>, IV. 15, 16.
- <u>Phil</u>. II. 13.
- + <u>Mat</u>. XVIII. 20.
- φ <u>I Cor</u>. XIV; <u>John</u>, XIII. 2.

† Luke XXII. 43; I Cor. XIII. i; Acts, X. 3. ø Dr Inge (Personal Idealism and Mysticism, pp. 94 ff) has pointed out that the notion of impervious spiritual atoms stands in flat contradiction to Christianity. The New Testament concept of personality is an altogether fluid one. But so far have we departed from this concept that it is possible for Professor H. H. Price to write, "The traditional religious conception of human nature is an 'isolationist' conception with regard to the individual mind.... The individual mind, it is supposed, can affect and be affected by other finite minds only in a very indirect and circuitous manner, by a long intervening chain of physical causes. The existence of telepathy shows that this 'isolationism' is false." Hibbert Journal, Jan. 1949, p. 109. This does less than justice to the religious tradition. But of course all depends on how far back we trace the tradition. Going back to St Athanasius, for instance, we find: "A man's personality actuates and quickens his whole body. If anyone said it was unsuitable for the man's power to be in the toe, he would be thought silly, because, while granting that a man penetrates and actuates the whole of his body, he denied his presence in the part. Similarly, no one who admits the presence of the Word of God in the universe as a whole should think it unsuitable for a single human body to be by Him actuated and enlightened." The Incarnation of the Word of God, VII. 42. Θ Loc. cit. As significant as the <u>fact</u> of telepathy is its route: the transaction (it seems) occurs at 'unconscious' levels. Or, as I would say, 'contact' is made through common superiors and continuous inferiors.

Eugène N. Marais (<u>The Soul of the White</u> <u>Ant</u>) puts forward a case for something like telepathy between the queen and the workers of a termitary, which he regards as, in effect, a single organism. \oplus See, for example, Jung's <u>Psychology and</u> <u>Religion</u>, pp. 45 ff., on the superior intelligence and purposiveness of the unconscious, and on the question whether this superior mind should be called mine, or a totality of which mine is part. level of consciousness. °

And again, there is the great and growing field of group psychology. It is true that the 'collective consciousness' described by Espinas × and Durkheim and several other French sociologists, like the 'group mind' of McDougall, aroused violent opposition, + but the data on which they were based are facts that demand formulation and careful study, since they are of the greatest practical importance. The Quakers' 'sense of the meeting' ϕ and the <u>esprit de corps</u> of, say, a well-trained aeroplane crew, are at their best impressive realities which even the outsider cannot overlook; and so, of course, are the moods of a mob, war hysteria, and so on. And the interesting fact is that what used to be considered the principal flaw in the concept of the collective consciousness -- namely that it transcends and may even contradict the individual consciousness -- now shows signs of becoming its strong point, the point which makes the study of group mentality so necessary and so fascinating. (This is well illustrated in the work of Dr W. R. Bion as a group psychiatrist. * He finds much evidence for the existence, in the group meeting periodically under his leadership, of a supra-individual mentality to which the members contribute anonymously. The group mentality is uniform in comparison with the diverse thoughts of the contributors, and it tends to contrast with their avowed intentions. That is to say, it allows the gratification of impulses which, for some reason, the individual is not prepared to acknowledge as his own in any ordinary sense. And this, after all, is very similar to Durkheim's point that there is often a glaring discrepancy between the "collective representations" of, say, religion, and those of the individual: he was correct in saying that society has "its own mode of thinking", but he did not sufficiently appreciate that this mode is ours, and must be acknowledged as such. † For psychological and moral reasons, no less than for intellectual ones, we have to admit that the individual, conscious, human mind is only one level of our total mentality.) Θ

With some people, the findings of modern psychology, and still more those of psychical research, carry no weight at all. But the truth is that these findings only confirm and extend the great principle of the 'compounding of consciousness' which is already exemplified with the greatest possible clarity in our own psychophysical organization as individuals. This pen I am using is a single object for me because numerous sense organs are appreciating as many separate aspects of it. \otimes Is there no compounding here? Similarly, if I have no direct way of getting at the organisms which constitute my organism, how am I able to move my arm so as to record the fact? My past tells the same story as the present. At one stage of my life I was a pair of cells (an ovum and a spermatozoon), and these became one, and this one divided into two, and these two into four; and now I am a vast population whose birth-rate approximately balances its death-rate. It is comic to think that such a creature, whose life-history is one long essay in compounding, should come to deny its possibility. Once grant that the stream of life has two sides -- a physical and a psychical -- and it must follow that the individual is psychically continuous with the whole of his animal ancestry. It would not be far-fetched to describe all the living as a single long-drawn-out and

° It is nevertheless true that many simultaneous discoveries may be plausibly explained without recourse to supraindividual mind, by attributing them to a maturing social situation: in the end, all is set for the new synthesis, which, being practically inevitable, is likely to occur in several places. But this 'explanation' by no means precludes the other, or accounts for all the cases. Cf. Lossky, <u>The World</u> <u>as an Organic Whole</u>, p. 165. Also L. L. Whyte on 'Simultaneous Discovery' in <u>The Listener</u>, Nov. 25, 1948.

× <u>Les Sociétés Animales</u>.

+ See R.R. Maciver, Community, pp. 76 ff.

 ϕ See F.E., B.E., and R.S.W. Pollard, <u>De-</u> <u>mocracy and the Quaker Method</u>, on the possibility of extending that method to purely secular affairs.

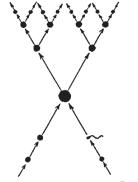
* See Dr Bion's series of articles 'Experiences in Groups' in <u>Human Relations</u>, i. pp. 314-320, 487-496; ii. pp. 13-22

There is of course much difference of opinion amongst the experts as to the practical value and the theoretical implications of such studies as Dr Bion's. But certainly there is a growing appreciation of their importance, and of the fact that psychiatry can no longer ignore that group mentality which is the indispensable counterpart of individual mentality. In this country much work along these lines is being done by The Tavistock Institute of Human Relations, and in the U. S. A. by the Research Center for Group Dynamics --- which bodies jointly publish the quarterly journal, <u>Human Relations</u>.

† Année Sociologique, ii. pp. 29 ff.

 Θ W. E. Hocking, <u>The Self: Its Body and</u> <u>Freedom</u>, p. 115, points out the mistake of treating our 'unconscious' drives and impulses as if they were strangers in the house, and not manifestations of the self. And he quotes William Watson's sonnet 'The Mock Self' as an instance of the opposite and less mistaken view --- namely, that it is the overt self, and not the hidden one, who is the alien.

⊗ Cf. William James, <u>Textbook of Psychol-ogy</u>, p. 463.



much ramified experience. ° The real problem is not so much to explain how our experiences come to merge, as to explain how they can seem to be distinct. And if any doubt should remain, I have only to reflect that, in claiming for myself my body and my instincts, and in taking full responsibility for my behaviour, I am implicitly identifying myself with the entire past in which these are rooted. When I own to my actions I own to every ancestral self that works in them. *

As if to show that I can never forget my historical unity with my fellows, I live in them, and make room for them to live in me. Indeed, apart from such mutual interpenetration, we have no life. We grow, we become more real, by becoming others, and by their becoming us. It is not a pious dogma, but a matter of observation, that intellectual and moral development, and what is aptly termed broadmindedness, are not a question of inflating oneself ad infinitum, but of taking on other selves. ϕ At the very beginning of this book I noted a striking example --- so completely do I make my companions' view of me (as a body with a head) my own view, that I have the greatest difficulty in realizing that there is any other, more original and central and intimate, which leaves me headless. But any attempt to parcel out my mental life between a central unit that is mine by nature, and peripheral units that are mine by adoption, would be useless. 'My' mental life is an aspect of the mental life of the group, or it is nothing. In other words, no social compounding of consciousnesses, no consciousness; no mingling of selves, no self. \times

And why, after all, should selves not merge? † If they are nothing in themselves and apart from their objective filling, if they are not mysterious soul-atoms or substances, what remains to hold them apart, and with what weapons are they equipped to resist mutual invasion? In so far as you and I enjoy a common object we are one. Our views of it are bound to be somewhat different -- in that difference lies their value -but they have a great deal in common: here we 'see eye to eye' and are 'at one'. Literally, we are of one mind, unanimous. W. E. Hocking has a memorable passage on this theme. + "I have sometimes sat looking at a comrade, speculating on this mysterious isolation of self from self.... And then it has fallen on me with a shock -- as when one thinking himself alone has felt a presence -- that I am in thy soul. These things around me are in thy experience. They are thy own; when I touch them and move them I change thee..... I can imagine no contact no more real and thrilling than this; that we should meet and share identity, not through ineffable inner depths (alone), but here through the foregrounds of common experience." If, on the one hand, selves have no private property to which they can cling, no opacity, \oplus then there is nothing to prevent their progressive unification up to the very apex of that subjective hierarchy whose other aspect is the objective hierarchy. If, on the other hand, I am mistaken, and the knowing subject is an unknowable something which exists alongside or in addition to its object, then I cannot possibly know that it is incapable of union with other subjects, in just such a hierarchy as this book describes. \otimes

In any case, whatever the explanation, it is plain that at different times I think and feel for my family, for my nation, for an organ of my body, for my planet, for my species, for myself as a solitary organism, and so ^o Russell has a definition of a mind as "all the mental events connected with a given mental event by 'experience', i.e. by mnemic causation." This 'experience' is "all those mental events which can be reached from the given event by a mnemic causal chain, which may go backwards or forwards". <u>An Outline of Philosophy</u>, pp. 298, 299. If we may suppose the "mnemic causal chain" to run unbrokenly alongside the physically continuous chain of organisms (or rather organism), then according to Russell's definition, all men and animals have, in the last resort, one mind.

* This point is taken up in greater detail in Part V.

 ϕ To the objection that men are still at variance at the high levels, I reply (1) that this is natural, seeing that no unit short of the Whole is without internal contradiction; and. (2) that apparent differences at one level are generally due to differences of level -- e.g., patriots who quarrel violently do so largely because religious and class issues complicate matters. But I would add that, in so far as I attain to a high level, I make its internal strife my own: the disunity is mine.

× Cf. C. A. Richardson, <u>Happiness</u>, <u>Freedom and God</u>, p. 157, on "God's sense-experience" as combining the senseexperience of finite subjects.
† To say that the self can merge with others, and divide, is an unavoidably misleading way of speaking. As the twigs and branches of a tree arise from, and come to unity in, the trunk, yet are not parts of the trunk, so the self has branches rather than parts. The living continuity of the tree, not the dead discontinuity of the nest of boxes, is the truer simile of the self.

+ <u>The Meaning of God in Human Experi-</u> ence.

In thinking truly, A. C. Bradley well says, I think what is the same for all who think truly. You and I as thinking the same true thought are the same thinker: what thinks in us is a universal self. And this universal thinking subject is not a separate mind, or another subject than you and I. <u>Ideals of Religion</u>, pp. 253 ff. Cf. Royce, <u>The World and the Individual</u>, i. pp. 397 ff; and John Caird, <u>Introduction to the Philosophy of Religion</u>, pp. 120 ff.

 \oplus "They see themselves in others for all things are transparent, and there is nothing dark or resisting, but every one is manifest..." says Plotinus of the beings in the realm of the Nous. <u>Enneads</u>, V. viii. 4.

 \otimes On our common objects and states as the same in you and me, and not repeated, see F. H. Bradley, <u>Ethical Studies</u>, p. 168. on. My life is spent in such vertical exploration of myself, which surely is what it feels like --- namely, the putting off and taking on of selves that are at one moment 'mine' and at another 'theirs'. + And if I do not trust my own feelings in the matter, there is always the outside observer to report upon my endless metamorphoses. *

Even if only a fraction of the evidence which I have brought together here were valid, it would be sufficient to show that selves are not impervious to one another. I think it is plain that common-sense objections to this conclusion are not based upon evidence as to the facts, but upon fear of them, upon anxiety lest our precious individual selfhood should be destroyed. And indeed it is a truth which cannot be ignored, that (particularly in the West) we have an 'instinctive' aversion to any doctrine that seems to submerge the self in a greater self. As William James says, "The God of our popular Christianity is but one member of a pluralistic system. He and we stand outside of each other, just as the devil, the saints, and the angels stand outside both of us." †

But this is only one side of the picture. We desire to merge just as much as we desire not to merge, and the nature of things is such that it answers to and meets this paradoxical double need of human nature. Our health and happiness, our sanity and our practical effectiveness, all demand the bi-polar self, merged above, separate below. Religion insists on little else. The New Testament exhausts metaphor and simile in the effort to bring home this fundamental law of our life --- the Body and its members, the House and its stones, the Vine and its branches, are true figures of our duality. × Our extremely limited human condition does not stand in the way of our becoming "partakers of the divine nature", neither is it abolished in the process. Quite the contrary: the unitary life of the higher levels is an empty abstraction without the plural life of the lower levels, and the latter is only at its best when it is consciously linked with the former. The most individual man is the least individual; the genuinely distinguished man has the maximum of common humanity in him. Again, he who will not surrender his own point of view, very soon has no point of view worth surrendering. It is the careful, ungenerous kind, bent on expressing his own personality and unwilling to give it up to a greater, who is least a person. ° The real saint, who has abandoned himself to the Divine Providence, and who (as Eckhart says) becomes to God what a man's hand is to a man, instead of being thereby reduced to a cipher, becomes a tremendous force in society. He is a living demonstration of the law that the only way to hold on to your selfhood is to let go.

Such is evidently the case in this life, but what of the next? If the mystic does not as yet lose touch with his separate human individuality, that (it may be argued) is more a matter of temporary necessity than of permanent choice, seeing that his longed-for heavenly goal is complete union with the divine. What, then, will remain of <u>him</u>? The answer (which I shall develop in Part V) is: all of him. For in the timeless eternal life (as distinct from a merely future existence) the past is not abolished, but all temporal events are at once preserved and transmuted. The lower and separate pole of the self, that unique human contribution which is its certificate of individuality, is neither lost nor (what would be worse) left to its own miserable incompleteness; it is fulfilled, saved from itself I am always having to re-learn the lesson that, as John Caird says, the family, humanity, and similar organizations of selves are "more truly me than my private self. Apart from them I have no real self, or only the false self of a fragment taking itself for a whole." <u>Op. cit.</u>, pp. 264-265.

+ R. L. Nettleship believed that if we all felt always towards one another as we occasionally do to those we love best, individuality as we now know it would melt into a universal being in and for one another, where consciousness of another would be consciousness of oneself.

* The swiftness and completeness of vertical metamorphosis is noted by Hui Neng: "When not enlightened, Buddhas are no other than ordinary beings; when there is enlightenment, ordinary beings at once turn into Buddhas." (Quoted by Aldous Huxley, <u>The Perennial Philosophy</u>, p. 67.) The ecstasy and rapture, which mark the higher stages of mystical contemplation are more spectacular phases of the metamorphoses we all experience.

† <u>A Pluralistic Universe</u>, pp. 110, 111. For contrast, there is the Nicene Creed: "the mystical body of thy Son, which is the blessed company of all faithful people."

× On the conjunct life of God and man, and the solidarity of mankind, as taught in the New Testament, see Rufus Jones, <u>Studies in Mystical Religion</u>, pp. 3-18.

° Significantly, the Latin persona means a player's mask, a character in a play, an actor. The word does not convey the idea of any permanent, substantial individuality, so much as of a role which is played. Adhering more or less to this early meaning, we may say that a man's personality is the totality of the parts which he consciously plays at different levels: a complete person would then be a player who knew all his roles -- infrahuman and human and suprahuman -- to perfection. In Death into Life, Stapledon describes Mankind as aware of the separate experiences of individual men, but in danger of losing this awareness, and so losing personality. And certainly, if the more exalted hierarchical individuals are also completer personalities they are increasingly in touch with their subordinates.

but not alienated from itself, in the Whole. $^{\circ}$

The final common-sense objection is that the merging of selves is incompatible with freedom and morality.

In fact, it is their very basis. Sin, says Tagore, • is taking for granted "that our self is the ultimate truth, and that we are not all essentially one." The merging of selves is our great moral task, and if we find this merging absurd or repugnant or incredible, the chances are that we are inventing reasons for shirking our duty. What can my duty mean but the claim of a higher and more inclusive self against a lower and less inclusive? + The 'must' of force would replace the 'ought' of moral responsibility if I were an undivided, one-level being, dominated by an alien authority. If, on the other hand, I were to surrender my own will so unequivocally to the will of the higher authority that no distinction remained, then once more the word 'ought' would lose its meaning for me. The home of duty lies somewhere between these extremes of barren opposition and of equally barren unity. The levels of the self must neither be insulated from one another nor run together, but must be held apart as necessary distinctions within a unity, as the terminuses of living vertical processes. Without tension and discrepancy, nothing can happen. Self-sacrifice -the denial of the lesser in favour of the greater self -- is nothing of the kind if it is easy, a matter of mere habit. It implies a painful and often tragic self-division. It is easy enough to believe in our heads that "We are at once ourselves and another, ourselves and several others, ourselves and all others, ourselves and the universe, ourselves and infinity"; × but it is extremely difficult to put our belief into practice. Yet that is precisely what we have to do. And to the extent that we succeed we become free. The way to liberty is to acknowledge and be true.

> "To our own only true, deep-buried selves, Being one with which we are one with the whole world." *

° We are separate and unique at the lower levels, and merged at the higher levels: to neglect either aspect is disastrous. The Averroist controversy of the 13th century hinged on this question -- one party insisting on the suprahuman unity of the active intellect, in which men are no longer distinct, and the other insisting on its connection with the bodies of individual men, where matter ensures distinctness. The soul of the Faithful is one, says Rumi, and their bodies are many; but the animal soul is many, for when its owner eats, its neighbour still goes hungry (Nicholson, <u>Rumi, Poet and Mystic</u>, p. 51).

• <u>Sadhana</u>, V.

+ Cf. Royce: "My Ought is my own will more rationally expressed than I as yet consciously realize." The World and the Individual, ii. p. 32. And Bosanquet: "By worship and self-surrender you repudiate and reject your badness, and will and feel yourself as one with the supreme goodness." What Religion Is. But the surrender and the repudiation require constant renewal. In some cases it is true that, as Bernard Shaw says, "if you can show a man a piece of what he now calls God's work to do, and what he will later on call by many new names, you can make him entirely reckless of the consequences to himself personally." (Man and Superman, III) Nevertheless the duality and its tensions remain, however little they are evident to the outsider.

× Maeterlinck, <u>Mountain Paths</u>.

* Matthew Arnold, 'Empedocles on Aetna'.

PART IV

And the angel which I saw stand upon the sea and upon the earth lifted up his hand to heaven, and sware by him that liveth for ever and ever... that there should be time no longer.

<u>Rev</u>. X. 5, 6.

Every one of us no matter what he does is in love with the eternal.

Plato, Symposium, 208.

And this is life eternal, that they might know thee.

<u>John</u>, XVII. 3.

It is not simply the duration, but the quality of the life which constitutes its character of Eternal. A spirit may live for ever, yet not enter into this. And a man may live but for five minutes the life of Divine benevolence, or desire for perfectness: in those five minutes he has entered into the life which is Eternal, never fluctuates, but is the same unalterably for ever.

F. W. Robertson, Sermon, Dec., 15, 1849.

We long for the Absolute only in so far as in us the Absolute also longs, and seeks, through our very temporal striving, the peace that is nowhere in Time, but only, and yet Absolutely, in Eternity.

Royce, The World and the Individual, ii. P. 386.

God created man to be immortal, and made him to be an image of his own eternity.

The Wisdom of Solomon, II. 23.

Be in awe of timelessness.

Chuang Tzu Book, II.

Thou hast grieved over them for whom grief is unmeet, though thou speakest words of understanding. The learned grieve not for them whose lives are fled nor for them whose lives are not fled. Never have I not been, never hast thou and never have these princes of men not been; and never shall time yet come when we shall not all be Of what is not there cannot be being; of what is there cannot be aught but being. The bounds of these twain have been beheld by them that behold the Verity. But know that That which pervades this universe is imperishable; there is none can make to perish that changeless being.

Bhagavadgita, II. 11-17.

But thought's the slave of life, and life, time's fool; And time, that takes survey of all the world, Must have a stop.

Henry IV, Part I, V. 4.

Who can speak of Eternity without a solecism, or think thereof without an Ecstasy?.... In Eternity there is no distinction of Tenses.... St Peter speaks modestly, when he saith, <u>a thousand years to</u> God <u>are but as one day</u>; for, to speak like a Philosopher, those continued instances of time which flow into a thousand years, make not to Him one moment: what to us is to come, to His Eternity is present, His whole duration being but one permanent point, without Succession, Parts, Flux, or Division.

Sir Thomas Browne, Religio Medici, I. 11.

CHAPTER XV

HERE AND NOW: THERE AND THEN

We should, if we were Wise, and Careful of our Soul's Health and Safety, <u>Grasp</u> and Comprehend in Thought, so far as we can, the several Dimensions of Time past, present, and to come.

Whichcote, Aphorisms, 181.

Nothing can act but where it is: with all my heart; only, WHERE is it? Be not the slave of Words: is not the Distant, the Dead, while I love it, and long for it, and mourn for it, Here, in the genuine sense, as truly as the floor I stand on? The WHERE and WHEN, so mysteriously inseparable from all our thoughts, are but superficial terrestrial adhesions to thought; the Seer may discern them where they mount up out of the celestial EVERYWHERE and FOREVER: have not all nations conceived their God, as Omnipresent and Eternal; as existing in a universal HERE, an everlasting Now?

Carlyle, Sartor Resartus, I. 8.

Men do mightily wrong themselves when they refuse to be present in all ages.

Traherne, Centuries of Meditations, I. 85.

I do not doubt that temporary affairs keep on and on millions of years.

Walt Whitman, 'Assurances'.

'Was' and 'shall be' are forms of time that have come to be; we are wrong to transfer them unthinkingly to eternal being. We say that it was and is and shall be; but 'is' alone really belongs to it and describes it truly.

Plato, Timaeus, 37 E.

The historical sense involves a perception, not only of the pastness of the past, but of its presence; the historical sense compels a man to write not merely with his own generation in his bones, but with a feeling that the whole of the literature of Europe from Homer and within it the whole of the literature of his own country has a simultaneous existence and composes a simultaneous order.

T. S. Eliot, 'Tradition and the Individual Talent', in Points of View, 1941, p. 25.

Repetition affirms that existence which has been now becomes.

Kierkegaard, Repetition.

Deeper and deeper into Time's endless tunnel, does the winged soul, like a nighthawk, wend her Wild way; and finds eternities before and behind; and her last limit is her everlasting beginning.

Herman Melville, Mardi.

1. WHENCE AND WHITHER?

What am I? So far, I have tried to answer this question in terms that are mainly spatial. I have now to put the dimension of time into the picture.

When am I? What do I amount to in time? These are crucial questions, incomparably fascinating and important for me. Am I ephemeral like a may-fly, immortal like an angel, or perhaps something between the two? If there is soon to be an end of me, problems about the remote future are none of my business, or at the most are of only academic interest. On the other hand, if I have a stake in the things to come, I want to know what they are likely to be. If I should turn out to be as persistent in time as I have seen myself to be ubiquitous in space, the questions will arise: who is the 'I' that endures, and what metamorphoses are the condition of immortality? In what sense could it be said that I who survive am identical with him who is here discussing that survival? And it is not only my future prospects which exercise me: I want to know what I amount to in retrospect. How old am I? How did I begin? My history "Men are entrusted from infancy with the care of their honour, their property, their friends, and even with the property and the honour of their friends. They are overwhelmed with business, with the study of languages, and with physical exercise It is, you will exclaim, a strange way to make them happy! What more could be done to make them more miserable? ---Indeed! what could be done? We should only have to relieve them from all these cares; for then they would see themselves: they would reflect on what they are, whence they came, whither they go, and thus we cannot employ and divert them too much. And this is why, after having given them so much business, we advise them, if they have some time for relaxation, to employ it in amusement, in play, and to be always fully occupied." Pascal, Pensées, 143.

is a tale that, in itself of overwhelming interest to me, will be doubly interesting if (what seems not unlikely) it can throw light upon my future?

These are problems which have baffled great philosophers and filled many inconclusive volumes. Nevertheless I must try to solve them for myself all over again, in the manner of my generation and my own manner. Till they have been re-phrased in the modern idiom, and re-visualized in the contemporary world-picture, these problems of human destiny are academic, more or less unreal, remote. In any event, no-one can afford not to be concerned about where he came from and whither he is bound, because upon the answer hang many practical issues of the present moment. A man on the way to a feast behaves very differently from a man on the way to an execution or a funeral, particularly when the execution and the funeral are his own.[†] If this matter is not worth looking into, I should like to know what is. Surely it is an unenterprising tourist who does not bother to inquire where the train he finds himself in is going or where it came from, but is content just to sit back and gape at the passing view. No doubt to ask is to risk being misinformed. As a child, I was told by my fellow passengers that the train would presently be divided into a section bound for a terminus called Heaven, and into a section bound for another terminus called Hell; and which section I should find myself in was uncertain. Later on, I was told by a different set of fellow-passengers that we were all heading for a crash, in which there would be no survivors. The whole excursion was, in fact, a fiasco -- if not something much worse -- and I settled down for a time to getting what entertainment I could from the scenery of the moment. But not for long. Something impelled me to set myself the task of drawing a map of the entire journey, piecing it together out of the innumerable but chaotic scraps of information which came my way. Here it is then, my sketch-map, in Parts IV and V of this inquiry. It is the best I can do at the moment, according to my lights. To make the attempt is doubtless to fall into many absurdities, but not to make the attempt would be to commit the worst mistake of all --- that of being afraid of, and disloyal to, one of the most essential ingredients of human nature. Man is a passenger, not freight. He is not a coward who dare not, a simpleton who cannot, or an idler who will not, inquire whither he is rushing.

2. HERE-NOW AND THERE-THEN (PAST)

I start again with my immediate experience --- of such things as this paper and the words appearing upon it, this desk and the rest of the furniture in the room, the houses and trees and clouds and sky and sun that I see whenever I turn my head to look out of the window. The question is: when are these things? Not the place so much as the date, or position in time, of my objects, is what I wish to discover.

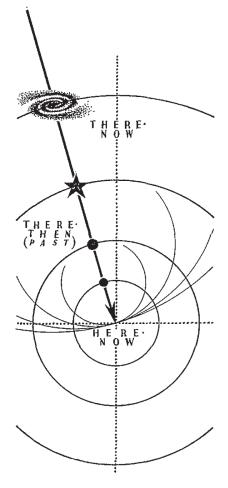
It goes without saying that they are <u>now</u>. The position in space of the contents of my experience is <u>here</u>, and their position in time is the present moment. My Here is really my Here-now, where time coheres with place. Sun and clouds, houses and trees and furniture --- all are

† If there is any truth at all in Dr Johnson's saying, that to be under sentence of death is a wonderful aid to mental concentration, then indeed we should all be wonderfully helped nowadays to concentrate.

It is significant that the one word <u>present</u>, as a temporal no less than a spatial term, may mean here, or now, or <u>here-and-now</u>; and that this ambiguity is, in practice, rarely (if ever) found to be inconvenient. Similarly, <u>distant</u> may mean remote in space, or in time, or in both. Our language recognizes, in many subtle ways, the organic unity of space and time. in this place and bear this date: they are presented to me, present, and absent neither in space nor in time. Just as the things that are there -elsewhere than here -- do not exist for me, so the things that are then -- elsewhen than now (so to say) -- do not exist for me. Only what is here now really is, so far as I am concerned. This is where I am imprisoned for life, at the intersection of space and of time. Now, now, now here, here, here or rather here-now, here-now, here-now the series goes on, and never by any chance does it become there-then I can no more escape from this captivity than from captivity within my own skin. For to jump out of Here into There is to take my Here along with me, and so not to jump out of it at all. Likewise to jump out of Now into Then is to bring the Then up to date (or down to date). There is no time-machine thinkable, let alone makable, that will shift me by a split second from the Now-centre of my time-world, any more than there is an aeroplane fast enough to shift me by a hair's-breadth from the Here-centre of my space-world.

And yet, of course, that is not the end of the matter: there are plenty of further complications. From the very start of this inquiry, it has been clear that this sun, these clouds and trees and pieces of furniture, are not only here. I send them to their respective stations. My Here is the base from which proceed innumerable Theres, forming themselves into a vast concentric system. And so it comes about that, if my Here is my perpetual prison, it is, though no more than a point, roomy enough for any prisoner's taste: it contains the world, and I am more likely to suffer from agoraphobia than from claustrophobia. Similarly with my Now. It is no more than the instant in which I am for ever encapsuled, yet it contains all time. For it is the moment from which I project a vast temporal system -- a system of graded or 'regional' Thens which I call past and future. The doors of time, no less than the doors of space, are flung wide open.

For instance, the sun, which I observe now, I label as the sun of eight minutes ago: I see it that far into the past. A star I relegate back from four to many thousands of years, and a spiral nebula anything from rather less than a million to hundreds of millions of years. And I explain my action by saying that, though light is the fastest thing in the world, it always takes time to get to me from the object, and the further away the object is the longer its light takes. Thus the light by which I see some of the nebulae left them long before the reptiles and mammals -- let alone man -- appeared on this planet, and the light of quite near stars has been all my lifetime on its way to my eye. At the other extreme, the paper at which I am looking is the paper of a tiny fraction of a second ago. But however close the object (the 'object out there') is to me, short of contact, it 'dates'. Far in space is far in time. The news I have of the world is always stale news, because signals intervene, and while they are on the way anything might have happened. Accordingly it may be said that the only spot I have up-to-date information about is the bare Here or Centre of my regions --- a place unable to provide any information whatsoever, a void of which the only news is no news. The world has ceased to exist for itself by the time it has begun to exist for me. My melancholy choice, in that case, seems to be between news of what is nothing (i.e. the Centre) and news of what was something (i.e. regional objects), between an



"At the hour at which we have arrived," says Victor Hugo, "who can certify that there is a single star remaining in the heavens?" (<u>Intellectual Autobiography</u>, p.) Or, for that matter, who can certify that a single man remains on earth, or that anything exists at all? There is a temporal variety of solipsism to match the spatial: I am twice removed from my object -- spatially and temporally out of touch with 'the external world'. empty Here-now and one which is filled with an abolished There-then.°

Put the matter this way, and I seem to be very unfavourably placed -- to be, in fact, permanently out of touch with reality. But I cannot seriously believe this is so. My problem then is: how to keep the scientist's account of the finite speed of light (which I have every reason to take seriously), and to get rid of its corollary (which I have every reason not to take seriously) that I am insulated from the world that is. The answer is that I must revise my ideas about time, precisely as I have had to revise my ideas about space. In Chapter I, I inquired where a star is, and discovered to my surprise that it is here, not over yonder. Now I ask: when is the event I see happening in the star? The answer is: now. The primary fact (the fact of which I need to remind myself again and again, so easily is it buried under masses of secondary detail) is that, just as a Nova or a Cepheid Variable are not stars there but stars here, so the flaring up of the one and the pulsing of the other are not events occurring then (in, say, the year 20,000 B.C.) but now, at the very moment I note them. Supposing I were to shift my Here-now so as to centre it upon the star itself, upon the stellar event itself: then the star would no longer be a star, and the event no longer stellar. Anything starlike is remote from its Centre, regional. Not out there in space, not long ago in time past, but here and now at this Centre, the real stellar events are being transacted. This is the simple but all-important truth, and none of the qualifications that follow are able to subtract from its validity. And no familiarity can rob this truth of its wonder for me: every time I think of it, it comes as a kind of revelation, making plain innumerable obscurities.

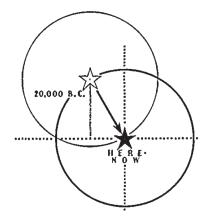
It is necessary to add, of course, that the stellar events which are here and now bear the mark of there and then. Just as they are here-fromthere, so they are now-from-then. They are to that extent ambiguous, divalent, projective. The only Here that is merely here, and the only Now that is merely now, belong at the Centre <u>per se</u>. All other Heres are herewith-reference-to-there, and all other Nows are now-with-reference-tothen. It is the nature of the spaceless and timeless Centre to exfoliate a world of space and time.

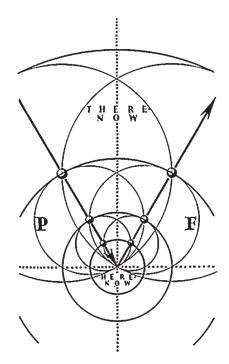
3. HERE-NOW AND THERE-THEN (FUTURE).

Instead of living in the past, then, as a naïve science would suggest, I live in a present which points to a past which it fulfils. Instead of living in a private shadow-world where all things have ceased to be real, I am that spot and that moment where they come to themselves --- from the future no less than from the past. The growth of the Here-now is symmetrical in time: it sends out shoots into the future as vigorously as into the past. In other words, my object is not only here-<u>from</u>-there (past); it is also here-<u>to</u>-there (future). Perception is a species of reaction, a two-way process rather, and any attempt to ignore either the incoming (or afferent and passive) side, or the outgoing (or efferent and active) side, is bound to give a false picture.

° Even if I were able, by means of a system of mirrors, to see into my own brain, I could never see the brain event by means of which I see that same brain event; for the finite speed of light ensures that the present subject shall never be the present object, and that the object shall always date

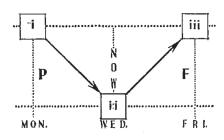
<u>Per ardua ad astra</u> does not necessarily mean flight. Carlyle says truly (if overexcitedly): "O thou that pinest in the imprisonment of the Actual, and criest bitterly to the gods for a kingdom wherein to rule and create, know this of a truth: the thing thou seekest is already with thee, 'here or nowhere,' couldst thou only see!" (<u>Sartor Resartus</u>, II. 9) And, I should, add, now or no-when





Let me take a homely instance. When I communicate with my friend, I alone know a certain ingredient of his future --- how distant that future depends upon whether he is on the other side of the room or the other side of the world, and upon whether I use sound or light or the postal service in order to reach him. In this respect, my present is his future. Suppose he lives in Aberdeen, and I live in London and am a good correspondent. He wrote to me on Monday; I get the letter and answer it today, Wednesday; he will get my reply on Friday. Wednesday is my Herenow, which I expand into a There-then having two aspects, the one past and the other future. In reading and answering his letter on Wednesday, I am realizing on Wednesday (i) what happened on Monday (my friend's writing to me), (ii) what is happening now (my reading and writing), and (iii) what is going to happen on Friday (his reading my reply). That is to say, my single Here-now (London-Wednesday) branches out into a double There-then (Aberdeen-Monday and Aberdeen-Friday), in symmetrical fashion.

This simple example may be taken as typical. My moment of experience, as Bergson points out, is at once a perception of the past and a determination of the future. \times I do not merely submit here to the regional presence of objects centred in the past: I respond, I act in their direction. No doubt the two movements, centripetal and centrifugal, are not always (in respect of particular objects) of equal strength, but vary according to the occasion; nevertheless there is good reason for believing that the one does not exist without the other. Whether my reaction to an object takes the form of light reflected back from me to that object, or gravitational disturbance, or some slower and more round-about process whereby the changes wrought in me find their way to their originator, it is plain that to modify me is to be modified by me in turn. But I mean much more than this. The Now is a wedge which, having split me into one half which is acted upon, past-looking, determined, and into the other which is creative, future-looking, determining, holds these halves together in an indivisible whole. Of these two, the second needs to be stressed, because it is so much less evident than the first. * My seeing is essentially practical. The same object is at once its self-expression here in me, from its own Centre, and my self-expression here in it, to its own Centre. Thus it is the product of a mutual creativeness. No wonder, then, that we do not see what we are not interested in, what does not come into our plans. "Our perceptions give us the plan of our eventual action on things", says Bergson. + "What I call 'my present' has one foot in my past and another in my future.... The psychical state ... that I call 'my present' must be both a perception of the immediate past and a determination of the immediate future. Now the immediate past, in so far as it is perceived, is ... sensation; and the immediate future, in so far as it is being determined, is action or movement. My present, then, is both sensation and movement; and, since my present forms an undivided whole, then the movement must be linked with the sensation, must prolong it in action."° The friend I am writing to on Wednesday, though present, is bifurcated into past and future aspects; yet he is one object, a seamless unity. Even the spiral nebula, whose past and future aspects here are held apart (and held together) by a span of millions of years, shows no sign of division.



× Matter and Memory, p. 177. Cf. Whitehead, Adventures of Ideas, XIV. 2-4. For Whitehead, "reality" is "the objective content of the initial phase of reception", or "the real antecedent world, as given for that occasion"; while "appearance" is "the effect of the activity of the mental pole, whereby the qualities and co-ordinations of the given physical world undergo transformation". But "reality" and "appearance" are relative terms, for "the objective reality of the past, as it now functions in the present, in its day was appearance." William James stresses the side which Whitehead calls appearance. "The essence of a thing", James tells us, "is that one of its properties which is so important for my interests that in comparison with it I may neglect the rest." (Textbook of Psychology, p. 357) The 'essence' of my object is the part it plays in my purposes: and this is clearly the case if (as I maintain) to observe at a given level is to function as a genuine member of that level, taking part in its practical and purposeful social life.

* I mean less evident for the scientific modern mind, not for the deeper and less conscious wisdom that finds expression in our language. We still look <u>out</u> of the room, <u>from</u> here, <u>through</u> the window, <u>to</u> the view over there; and our gaze is perhaps <u>penetrating</u> or <u>piercing</u>. Thus unwittingly we endorse the ancient belief of the Greeks that vision is a beam or ray proceeding from the eye to the object.

+ Creative Evolution, p. 198. Cf. pp. 12, 99.

• Once more, language is true to the facts. 'The star is my <u>object</u>' may mean that it is what I experience (as regards the past), or what I intend (as regards the future). The first is the star's action on me, the second is my action on the star; and our language, with inspired ambiguity, unites these in the one word <u>Object</u>. But we are granted no preview of our total response, and are like the little girl who, to find out what she wanted to say, had to listen to herself speaking.

^{° &}lt;u>Matter and Memory</u>, pp. 176-7. Cf. pp. 124 ff, 163 ff.

How is it possible to weld past and future aspects of my object so firmly? The answer is that such temporal distinctions are secondary: the primary fact is the indivisible object here and now. The question I should ask is rather: how can I break up the content of the Here-now and send it so far afield? And the shortest answer to this question is: subject and object are equal, temporally no less than spatially. Relative to my object, I am in that position in space and in time where it is a spiral nebula. Just as my Here is of galactic dimensions, so is my Now: they are typical of galactic intercourse -- of social life at the galactic level --- wherever it occurs. I am a nebula appreciating a nebula, and I have no reason to suppose that my way of doing so is in any important respect peculiar. This is how it is done; these are the inescapable spatio-temporal conditions. A Now which, in itself an unextended instant, expands in its object to millions of years, and a Here which, in itself an unextended point, expands in its object to billions and trillions and quadrillions of miles (or rather these two conjoined in a Here-Now) are mine when I function in my galactic capacity. That is to say, my Now is as patient of the temporal character of my object as my Here is patient of its spatial character.

In Chapter I, I asked the question: do I accompany to their stations in space the objects which I project from the Centre? Do their Centres map out my boundary for the time-being? Am I co-extensive with what I behold? Yes is certainly a right answer (though it is not the only right answer). In other words, I am free to take quite seriously the phrase that I am in touch with what I see, and to look upon vision as a species of tactile sense. I stretch out a pair of arms (as it were) towards the stars, to handle them. Now beside their extraordinary length, these arms of mine have the further peculiarity that they are not contemporaries: they are widely separated in time no less than in space, since it may take thousands or millions of years for an impulse to get from 'the finger-tips of my left hand' to the Centre, and as long again for the outgoing response to get from the Centre to 'the fingertips of my right hand'. * I am one body in contact with its object, but when that object is a nebula, one of my 'hands' is (say) two million years later than the other. My reactiontime is two million years. And I think it must be admitted that an organism's reaction-time cannot exceed its life-span. I cannot grow the kind of body which enables me to observe the galaxies, unless I acquire along with it the necessary longevity. \times

All this applies (with some minor reservations) to remembered objects and anticipated objects as well as to perceived objects: in all instances the object is Now, yet projected upon its Then, and in all instances it is 'seen home'. This we acknowledge when we say that a man, though present, is also far away, living in the past or the future, absent-minded, abstracted, withdrawn, elsewhere. Less expert perhaps than Blake or Victor Hugo, we are nevertheless all mental travellers. + But however far we go in space and in time, we never abandon this Centre; and that is why all our travelling is really growth and ungrowth.

H. Wildon Carr (<u>Changing Backgrounds</u> <u>in Religion and Ethics</u>, p. 157) distinguishes between our <u>existence</u> which is now, and our <u>essence</u> which is to transcend the now. I do not think this distinction is a very happy one. We do not exist apart from the objects in us, and our objects do not exist apart from their respective minimum time-spans, which they achieve in us.

* In principle, this is no different from what happens when I use my right hand to brush a fly from the back of my left hand: the right hand (as responding) is, say, a tenth of a second later than the left (as stimulated).

× Not only do I have all the time I need for the kind of life I choose, but this time is internal. C. A. Richardson tells us, "'Time' is 'in' the monads; the monads are not 'in time." (<u>Happiness, Freedom and God</u>, p. 191.) However this may be, if I am <u>where</u> I act, I am also <u>when</u> I act.

+ See Blake's poem, 'The Mental Traveller', Hugo's <u>Contemplations</u>, and Professor Denis Saurat's <u>Gods of the People</u>, pp. 80 ff. Cf. <u>Paradise Lost</u>, V. 86 ff.

4. THE SEEN-NOW LINE (FUTURE)

To common sense it would seem that the two 'arms' are not symmetrical, seeing that whereas I am capable of being greatly modified here by my object's past aspect, I am incapable (particularly when the object is a star or a nebula) of similarly affecting its future. Apparently I can alter only a few very near things so thoroughly that I can know what is coming to them.

This would indeed be the case if my seen-now lines were to travel through uniform and non-regional space, if their advance were not more like growth than mere travel. Only a star can act on a star, and it takes me perhaps a hundred years of the future to grow, from this spaceless point and timeless instant at the Centre, to full starhood over there in my object. In fact, common sense does not go far enough in pointing out my human limitations: no man has even so much as glimpsed a star, because to do so is to act upon it -- a suprahuman task in space and time. As my eye sweeps across the night sky, it is not this ephemeral man but this long-lived star -- the Sun -- who is enjoying social intercourse with his fellows, thereby embracing in his present moment of experience a future reckoned in tens or hundreds or thousands of years.

Vision is sometimes called an anticipatory sense, because it warns me of what is coming to me or of what I am coming to. ° Thus the driver concentrates upon the stretch of road ahead, which his car will presently cover; the navigator makes out the buoyed channel and the distant harbour; the forward player has one eye on the goal; the tiger gives himself up entirely to the prey he is about to incorporate. * The more advanced the organism the further and the more thorough that penetration into the future which enables it to get a living. What, then, are the limits to this penetration, so far as I am concerned? Surely very distant objects do not hold my future in anything like the same sense as near ones do. Sight, it seems, when stars and galaxies are in question, is no longer anticipatory: in such instances (common sense points out) there is little risk of close approach, much less of collision. Why, then, do I see the stars?

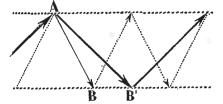
Later on, I shall show that the reason we see the stars and the galaxies is that they are our practical concern, and that our future lies amongst them, at their level. Thus all seeing, and not least that of heavenly bodies, is anticipatory. I look out upon what I was and shall be. And, in fact, the principle is already evident. I can look beyond the man to the planet only by growing to include the man, beyond the planet to the star only by including the planet, beyond the star to the galaxy only by including the star. What I <u>see</u> at one level I <u>am</u> at the next. And when external light becomes internal process, its time is incorporated along with its space.

5. THE RHYTHMS OF INTERCOMMUNICATION

Light travels at 186,000 miles a second, but according to common sense this is not nearly fast enough if I am to live the social life of the higher

° Cf. Bergson, <u>Matter and Memory</u>, pp. 22 ff. Actually, of course, hearing and smell, and even the various touch senses, are often anticipatory -- as when I test the temperature of my bath-water with my hand, before getting in.

* Cf. Whitehead: "An event mirrors within itself such aspects as the future throws back onto the present, or, in other words, as the present has determined concerning the future." <u>Science and the Modern</u> <u>World</u>, p. 91. "Thus the self-enjoyment of an occasion of experience is initiated by an enjoyment of the past as alive in itself and is terminated by an enjoyment of itself as alive in the future." <u>Adventures of Ideas</u>, XII. 2.



AB is a light-signal anticipating the slower AB'. B anticipates the future B': he knows what is coming to him.

levels. I should need many times my expectation of life, to keep up a correspondence with any but the nearest stars. As for the galaxies (common sense points out) we are virtually out of touch with them altogether, seeing that our respective Here-nows (or 'mail days', so to say) are staggered by some millions of years.

In fact, however, my human mortality is no inconvenience at all when I function at the higher and more permanent levels, for I take on such length of life as my object requires of me. Telescope-fashion, I extend back and forth in time to suit the correspondence I happen to be engaged upon. I last out the necessary time, just as I fill out the necessary space. Raleigh's prayer before his execution \times --- "Set on my soul an everlasting head" --- was already granted, for it was addressed to an immortal Correspondent: to have an everlasting head it is only necessary to fill it with an everlasting object. As for lesser objects, the staggered pattern of our system of communication -- the fact that "signalling is only possible along a track of temporal relation and not along a track of spatial relation" ° -- is no disability, no bar to free intercourse, but the very determinant and guarantor of the quality of that intercourse. In fact, if signalling occurred along a track of purely spatial relation there would be no signals to send. † An essential ingredient of the message is the time it takes to come through. It matures on the way. Everything that is worth while takes time, and the more worth while it is the more time it takes.

Even our ordinary terrestrial letter-writing illustrates the principle. It is difficult to dwell upon petty day-to-day affairs in your monthly letters to your friend in Australia; much less difficult when he lives in the same country as yourself. When you can 'phone him at any time, or drop in to see him, the minutiae of life are apt to become all-important. Distance does more than lend enchantment and make the heart grow fonder; and time does more than heal wounds. I have described space -- real extension, undivided into discontinuous fragments, organically entire -- as the form and the rationale of creativeness. Now I must correct that description: it is space-time, regionally organized about innumerable Centres, which alone merits the title of world-builder. Give your object time enough (this will involve giving it space enough), or give it space enough (this will involve giving it time enough), and you will see it for what it is --- a living, suprahuman star, a galaxy, the Whole. Everything, or nearly everything, hangs upon the range and the tempo of your correspondence with the object.* Short letters and quick replies, a fast rhythm, and your object is a little object and you are a little subject. Long letters and long-awaited answers to them, a long-drawn-out rhythm, and you and your object are relatively vast and permanent. The folding wedges of the There-now which are driven between you insulate each from the other's pettiness, brevity, and insignificance. They pitch your conversation high, ensuring its quality. Friendship involves remoteness. "Why insist on rash personal relations with your friend? Why go to his house, and know his mother and brother and sisters? Why be visited by him at your own? Leave this touching and clawing..... The hues of the opal, the light of the diamond, are not to be seen, if the eye is too near. To my friend I write a letter, and from him I receive a letter.

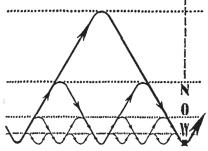
That seems to you a little. It suffices me..... There can never be deep

× "And this is my eternal plea To Him that made heaven, earth and sea; Seeing my flesh must die so soon, And want a head to dine next noon, Just at the stroke when veins start and spread,

Set on my soul an everlasting head. Then am I ready, like a palmer fit, To tread those blest paths which before I writ."

° Eddington, <u>The Nature of the Physical</u> <u>World</u>, p. 58.

† Cf. Samuel Alexander's doctrine that Space is needed to make Time what it is, to "sustain the togetherness of past and present, of earlier and later"; and that Time is needed to save Space from being a blank without distinguishable elements. The concrete reality is four-dimensional Space-Time, and Space alone, and Time alone, are abstractions. <u>Space, Time and</u> <u>Deity</u>, i. pp. 45 ff.



The letters I now receive by same post come from correspondents writing at different times, from different levels, with different frequencies.

* Wordsworth, in a famous passage of his Preface to the Second Edition of the Lyrical Ballads, recognizes the importance of the interval between the bare experience and the eventual emergence of its full quality. Poetry, he says, takes its origin from "emotion recollected in tranquillity". Cf. Henry James' experience (Preface to The American) "that the near view of events -- the immediate impression that prevents standing off and allows neither space nor time for perspective" -- is unsatisfactory for the writer. And Lytton Strachey (Preface to Eminent Victorians): "The history of the Victorian Age will never be written: we know too much about it. For ignorance is the first requisite of the historian -- ignorance, which simplifies and clarifies, which selects and omits, with a placid perfection unattainable by the highest art."

peace between two spirits, never mutual respect, until, in their dialogue, each stands for the whole world." ° And, as a matter of fact, every communication I receive bears the post-mark of the Whole (only I lack eyes to see it); and every reply of mine is addressed to the Whole.

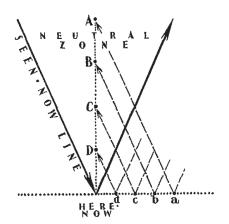
° Emerson, 'Friendship'.

6. THE INSTANTANEOUS THERE-NOW

The wedge-shaped neutral zone whose cutting-edge is my Here-now, whose length is the radial seen-now line, and whose butt-end may be anything from the minutest part of a second to many hundreds of millions of years --- this is not at all what common sense means by Therenow. The circumstance that I happen to be insulated from the 'real' Now at all points of space except the one I label Here (so that what is going on at this moment elsewhere cannot affect me until some future date) does not, for common sense, make that Now any the less real. In due course I shall know what it holds for me -- the barriers will fall. Then, having allowed in my calculations for the speed of light, I shall be able to plot a worldwide series of events that were contemporary: the worldwide instant will be mine, albeit in retrospect. This being so, why should I not, in anticipation of the moment when the insulation of this Herenow will have vanished, proclaim the instantaneous universal Now, the There-now which is no wedge but a line? Why not, to match the point that endures through all time, the moment that happens throughout all space? Why not say with Locke, + "For this present moment is common to all things that are now in being, and equally comprehends that part of their existence, as much as if they were all but one single being; and we may truly say, they all exist in the same moment of time."?

This is plausible enough, but it does not work out in practice. Simultaneity is much more complicated than it seems to be. * In order to simplify this discussion as much as possible, let it be assumed that we need not rely upon 'physical' signals which take time, but may use telepathy instead --- a medium of communication which, as 'non-physical', may be supposed to take no time. And in order that the results shall be unambiguous, let it further be assumed that the telepathic agent and the telepathic percipient are respectively situated on two planets which are three light-hours apart. Now the fact that it would take the agent three hours at least to get a physical signal through to the percipient, makes no difference (common sense would argue) to the fact that he can by telepathy convey his message instantaneously to the percipient, at some pre-arranged moment. At the second agreed upon, telepathic rapport being unhindered, agent and percipient are at one in time, though they are divided by a wide gulf of space.

Again, this is plausible, but impossible. The telepathists have no way of settling the moment of rapport. For each has to rely upon calculations by local astronomers as to where the 'real' now-line lies with reference to the seen-now line, and these observers get different results according to how they are moving. The result is that the telepathist is no better off than the radio-telegraphist.



+ Essay concerning Human Understanding, II. xv. 11. Cf. Leibniz, in a letter to Clarke, "I hold space to be an order of coexistences, as time is an order of successions. For space denotes an order of things which exist at the same time, considered as existing together."

* Nevertheless (Minkowski showed) there does exist an invariant relation, called the interval, between any two events. This interval, which is the same for all observers however they are moving, may be regarded as a kind of distance, but a distance in a four-dimensional continuum. The disagreement of various observers arises from the fact that they split up the four-dimensional reality into three dimensions of space and one of time, and do so each in his own way. The interval between an external event and an event here-now is said to be 'space-like' when no observer could travel so as to be present at both events, and 'time-like' when he could do so; in the former case it is possible for the relative motions to be such that the observer judges the two events to be simultaneous. The interval between events along my seen-now line is zero.

Rather he is worse off, seeing that he will have to 'transmit' for six hours if he wishes to make quite sure of getting over the ambiguity of the Now. ° The prearranged moment of rapport has expanded to a period of six hours. If the telepathists were in different galaxies instead of in different planets, it would expand to a period of perhaps hundreds of millions of years. And if, on the other hand, agent and percipient were all but touching, their respective Nows would still fail to coincide in a timeless instant: the wedge-shaped There-now would still remain. Only the Now that is here is instantaneous: other Nows include time, and the further afield they are in my regions the more time they include. The age-long living evolution of an Earth in a distant galaxy is the whole of it contemporary with this moment of mine. My Now spans without effort vast and protracted histories all over the universe, in worlds for whom I rank as one of the immortal gods. *

Our planetary telepathists have forgotten that they cannot alter their spatial relationships and leave their temporal relationships unaffected. Change in the scale of the first is change in the scale of the second. They have overlooked the fact that, vis-à-vis each other, they are no longer men, but planets; and that planets cannot niggle with space and with time as men can and must niggle: the celestial picture is painted with a much broader spatio-temporal brush than the terrestrial. Little and brief things like men do not exist as between celestial bodies; they are entirely out of place in such company, too fine to be retained upon the sidereal, space-time mesh. When I deal with stars I join a society in which Now may mean a century.

7. <u>TELEPATHY AND THE THERE-NOW</u> +

In the previous section I supposed that telepathy, as a 'non-physical' means of communication, might have certain advantages over 'physical' signalling by means of light or radio waves; but it turned out that the spatio-temporal structure of the world prevents any such attempts to by-pass 'physical' limitations. If you break the rules in one form you will only (it seems) find yourself obeying them unquestioningly in another. And this result was only to be expected. So far in this book, I have found no reason to postulate, and a number of reasons for refusing to postulate, two worlds --- a physical world in space and time, and (running parallel with it, on the same level or levels) a non-physical or mental world which is indifferent to space, yet (oddly enough) anything but indifferent to time. One world, psycho-physical from top to bottom, has sufficed me up to this point, and is likely to continue to do so. This is not to deny, of course, that manifold distinctions (not altogether unlike the familiar distinctions between the physical and the psychical, or the material and the spiritual) must be made. Indeed I am obliged to postulate, within the one psycho-physical universe, some dozen 'worlds' or levels, each with its unique spatio-temporal 'mesh', and the entire system bounded on the one hand by an order that is exclusive of and inferior to space and time, and on the other hand by an order that is superior to them because it includes them in their totality.

° See Eddington, <u>The Nature of the Physical World</u>, III.

* Whitehead defines contemporary events as those which happen in causal independence of one another: they are mutually insulated, because no signals can pass between them: none of them belongs to the past of another. This mutual independence provided by the neutral wedge of the There-now is, for Whitehead, the condition of freedom: the organism is thereby allowed elbow-room, a freedom from outside interference and an opportunity for creativeness. See, e.g., Adventures of Ideas, XII. 4. It may be added that the wedge grows with the hierarchical status of the individual, and that his freedom grows accordingly.

+ When Eddington (<u>Op. cit</u>., p. 49) called in a pair of telepathists (one on this planet and the other on Venus) he was simply concerned to illustrate, from the physicist's point of view, the ambiguity of the Now: he had, of course, no intention of throwing light on the procedure of telepathy. But in fact the illustration was more than a characteristically luminous one: it throws just that light upon the mystery of telepathic communication which is so much needed. Indirectly, it does much to tame the wild phenomena of telepathy, to domesticate the subject and bring it into the well-behaved family circle of the sciences. If the course this inquiry has taken is on the whole a true one, then I should expect what is called telepathy to observe, in its own way, the regional constitution of things, and to comply at each level with the essential spatio-temporal customs of that level.

So much for <u>a priori</u> considerations. What is the actual evidence? Though far from complete, I think that on the whole it bears out my thesis. First, there is the weighty pronouncement of modern physics, to the effect that (as I have just shown) telepathy cannot disclaim all connection with the space-time continuum, but is inextricably involved in it and governed by it: 'non-spatial' and 'non-temporal' telepathy, or telepathy which plays fast and loose with space-time, has virtually been exposed as an unreal abstraction. Second, there is the no less powerful evidence supplied by direct research into telepathy itself. I refer to the phenomenon of 'displacement', ° which many writers have found so surprising. To cut short a long and interesting story, what happened was this: in certain earlier experiments, where the percipient was required to guess which of the cards the agent was looking at, the results were on the whole discouraging; but everything was changed when, later on, it was found that the percipient tended to guess correctly, not the card observed by the agent on that occasion, but the card he had looked at previously, or the card he was about to look at. The (statistically recognizable +) telepathic effect is not concentrated in a moment but spread over a period of time: it is wedge-like rather than line-like. Or, in the phraseology of this book, while the agent's Now is instantaneous, the corresponding Now of the percipient is found to be of some seconds duration. Telepathic registration in the percipient may occur at any time during this extended period, because the whole of it is 'contemporary' with the agent's perception of the card. Thus the percipient may be said to look into the agent's future, just as the letter-writer looks into the future of his correspondent. In fact, the 'displacement' effect investigated by Carington and Soal is nothing else than a small-scale variant of the 'neutral wedge' or 'hour-glass' effect investigated by Minkowski and Eddington. Whether the telepathic agent and percipient are men whose mutual There-now is a matter of seconds, or planets whose There-now expands to hours, or stars or galaxies whose There-now is an age, the principle is the same. <u>Third</u>, there are the data furnished by the religious consciousness. There is a traditional belief (and I have, up to now, found such beliefs well worth taking seriously, and admissible in testimony) that when man prays God is 'telepathically' aware of it, and further that the divine experience into which his prayer enters is timeless. In other words, the agent's Now (i.e. the man's) ranges from the instantaneous Now-here to the eternal Now-there of the percipient (i.e. God); and in praying to God in the year 1950 he prays, not to a contemporary deity who shares that date rather than another, but to One whose date is the year 950 and 1950 and 2950, or rather to One who is beyond time because He is at all times. Here the telepathists' displacement and precognition, and the physicists' ambiguity of the Now, reach their limit; for (if I may so put it) this moment in me is contemporary with every moment in God. In respect of my intercourse with Him, I am present alike at the beginning and the end of the world, and throughout all its history. Many centuries before Eddington's "wedge-shaped neutral zone" or Caring-

° Cf. <u>Proceedings</u> of the Society for Psychical Research, xlvi (June 1940) pp. 152 ff, and xlvii (Dec. 1943) pp. 21 ff, for an account of Dr S. G. Soal's experiments, which established beyond question the fact of displacement. Cf. J. B. Rhine, <u>Journal of Parapsychology</u>, v (March 1941); Whately Carington; <u>Telepathy</u>, pp. 31, 38; G. N. M. Tyrrell, <u>The Personality of Man</u>, pp. 119 ff.

+ The fact that experimental telepathy is a matter of statistical effects and not of individual instances, is, I take it, more relevant to the nature of telepathy than to any shortcomings in our investigation of it. The telepathist would do well to imitate the physicist whose law of indeterminacy characterizes the observed rather than the observer. In that case it would be improper to speak of the single correct guess occurring say 21/2 minutes before or after the exposure of the card to the agent: only the total performance, in which such statistical effects as 'the optimum period of displacement' emerge, would be relevant. I think I am justified in saying, accordingly, that the percipient's 'Now' is not on one occasion ahead in time, and on another behind, or absolutely contemporary with, the agent's; but instead it fills the whole period over which positive results are obtained. The situation is not radically different in physics --- there is no ambiguity about the simultaneity of two events for a single observer: it is only when many differently moving observers are introduced that the ambiguity (with its extent and significance) becomes clear. Here also the significant result is virtually statistical.

ton's "displacements" were dreamed of, devout souls everywhere made practical use of the principle of the expanding There-now. Heaven is the outstanding instance of precognition.

Perhaps I should add a reference to telepathy at the infrahuman levels. There are plenty of indications that something of the kind operates amongst animals ° --- how else can the leaderless flock of pigeons or starlings, or shoal of minnows, move, with such beautiful precision, as one body? When we consider the behaviour of some of the social insects, and the no less surprising performances of many solitary insects and other arthropods, we find that there is much to be said for Carington's hypothesis of a joint telepathic-system, constituting the group mind of the hive or the ant-hill in the one case, and of the species in the other. Again, the organization, at cell-level and below, of my own bodily responses suggests a very intimate rapport --- how else can so much be done so swiftly and so well? And the mark of all this infrahuman rapport would seem to be its superlative tempo and precision: the ambiguity of the Now is here almost overcome. It is only to be expected that the temporal span of the There-now should shrink towards instantaneousness as telepathic agent and percipient draw together.

But I suspect that any distinction between 'telepathic' and 'normal' forms of the mutual immanence of social beings becomes increasingly arbitrary and unreal as we leave the human level. In any case, I take telepathy to be only a special instance of hierarchical procedure, whose proper channels (whether linking adjacent levels or the members of a pair) always run vertically and never leak. This by no means implies that telepathy is a kind of 'mental radio', which is propagated as light or wireless waves are propagated, × or that it requires any medium of its own, or that we must look for some special transmitting and receiving organs. I am at this moment in 'telepathic' communication with millions of cells in my arm and hand, and they with me, but to seek some particular apparatus and medium which make this two-way rapport possible would be a waste of time. And this bodily rapport is, on my theory, the pattern of all hierarchical intercommunication: there is, ultimately, no other kind, and the physical procedure of sense, while it seems horizontal, is nothing of the sort. All real process is both vertical and thoroughly 'psychological', yet it is also spatio-temporal and indeed 'physical': the two aspects are indissolubly united. Therefore it seems to me that the somewhat discredited 'mental-radio' theories of telepathy which neglect the psychical, and the more orthodox theories which neglect the physical, are alike abstractions from the concrete reality.

8. THE HOLLOW THERE-NOW

The inflated Now of a pair of remote mutual observers is, for common sense, singularly unsatisfactory. It is hollow, alive at the periphery but dead at the centre, like the famous banyan tree. When I look at a star ten light-years off, I am in touch with what it was ten years ago and what it will be in ten years' time; and so it may be said that our mutual Now is ° Mr Whately Carington makes the interesting suggestion that telepathy is most operative neither in man (whose speech and writing give rise to endless differentiation of individual minds) nor in the lowest organisms (where there can be little differentiation and little to communicate), but rather at some stage which falls between these extremes. He concludes, "Thus quite general considerations of a theoretical character lead us to the conclusion that we should expect to find the maximum of telepathic processes and consequent psychical integration just about where, to all appearances, we do find them, namely, among animals a good deal lower in the evolutionary scale than man, but appreciably above the lowest forms of life." Telepathy, pp. 156-160. Cf. Eugène Marais, The Soul of the White Ant.

× To the best of my knowledge, research has so far failed to detect any diminution in telepathic effects on account of distance, or any hint that telepathy has anything to do with the inverse square law that governs all forms of 'physical' radiation. But it is a mistake to draw the conclusion that telepathy is therefore altogether 'nonregional'. Complicated 'spindle effects' (see chapter IV. §11) may well obscure the spatial aspect of terrestrial telepathy. I should say it is likely that, as range increases, so the individual operator tends (without knowing it) to become a group operator, and that the effects are correspondingly reinforced. What is now required is much experimental work to establish the laws of telepathic procedure, the fact of telepathy having been amply demonstrated. Cf. B. Hoffman, Journal of Parapsychology, iv (June 1940); Whately Carington, Proceedings of the S.P.R., xlvi, Part 162 (June 1940), p. 61; and Telepathy, pp. 50-53; C. D. Broad, Proceedings of the S.P.R., xliii, Part 142 (Oct. 1935); G. N. M. Tyrrell, The Personality of Man, IV. 7.

"Does the cosmic space we dissolve into taste of us, then? Do the angels really only catch up what is theirs, what has streamed from them, or at times, as though through an oversight, is a little of our existence in it as well?" My answer to these questions of Rilke's (<u>Duino Elegies</u>, II) -- in so far as it <u>is</u> an answer -- is that the star-angels are not themselves without their total infrastellar hierarchical 'filling'; more than a little of us goes to their making, and cosmic space is for ever drenched with humanity. twenty years. But instead of twenty filled years (common sense goes on), instead of twenty years of real life or experience of any sort, there is just a vacuum. With the tips of my antennae I span that period of stellar existence, but its content escapes me.

The hollowness of the There-now, the temporal gap with which my object confronts me, cannot be insisted upon too strongly. I have met it before in other forms, and shall meet it again. It certainly exists --- but it exists to be filled. But where can the filling be found? Not there in the region of the object itself, but in each nearer region up to and including this Centre of mine. The perfect filling was available all the time, but I looked for it in the wrong place, in the horizontal instead of the vertical, in the object per se instead of in the mutual commerce between us. The antennae (of many levels) are themselves the filling of the gap (of one level) which their extremities span. In fact; the gap was never a gap; only my habit of horizontality, of taking reality level by level, abstractly, gave the appearance of hollowness. Of course the tips of my antennae are separate in time and enclose a temporal void (in this lies their use), but they are held apart by what joins them and abolishes the void. Every part of the V-shaped organ, every span from the maximum at its extremities to nothing at its centre, every subsidiary pair of antennae which comprise the one pair --- all are essential to its working. Of course it is inevitable, and indeed necessary, that my awareness should forsake the unity of this timeless Centre, should divide in time and settle in the tips of my instrument. But I must sometimes realize that it takes the entire many-levelled organism so to overlook all but its own one-levelled supersensitive extremities. The lacuna in the stellar There-now is real enough, but it is progressively reduced to the lacunae of lesser There-nows, right down to the Here-now which is the pivot of the whole system. In plainer language, if I want to know in detail what events go to build up twenty years of sidereal life, I must turn my attention to all the nearer regions, culminating at this Centre. The secrets of the stars lie between themselves there and myself here.

This will not do for common sense. Surely twenty years of the star's existence is twenty years of the <u>star's</u> existence, and not of something else's. Why should it involve, unless it be incidentally, the existence of progressively inferior units, over progressively shorter periods?

The reason is that real time, like real space, is organic, hierarchical, non-uniform, cumulative, creative. What you find in it depends upon how you divide it, upon the scale of your units. A minute on a star is not stellar, any more than a pound and an inch are stellar. Neither five million years of history, nor five seconds of it, is <u>human</u> history. No star can survive in a universe whose time has been cut up into units of, say, one year; and there are no men in a universe whose time is further subdivided into units of, say, one second. Horizontal or abstract time and space, entirely atomized, are empty and featureless. They are always having to make a fresh start; they are not given a chance to develop. You need <u>both</u> hands, and an appreciable length of elastic, to demonstrate the properties of that material: and so it is with a stretch of real time --- there are two ends to it; and its Centre, where this duality is overcome, is not in time at all. × But the important point is that time is <u>vertically</u> organ-

What I call the hollow and the filled correspond roughly to what Hegel calls the bad infinite which excludes the finite, and the good infinite which includes it.

The 'antennae', or centripetal and centrifugal lines of process, have been beautifully described by Rilke, and his translator Mr J. B. Leishman:

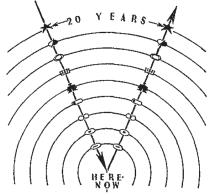
"Whether I was -- or am: you are faring over me, infinite darkness of light. Hidden away, I'm receiving all you're preparing

sublimely in space there into my wakeful sight.

O Night! Can you feel my eager inspection? ---

the way my being recoils in its course to gather itself for one last triumphant trajection?"

Later Poems, p. 113.



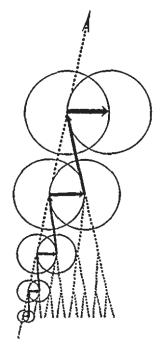
Of the many examples of temporal 'hollowness' and its 'filling', politics provides one of the most striking. Politicians of the right are concerned with what society was in 'the good old times'; those of the left with what it will be in 'the good time coming'. (This division is a very proper one, arising, not from human perversity, but from the nature of a universe which bifurcates time. Human society, like the other members of the hierarchy, is bifurcated accordingly.) The gap between past and future must be filled by practical measures of government now; but these owe much, if not all, of their soundness to the entire bifurcated system of which they are the centre. Good government now means a large and well-bridged, time-span between a right based on the past and a left based on the future.

× Cf. Emerson, "And so we say that the Judgement is distant or near, that the Millennium approaches, that a day of certain political, moral, social reforms is at hand, and the like, when we mean, that, in the nature of things, one of the facts we contemplate is external and fugitive, and the other is permanent and connate with the soul." ("The Over-soul") Or, as I would put it, one is regional and the other is central; and this duality, with the span of time it marks off, is an indispensable aspect of all experience. What occurs without warning, and is not remembered, does not occur at all. ized about the Centre: on the level there is no time. In other words, it is the intercourse of hierarchical functionaries which, always proceeding vertically, at once creates and requires the appropriately graded spatiotemporal conditions. Time and space are essentially social, and fully subject to the law of elsewhereness which marks all sociality. Thus the star achieves neither the spatial nor the temporal aspects of starhood in itself, but only here in me and in its other star-observers. It must go out of itself to get even the time in which to be itself.

The star, then, comes here in pursuit of its starhood: it finds its infrastellar filling in <u>this</u> star, and not in itself. + But common sense finds this property incredible. The filling it acquires here is not its own property, but the Sun's. The planets are not its own; it can claim neither Life nor Humanity; we men do not live in it, neither do our cells and molecules. Presenting to another star the contents of this one is (in the eyes of common sense) more generous than to the point; and it is no more likely to bring that star to life (or to organize its stellar time) than a sound head on <u>my</u> shoulders is likely to revive <u>another</u> man's decapitated corpse.

But that is just what my head does do all the while! If a man wants a head on his shoulders, he must (as Chapter I made clear) make do with mine or another's, since he has none of his own. Now men are not the only hierarchical individuals who are headless: stars, and indeed all grades, are in what amounts to the same condition. At each level of myself I have to go to my companions for my content or filling: without them I am nothing. The Sun is not itself a star here, but other stars here. There is a true sense in which the Life and the Humanity that are in this Sun are not the Sun's, but belong to the stars in general. For as each new hierarchical level is attained, there is a total shift from the self to the notself: all its content is unloaded upon the other. To put the matter crudely, my cells do not add up to me but to my fellow men, and men do not add up to Humanity but to the other species, and the members of the solar system do not add up to the Sun but to all the stars in the sky. The fact is that, so far from this star being the only one that is certainly alive, it is the only one that is certainly dead, and the life it seems to have is the life of all the rest. * None of them is 'hollow' or wants 'filling'. Social life -- which means all life -- is such that there can be no private property in hierarchical content: the only way to have anything is to pass it on.°

For common sense these statements are wild and fantastic: the fundamental law of elsewhereness remains incomprehensible. Actually, however, there are plenty of familiar instances of the law. Consider again my correspondence with my friend in Aberdeen. The letter I write to him (the letter which, determining to some degree his future, is for me insight into that future) does not consist of news about him, but of news about me. Not <u>his</u> state of health, or family events, or social and professional activities, but <u>mine</u>, make up the experience of his (as he reads my letter on Friday) which I foresee (as I write the letter on Wednesday). My 'filling' is shifted on to him. This is typical of correspondence; and without correspondence (in the broadest sense of intercommunication) there is nothing whatever to correspond about. × If I go to Aberdeen on a visit to my friend, the situation is basically the same as when I am writing to him. For even common sense must admit that the friend I shake + The star-gazing Thales, having fallen in a well, was very properly rallied by a pretty maidservant for his eagerness to inspect the heavens and his neglect of what lay at his feet. (Plato, <u>Theaetetus</u>, 174 A) And truly we misread the far regions if we ignore the near ones which lie at their heart; neither the well nor the maidservant in <u>this</u> star is irrelevant to <u>that</u> star.



* "What is the chief news of the Night? Lo, iron and salt, heat, weight and light In every star that drifts on the great breeze! And these Mean Man." Coventry Patmore, 'Legem tuam dilexi'

° I imagine Heraclitus had something like this in mind when he said: "Mortals are immortals and immortals are mortals, the one living the others' death and dying the others' life." (Burnet, <u>Early Greek Philosophy</u>, p. 138)

× Cf. <u>Chuang Tzu Book</u>, VI: "As a thing himself he was always in company (with other things) and always welcoming them, always being destroyed and always being completed." hands with and see and hear and answer is reducible, not to <u>his</u> bodily condition, but to <u>mine</u> --- to the state of <u>my</u> retinae and cochleae, optic and auditory nerves, cerebral cortex, and so forth. We exchange bodies. ϕ And if in the evening we should go out to look at the stars, it is not <u>their</u> 'local filling' which determines what they are for us, but <u>ours</u> --our terrestrial experience of every grade, our earthly loves and visions of beauty, the misery and delights of our human condition --- and what the stars are to us is a real part of what they <u>are</u>. Without us no star is itself. The point is so fundamental to this inquiry, and so difficult to keep in mind, that I make no excuse for labouring it. *

9. THE ELASTIC THERE-NOW, AND DELAYED CORRESPONDENCE

But there are several characteristics of social intercourse, in its temporal aspect, which I have so far neglected. First of all, there is the fact that light is only one of the means of communication, most of which are much slower and more limited in their range. Each mode has its appropriate rhythm. Moreover a number of modes and rhythms may be operative on the same occasion, and in respect of a single pair of correspondents. Thus I not only see my friend but converse with him, and our conversation is not entirely taken up with trivialities, answer following question in quick-fire succession: thought is liable to reduce the tempo. Also I remember what he used to be years ago, and is likely to become. And our conversation is all the while mediated by nerve-impulses and chemical changes (e.g., of our retinal rhodopsin, or visual purple) which proceed at various rates. In short, my There-now in respect of my friend, is of numerous dimensions: it is not one wedge-shaped zone, but a number of such zones superimposed, and their angles differ widely. This temporal complication is essential to the completeness, to the rounded quality, of our friendship. Indeed, any entirely satisfying human relationship would involve a filled There-now (so to say) whose dimensions ranged from the whole of time to an instant: it would truly be "such a friendship as had master'd Time". +

The fact remains that my There-now, however complex, is the projection of my Here-now, which is the receptacle not only of all space but of all time, and of every lesser time-span. ° History is present reality, says Croce; and history is of all durations. Whose is this Here-now, which is the focus of my being? A man's. Yes indeed; but also an atom's and a star's, an electron's and a galaxy's. It is the common hub of all my wheels within wheels, the Centre which is as much the possession of my outermost rings as of my innermost; the ever present repository of their time-scattered contents. Surely an arresting thought ---that this Centre, which is the locus of all my memories \otimes and percepts and anticipations, is inexhaustible, the home of eternity itself, and all because it is a timeless point of time. Traherne is one of the very few who grasp the weirdness, and the tremendous implications, of these facts. "Is not this a strange life to which I call you? Wherein you are to be present with things that were before the world was made?" It is much more than a human life. "The contemplation of Eternity maketh the Soul immortal..... No creature but Page 384

 ϕ A further instance of the principle is furnished by the uppermost levels. The penultimate hierarchical units (whatever they are) do not add up to, or culminate in, or converge upon, the Whole: the Whole comes to them <u>ab extra</u>, as wholly other.

* The difficulty is particularly great in an age whose science has for its chief aim, as W. Macneile Dixon points out, the suppression of the observer. We suppose him not there, or attending to private affairs, or gossiping with his neighbours, <u>The Human Situation</u>, p. 159.

+ Tennyson, In Memoriam, 85.

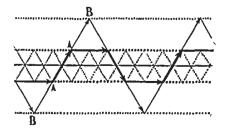
° There are, says St Augustine, three modes of time: "a present of things past, a present of things present, and a present of things future." They are respectively memory, sight, and expectation. He is led to this view by (a) the reflection that only the present really is, and (b) the reflection that the past and the future are not unreal. See Confessions, XI. 20. For me, the "present of things present" is an unreal abstraction: the mere present, or Here-now, whose content is entirely unprotected, is empty of content. But St Augustine's vivid appreciation of the presentness of temporal events (including memory images laid by "as though in wonderful cabinets") is just what I want to convey here.

 \otimes Accordingly the problem, as Fries pointed out, is not so much to explain memory as forgetting.

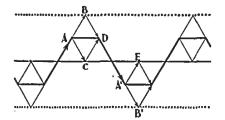
one like unto the Holy Angels can see into all ages." Again, "all ages were for most glorious ends, accessible to my understanding, yea with it, yea within it. For without changing place in myself I could behold and enjoy all those: Anything when it was proposed, though it was a thousand ages ago, being always before me." ° As corresponding with hierarchical individuals of all grades, and making use of many means of communication, I possess a There-now which is infinitely elastic: and my There-now is from my Here-now.

A further complication arises from what may be called 'delayed correspondence. It is obvious that the efficiency of the postal service is not the only factor that determines the tempo of intercommunication. More often than not, the main consideration is how long correspondents take to answer letters once they get them. The postal-time sets the lower limit to the correspondence-time, but the latter may (and generally does) far exceed the former. Now in the procedure of the hierarchical organization (and even in that tiny portion of it which is dealt with by the Post Office) the correspondent's delay in replying is not (normally, at any rate) due to laziness or any kind of accident, but is functional. The time-lag is a necessity --- a graded and organized necessity. Only routine letters can be answered by return of post; those that set the official a problem take longer. He may account for the delay in two ways. He may say (i) that his staff needs time to look up all the relevant material and to submit to him partial and rough drafts of the reply; or (ii) that he has to refer the case to some higher authority whose decision is not to be had at once. And, of course, the more difficult the problem the longer the delay, either because the subordinates have more to do, or because the case has to go to higher and higher levels. Actually, though one or other of these (either the downward or the upward reference) may be most in evidence, they always go together, and are (as Chapter XIII showed) two aspects of one movement. I cannot, with my staff, sit back and rely on getting the right answers to all my problems decided for me by higher officials; nor can I, with my staff, evolve the right answers without the help of my superiors. The price of guidance is responsible work, and the condition of responsible work is guidance. And both mean delay. Both mean a discrepancy between post-time and correspondence-time. If officials were to deal with their mail at once and on the spur of the moment, the higher functionaries would lose their raison d'être, which is the solution of the larger problems. Such problems are not solved in a hurry: their tempo is slow. The higher the level the more deliberate, in every sense of that word, is its procedure. And this higher procedure is not something distinct and by itself, but simply the lower procedure differently viewed, its longer rhythms apprehended. Correspondence at one level conceals, and in the last resort <u>is</u>, correspondence at all levels.

Our lesser correspondence is not so much overruled as brought round in the end, by the slow but certain influence of higher authority, to the requirements of the greater correspondence. And our freedom consists, not in denying or in futilely resisting this control, but in recognizing that it is not alien control, in the discovery that its tempo is our tempo. This means delayed correspondence. • The principle is well known, under a variety of names. Thus the rash man is advised to stop and think, or to ° Centuries of Meditations, I. 45,55; III. 24.



A maturation period, or delay for thought and emotional adjustment, raises the status and improves the quality of correspondence. This is because it changes the status of the correspondents themselves, from A-A to B-B.



The official receives a letter at A, refers the case to the higher official B and to his own staff C, thus arriving at the correct answer D. A's correspondent A' does likewise, referring the case to his superior B' and his inferiors E. The real correspondents, then, are B and B', with A and A' for intermediaries or agents. In fact, the level to which we attribute the real correspondence depends upon our ability to grasp the extremely deliberate tempo which underlies all our hurried intercommunication.

• This delay is sometimes called 'prolonging the vestibule of satisfaction'. Evolutionary advance, in one of its most important aspects, and the development of man to maturity, mean the great increase of suspense, of what I may term creative waiting. Cf. W. E. Hocking, <u>Human Nature and Its</u> Remaking, p. 177; G. F. Stout, Manual of Psychology, p. 277; Bergson, Matter and Memory, pp. 22-3, and Creative Evolution, p.152. "Consciousness", Bergson tells us, "is the light that plays around the zone of possible actions or potential activity which surrounds the action really performed by the living being. It signifies hesitation or choice Where the action performed is the only action possible consciousness is reduced to nothing It measures the interval between representation and action." And he goes on to associate intelligence with consciousness and instinct with unconsciousness.

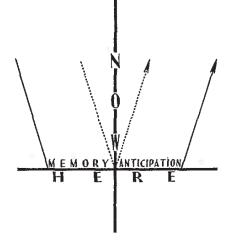
think twice; the angry man is advised to count twenty before answering back, so that his own wiser counsels may prevail; the perplexed man is advised to sleep on his problem, in the hope that deeper or more exalted layers of his personality may contribute to the solution. * And it is generally held that an important part of the distinction between 'instinctive' and 'intelligent' behaviour (not that either can exist without the other) is the delay between stimulus and response that marks the latter, in contrast to the lack of delay that marks the former. The instinctive response may indeed come in instalments and be long-drawn-out, but it is relatively free from the fumbling uncertainties and exploratory delays of intelligence. We climb the hierarchy by slowing down.

10. THE HERE-THEN LINE

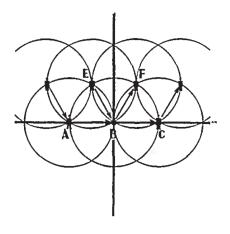
Delay in correspondence may be looked upon in two ways --- either as a method of enlarging the scope of the There-now, or as a method of combining the 'sensory' contents of the There-now (e.g., patches of colour and raps of sound) with the 'ideal' or 'non-sensory' contents of the Here-then (e.g., remembered or anticipated patches of colour and raps of sound). It is with the second of these interpretations -- in which the object is <u>twice</u> removed from the Here-now -- that I am concerned in this section. Though my experience here and now is of an undivided object, I cannot help recognizing that it has for components aspects of myself <u>then</u>, no less than of itself <u>there</u>. In other words, the object is projected from the Here-now in a somewhat more sophisticated and complex fashion than at first appeared; in a fashion which distinguishes between the 'objective' and the 'subjective' elements in it.

First let me set down, as a basic diagram or framework for this discussion, a Here-line extended in time but unextended in space, and a Now-line extended in space but unextended in time. The first stands for this place at all times, and the second for all places at this time. Their junction, the Centre of the system, is this place at this time. In Bergsonian language, the Here-now is that focus of action where the physical or spatial There-world intersects the psychical or temporal Here-world. Here-now, mind and body are one in action: beyond, they are divorced. "The mind is continuous with an infinite past, the body is continuous with an infinite present, and the ever-moving point at which these two realities meet, is the present centre of action." ×

Here and now (B) I am 'looking <u>at</u>' my friend (EF), and also (through A) 'looking <u>back</u> at' him as he was a moment or two ago, and (through C) 'looking <u>forward</u> to' him as he will be shortly. I 'see' him with a threefold vision, thanks to the bending (so to say) of my line of sight. This is, of course, an oversimplification: the contributions of memory and anticipation to present experience are very extensive and complex, and often they seem to be altogether predominant over the sensory element. Just how much of the Here-line is directly involved depends upon the level at which I am functioning. It may be said that the Here-now associates itself with, or produces, such Here-thens (and, through them, * In what does the art of thought, or of prayer, or of artistic creation, consist, but in (1) the posing and preliminary exploration of a problem; (2) a period of waiting; (3) illumination; (4) verification? And what does this imply but reference to our other levels, which always takes time? Cf. Rignano, <u>The Psychology of Reasoning</u>; Henri Poincaré, <u>Science and Method</u>; Graham Wallas, <u>The Art of Thought</u>.



× H. Wildon Carr, <u>The Philosophy of</u> <u>Change</u>, p. 68.

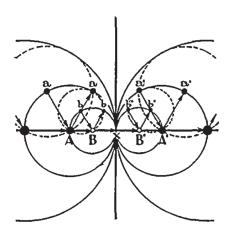


such There-thens) as the object of the moment requires for its completion, though in fact the Here-now contains them all. As Bergson puts it, the 'mind' selects from the time-series those memories, and the 'body' selects from the space-series those physical influences, which serve the occasion.

This by no means implies that there is, after all, a one-level and uniform time, or that I do not need, at each level, to go out to my companions in order to realize the time proper to me at that level. My Here-line is nothing if it is not regionally organized. The status of an object in the time-series is a function of the temporal interval that separates it from the Now, precisely as the status of an object in the space-series is a function of the spatial interval that separates it from the Here. (It is necessary, of course, not to confuse the two orders. An hour is an hour a hundred miles from here, just as a foot is a foot a hundred years from now. On the other hand, an hour, taken in perspective, is not an hour a hundred years from now, any more than a foot is a foot a hundred miles from here. Spatial and temporal perspective are very intimately connected, but not interchangeable.) Moreover, it must be remembered that my Here-line is not mine in any ordinary sense; for it is nothing apart from its contents, which are invariably objective or other-than-myself. Thus the view into 'my own' past and future is a perspective view in which temporal range determines hierarchical status --- the status of my companions. I remain mere temporal capacity for them; only in and through them can I claim any past or future at all. \otimes

To common sense, this notion of a temporal perspective * in which status is, on the whole and in the long run, proportional to remoteness, is absurd. Not that common sense denies the <u>fact</u> of temporal perspective --- only its <u>effects</u> are precisely the opposite of those I describe: the status of the object (says common sense) is <u>inversely</u> proportional to its remoteness in time. As Keyserling °says, "The past, as such, is something entirely indifferent, its value decreases in direct proportion to its remoteness."

There are at least three good reasons for this common-sense view. The first is that the observer takes too seriously what I call 'spindle effects' --the periodic but temporary collapse of the object as its range increases. It is easy enough to mistake this kind of falling off, preparatory to a large increment, as obsolescence. The second is that the observer fails to shift centre. In time no less than in space, the remoter phases of the object are not concentric with the nearer phases; and the investigator of my past (for example) is obliged to transfer his attention from an individual man to a group, from a group to a race, from a race to a species, and so on, in order to keep track of me at all. If, as generally happens, the investigator fails or refuses so to shift centre, he will naturally regard my past (and probably also my future) not as increase but as diminution, till I fade away altogether. The third reason is that, in this scientific era, we habitually neglect the superior hierarchical series in favour of the inferior. In Part V, I shall bring forward abundant evidence to show that my past and my future are so bifurcated that, at each stage of my history, I am at once the superior and the inferior members of a Pair. But common sense, having eyes only for the inferior series, sees my past and my future declining into the realm of the merely vital, and then into the realm of the merely



Events A and A' owe their status now (at x) to their range Ax, xA. B and B' owe their lower status to their shorter temporal range. But neither class is anything apart from its objective and projective content aa, bb, a'a', b'b'.

⊗ Accordingly it is not surprising to learn that sensitives, however able to predict the future of other people, are seemingly unable to predict their own. (See, e.g., Eugène Osty, <u>Supernormal Faculties in Man</u>.)

* The useful term 'temporal perspective' must not be taken to imply that the laws of temporal perspective are practically the same as the laws of spatial perspective. Here are two species of a genus, each of which has to be studied for itself, and differentiae noted no less than common characters. Cf. James Ward, <u>The Realm of Ends</u>, pp. 395-6.

° <u>Immortality</u>, p. 1.

physical: if I can be said to have a history extending beyond the human, then it is infrahuman and not suprahuman. The truth, however, is that it is both. The common-sense notion of negative or fading perspective is true as far as it goes, but by itself it is a dangerous half-truth. Genuine insight into time demands a kind of double vision, for which every object becomes a Pair.

Though common sense is blind or partially blind to positive temporal perspective, there are plenty of commonplace indications that it is no fiction. My long-term projects have greater scope than my short-term projects. Thus I do not plan my dinners a year ahead, neither do I settle the day beforehand where I shall spend my annual holiday. This inquiry as a whole takes more time than this paragraph of it, and its value is proportionately higher. The perspective effect is much the same when I turn from the future to the past. Just as effective anticipation involves a refusal to go into details prematurely, so effective memory involves a refusal to recollect trivialities: it may be defined as an orderly and creative process of amnesia. ° Just as the art of drawing is to know what not to draw, and the art of seeing is to know what to overlook, and the art of prediction is to know what to come upon unawares, so the art of remembering is to know what to forget. No perspective foreshortening, no view. "And now it is all gone", Froude laments, in a famous passage in his History of England, --- "like an unsubstantial pageant faded; and between us and the old English there lies a gulf of mystery which the prose of the historian will never adequately bridge." But in fact the gulf does not unmake, but makes, the old English. Only at that viewpoint in time where innumerable irrelevancies are no longer visible, are the old English seen for what they are. "The field of Graeco-Roman history", writes Arnold Toynbee, "is not encumbered and obscured by a surfeit of information, and so we can see the wood --- thanks to the drastic thinning of the trees during the interregnum between the dissolution of the Graeco-Roman society and the emergence of our own. Moreover, the conveniently manageable amount of evidence that has survived is not overweighted by the state papers of parochial principalities, like those which, in our Western world, have accumulated, ton upon ton, during the dozen centuries of its pre-atomic-bomb age. The surviving materials for a study of Graeco-Roman history are not only manageable in quantity and select in quality; they are also well-balanced in their character.

Statues, poems, and works of philosophy count here for more than the texts of laws and treaties; and this breeds a sense of proportion in the mind of a historian nursed on Graeco-Roman history; for -- as we can see in the perspective given by lapse of time more easily than we can see it in the life of our own generation -- the works of artists and men of letters outlive the deeds of business men, soldiers, and statesmen. The poets and the philosophers outrange the historians; while the prophets and the saints overtop and outlast them all." ° But it is not as men that these great ones remain in view: they are visible only because their stature is suprahuman. And it is we who, by entertaining them now, give effect to that stature, and are ourselves similarly enlarged. The distant view, in time as in space, is only to be had by growing till you can see over the heads of the crowd. * "It is remarkable", says Emerson in his essay on History, "that involuntarily we always read as superior beings." We feel perfectly at home with, and equal to, the most exalted historical figures and occasions, no matter how humble our present sphere.

"Memory puts the events of the past in its crucible and elicits from them as it were their essence," writes Ethel M. Rowell (<u>Hibbert Journal</u>, July 1943, p. 355). "The experiences and events of the past form an organic if ideal order, and it is this order which I think may be and indeed must be changed by the impact of the present upon it. There is recreation of the past by the present, not in respect of the content of the past, but of the significance of its relations." My only criticism is that, as I see it, the past has no content apart from "the significance of its relations".

° Cf. William James: "In the practical use of our intellect, forgetting is as important a function as remembering If we remembered everything, we should on most occasions be as ill off as if we remembered nothing. It would take as long for us to recall a space of time as it took the original time to elapse, and we should never get ahead with our thinking. All recollected times undergo, accordingly, what M. Ribot calls foreshortening; and this foreshortening is due to the omission of an enormous number of the facts which filled them. 'We thus reach the paradoxical result,' says M. Ribot, 'that one condition of remembering is that we should forget. Without totally forgetting a prodigious number of states of consciousness, and momentarily forgetting a large number, we could not remember at all. Oblivion, except in certain cases, is thus no malady of memory, but a condition of its health and life."" Textbook of Psychology, pp. 300-1.

° Civilization on Trial, pp. 4-5.

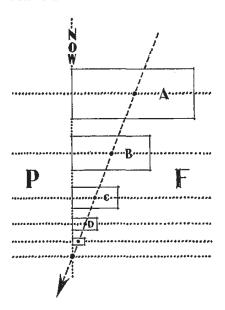
* It may be objected that some of us are able, by paranormal means, to surmount these limitations, and that precognition in detail of the historical events of the year 5000 A.D. is just as possible as precognition of which horse will win this year's Derby. I doubt whether the available evidence is conclusive either way, but there are plenty of data that suggest that paranormal cognition obeys the laws of temporal perspective. Eugène Osty, for instance (see his Supernormal Faculties in Man), records that an event in his life was foretold vaguely two years before its occurrence, and in greater detail again four months beforehand. What the observer certainly can do (as I show in the next section) is to shift from this Now to another, and this is a faculty that is common to normal and paranormal experience. But all that happens in such cases is that the perspective-system of the first Now is exchanged for that of the second. Indeed, to abolish temporal perspective (as distinct from shifting it) would be to make nonsense of our experience.

A pair of travellers, coming down from the hills to a town in the valley, see at first the same town; but the nearer they get to it the more dissimilar their views of it become. So in time: the remoter the event the more likely we are to see eye to eye in the matter, for the long view is the magnanimous, the balanced, the large view. We are in a better position to judge Attila than Napoleon, and Napoleon than Hitler. What we are depends upon whether we turn to an earlier or a later page of our history books. Everything hangs on how (to use Mercutio's words) we keep "time, distance and proportion". The creative passage of time ensures that Wordsworth's recollections in tranquility do not merely repeat the initial experience, that Tennyson's "days that are no more" shall be fresh and strange and dear now, that Proust's great Recherche shall bring out new meaning and value in what was so trifling at the time. Indeed it takes "the interpretation of full time" × for any event to reveal all that it has in itself to be. + It is often said that every generation must rewrite its history books; what is not so generally realized is that no occasion exists in its entirety till <u>all</u> its histories have been written --- or, more generally, that no event is completely itself till 'the end of time', or while it remains 'in time'. The reality of a thing (as Josiah Royce saw so clearly) is its whole meaning, including that which I now give to it. Thus history is very much more than, in Collingwood's phrase, thinking the thoughts of dead men. In me the dead men live a perfectly genuine life. As the star comes to starhood now in me, so 1066 comes to 1066-hood now in me -- at least it approaches that status. What 1066 is to the present-day reader it could not be to the men of that time. To arrive at its own nature it must grow up to and into this moment.

To possess anything you must give it up, and the more valuable it is the more thoroughly you must abandon it. The event to which I look forward -- say the first sign of spring, or the completion of this book, or moving to a cottage in the country --- has <u>now</u> its characteristically pleasurable quality. When the event actually occurs, when the interval that divides me from it is reduced to almost nothing, its scope and quality are similarly reduced: the broad perspective has gone, and I can see only some petty detail that requires my instant attention. Nor is this process of reduction or analysis due merely to human weakness: the Centre must be cleared for action. All my activity involves the breaking down of my object from something then-from-now to nothing now-from-now. Consider, for example, my cottage, and how (if I am judicious) I choose its site. I use the method of elimination, deciding first the country (A), then the district (B); further exploration and inquiries enable me to settle the locality, (C), and eventually the actual road and plot of land (D and E). As time goes on, as my decisions are made and I approach my objective, it dwindles --- from the wide world to a quarter of an acre. And this, in principle, is the life-history of all my plans. To approach in time the looked-for and worked-for future event is to cut off one possibility after another until complete definiteness -- and nothingness -- is attained here and now; and then to watch the event repeat (more or less) this history in reverse, and grow again to something like its old dimensions as it recedes into the past. ° Just as to approach me in space is to shed space till you come to share my spaceless Here, so to approach me in time is to shed time till you come to share my timeless Now. And in

× <u>Coriolanus</u>, V. 3.

+ "In our excursions into the past, in our intimacy with what has been, we taste a spiritual quality. We are no longer in communication with flesh and blood but with immortal essences." So writes W. Macneile Dixon (The Human Situation, p. 414) But he goes on to regard the past as already complete: "How perfect it is, the past, to which nothing can be added, and from which nothing can be taken away! It is no longer material, it has become a vision. To it belongs the statuesque dignity of repose, the quality of everlastingness, never more to be troubled by the restlessness of change. Over the past time has thrown a transfiguring veil. Its agitations are at an end." These eloquent words are true, but only from a point of view that is beyond time altogether. So long as we are in time, so long as we have a future, the past is uncompleted, imperfect, mutable. And if the past were only what it is now to us, were incapable of further growth and transformation, we should indeed have reason for despair. It needs much longer treatment.



° Of what is merely now we are unconscious, for the very good reason that there is nothing to be conscious of. Emerson has an admirable passage on this: "The actions and events of our childhood and youth, are now matters of calmest observation. They lie like fair pictures in the air. Not so with our recent actions, --- with the business which we now have in hand. On this we are quite unable to speculate. Our affections as yet circulate through it. We no more feel or know it, than we feel the feet, or the hand, or the brain of our body. The new deed is yet a part of life, --- remains for time immersed in our unconscious life. In some contemplative hour, it detaches itself ... like a ripe fruit, to become a thought of the mind. Instantly, it is raised, transfigured." 'The American Scholar'.

fact these are not separate movements, but differently apportioned elements of one movement.

11. SHIFTING THE NOW-CENTRE

An extremely important proviso must be made here --- many complications are introduced into temporal perspective by the fact that the Now from which events are viewed is no fixture.

It is a fundamental principle of this book that self-conscious life in society involves the ability to shift Centre to one's companions, making their Here and point of view one's own. Though I am never anywhere but here, this fact is no hardship, for my Here potentially includes every There. My Now is similarly capacious of Then; \times and my social life requires that I shall shift my Now-centre to coincide with my companions, in precisely the same way that I shift my Here-centre to theirs'.

Thanks to the observer's aptitude for travel in time, history is much more than the discovery of what the past means now and on the long view; it is also the discovery of what the past meant to its near contemporaries, to those who were immersed in it. No one really studies history until he is able to put himself into the shoes of its actors, to see and to handle the little and common things of their life, to think their everyday thoughts, to submit to their feelings. * Miracles of patient labour and imagination and sympathy are needed --- and occasionally, in the great historian, they are found; and we are permitted to share his insight. The fact is that history is compounded of two diametrically opposed endeavours --- the endeavour to realize the full significance for the present moment of past events whose mere pastness is irrelevant; and the endeavour to eliminate from them every trace of our present interest, and to get back to what they were in themselves. This latter goal is, of course, unattainable. History is bi-polar or it is nothing, and there must always be an interval of time between the event and its observer. Indeed it may be said that the ideal history of an event (the history which not only includes, but unites by a long series of intermediate stages, the endeavour to make it wholly present and the endeavour to suppress the present altogether) is the totality of what it is to the observer viewing it from the point of view of every generation and every age. To 'save' the past, two things are needful: (i) it must be reconstructed and preserved and given (or given back) its own consciousness, and (ii) it must be transmuted in our consciousness. No event may be lost, and myriads that have been temporarily lost must be found. Time is not transcended by quietly dropping its close-range and more sordid contents -- this can only produce the bowdlerized or 'hollow' and abstract version of the superior hierarchical individuals -- but by the opposite method of working over all its contents till every potentially significant relationship is brought to full consciousness. \otimes It is only the completed organization of the temporal which is timeless.

"The iniquity of oblivion blindly scattereth her poppy", ° but the drug's

× Cf. Leibniz, "One who saw everything could read in each body what is happening everywhere, and even what has happened and will happen. ... But a soul can only read in itself what is distinctly represented there; it is unable to develop all at once all the things that are folded within it, for they stretch to infinity." <u>Monadology</u>, 61.

* I plunge beneath the surface of my mind, and there live a life in which I not merely think about Nelson but am Nelson, and thus in thinking about Nelson think about myself." R. G. Collingwood, <u>An Autobiography</u>, X.

"To clap-on your felt, and, simply by wishing that you were Any<u>where</u>, straightway to be <u>There</u>! Next to clap-on your other felt, and, simply by wishing you were Any<u>when</u>, straightway to be <u>Then</u>!" And in fact, as Carlyle goes on to say, both kinds of wishing-cap are ours. "Or thinkest thou it were impossible, unimaginable? Is the Past annihilated, then, or only past; is the Future non-extant, or only future? Those mystic faculties of thine, Memory and Hope, already answer." <u>Sartor Resartus</u>, III. 8.

⊗ The really great musical composition, or intellectual edifice, or poem, or painting, or history, must have scale. A very short novel can hardly fail to be slight, seeing that its several parts lack that mutual range and detachment which makes for mutual immanence of high quality; its system of temporal prehensions is too restricted; it does not require us to <u>wait</u>. But the large-scale whole needs small-scale filling of many grades, or the effect is mean: the secret is, in a word, <u>hierarchy</u>.

° Browne, <u>Hydriotaphia</u>, V. 8. It is the arbitrary character of what survives that is Browne's theme: the names and deeds of truly great men are lost, while those of nobodies are by some accident rendered immortal. What shall live and what shall die in human memory seems left to chance. And, indeed the element of irrational accident cannot be ignored. Yet the fact that we are aware of it, and able to do something to correct it, is perhaps some indication that it is not final. effects are themselves fleeting. In his own capacity for the resurrection of the past, each of us has an earnest of that total Now which, gifted (so to speak) with perfect sympathy and imagination, is able to shift Centre to every Now and hold all time together in an eternal present. I need not go far in search of instances. It is only too evident that in my day-dreams I become present at past and future moments of my life; and I do not have to read an absorbing novel, or watch a well-acted play, to be 'taken out of myself' and transported to other scenes and ages \times --- a scent, an evocative word, the merest suggestion of something that is not wholly contemporary (and what is?) and I am rapt away. It is practical necessity, and no lack of mobility in time, which ties me down; indeed the problem is rather how to restrict futile mental travelling than how to acquire the knack of it. I seem to be bent upon escape, so that only by an immense effort of concentration am I able to keep more or less to the point, or (what is more likely) to be dragged back again and again from my purposeless wanderings in time to the problems of this present moment. Sleep and dreaming are, I suggest, partial relaxations of this effort; and when we die we give up altogether the task of temporal concentration. A dying man is one who is letting his mind wander more than usual.

12. THE INFRAHUMAN HERE-THEN

My Here-then is subject to the same perspective effects as my Therenow: it is organized according to the same hierarchical system. Common sense, however, finds little trace of this organization. In particular, common sense cannot accept the statement that whereas I shall be a man a few moments hence, and was a man a few moments ago, I am meantime much less than human. Yet this is the conclusion I am driven to. I can claim to have been human, and to have been cellular more recently, and to have been molecular more recently still; similarly I can look forward to being first molecular, then cellular, and then human. But I am none of these things now. And the time will never come when I can truly say, 'Now, at this very instant, I am a man; or, if not a man, at least I am something'. "The rule is, jam tomorrow and jam yesterday --- but never jam today", and Alice's objection that "It must come sometimes to 'jam today'' is overruled. Dryden has every reason for complaining: "Man never is, but always to be blessed". In Wordsworth's phrase, he is "something evermore about to be". If he is anything at all, it is in the other that is not himself, in the place that is elsewhere, in the moment that is not yet, and in the moment that is no more.

"Here between the hither and the farther shore While time is withdrawn", +

he is nothing. In all this more-than-fabulous universe of space, with its immense vistas and populations, there exists not a single spot where I am not present --- excepting one, and that is <u>here</u>! So in time, stretching age upon age before this Earth was born, and age upon age after her death, there is not a moment from which I am absent --- excepting one, and that is <u>now</u>! This is the only spatio-temporal location in the world that absolutely refuses to contain any aspect of me. I am for ever absent;

× In witness of the fact that such 'ecstasy' does not necessarily consist of experience that is dim and lacking in sensuous immediacy, there is the famous case of Moberly and Jourdain. These Englishwomen, while walking in the grounds of the Petit Trianon at Versailles, were (seemingly) transported to the year 1789. Not only did they meet persons who had every appearance of belonging to that period, but saw a bridge and woods and other features which existed then, but had since been removed. It was only some time after this experience that the ladies realized its oddness. See C. A. E. Moberly and E. F. Jourdain, An Adventure.

As the King says in <u>All's Well that Ends</u> <u>Well</u> (V. 3), we

"Make trivial price of serious things we have,

Not knowing them, until we know their grave".

But a vital distinction is necessary. Inasmuch as these things are other than ourself, and we "make trivial price of them" here and now, we fail to live. For it is not to them but to ourselves that we must accord this treatment. The valuation of the object means the devaluation of the subject: the 'solidity' of the one demands the 'hollowness' of the other, and they fit as hand and glove. We have nothing we have not made room for.

+ T. S. Eliot, 'East Coker'. In another place in the same poem, he writes, "And of what deeds is it not true that We had the experience but missed the meaning?"

And in Murder in the Cathedral:

"One moment

Weighs like another. Only in retrospection, selection,

We say, that was the day....."

and if I were not, my world could not be present. Like the rainbow that vanishes when you come to it, and the star that is only visible 'out of the corner of your eye', the present will not bear close inspection. Its contents are like the stock-in-trade of that disquieting shop in <u>Through the Looking-glass</u> --- whenever Alice "looked hard at any shelf, to make out exactly what it had on it, that particular shelf was always quite empty, though the others round it were crowded as full as they could hold." *

The man I was runs me so close, and I follow so hard upon the heels of the man I shall be, that I have some excuse for supposing that he who is is human. Everything happens as if I were able to spread myself into the past and the future in order to gain the support of my human region, and prevent myself from falling into the bottomless abyss of which that region is the periphery; to prevent myself also from becoming aware of the abyss. But I am certainly not without intimations of the pit of the infrahuman over which, Pythia-like, I am poised. I suppose that I perform human acts, but it is not difficult to discover that I only intend and <u>remember</u> them. × The vastest projects come down to some utterly trivial movement (of tongue or hand or foot) that is now required of me: as many proverbs testify, the only way to get anything big done is to do that little bit of it which lies nearest. And the nearer it is the lower it is in the hierarchical scale --- literally we make nothing of even the most colossal task. The only way the player can see anything at all of the game is by joining its spectators, apart from whom there is no game. What I have to do has solidity, completeness, status; what I have done is established and capable of inspection; but what I am in the midst of doing is disorganized, fluid, in the melting pot. The centre has dropped out of my life. As William James says, "The present moment of consciousness is ... the darkest in the whole series nothing can be known about it till it be dead and gone." ° The speaker is his own most interested listener, and sometimes an astonished one, for his words come to him from the infrahuman depths of the present. "We spend our existence questioning and exploring ourselves; our acts are as much a revelation to ourselves as to others." • Ex nihil omnia fit. As in space so in time: I can see a thing coming to me and retreating from me, but I cannot see it when it is on top of me. For there is nothing to see. And so I am perfectly protected against all assault: I have the complete safety of one who, because he can get no lower, need fear no fall. + 'Naught can never come to harm.' * I am the world-mill that grinds all things to powder, and reconstitutes them.

13. THE SUPRAHUMAN HERE-THEN

But it is the suprahuman periphery, rather than the infrahuman core, which common sense finds incredible. If I have already forgotten what I had for dinner yesterday, and have no idea what I shall have for dinner tomorrow -- if events so near in time are yet beyond my ken -- how can I speak with confidence about the remoter pattern of my own life, to say nothing of what lies beyond it? Isn't the very existence of bookmakers and insurance companies, and so on, sufficient evidence that time is not transparent like space, but more or less opaque? Do we not live in a Page 392

* Cf. M. F. Cleugh, <u>Time and its Im-</u> portance in Modern Thought, pp. 22 ff. After describing the 'flatness' we are apt to feel when a long-awaited event at last arrives, Miss Cleugh goes on, "Or we may be puzzled at the disappearance into a tenuous 'now' of what had been so long expected, and with a shock of surprise --- amounting almost to terror sometimes --- we realize that what we call 'now' is to us an unknown.... We know less of the present than we do of past and future."

 \times Or, adopting other language, I may speak of the <u>cause</u> and the <u>effect</u> of what happens here and now. The real cause is the universe, narrowing down by hierarchical stages to nothing; and the real effect has the same general pattern in reverse. What we <u>call</u> the cause and the effect are those few items which our interest selects from the totality.

• Maeterlinck, Mountain Paths, p. 41.

+ Already we are "eas'd with being nothing"(<u>Richard II</u>, V. 5). Cf. David Lindsay, <u>Voyage to Arcturus</u>, p. 238: "A wonderful idea swept through his whole being, accompanied by the intensest joy ... 'I am nothing! ... Then nothing can hurt me."

* Hugh Lofting, (<u>Dr Dolittle's Return</u>, p. 46) puts this 'old saying' into the mouth of one of his delightful animal characters; but whether it <u>is</u> an old saying or not I have been unable to discover.



[°] Principles of Psychology, i. p. 341.

temporal fog? No doubt 'the mists of time' are thinner behind us than ahead, and no doubt they lift from time to time over a small portion of the landscape; but to suppose that this temporal weather is obedient to some law of perspective -- and <u>a fortiori</u> a suprahuman perspective -- is for common sense mere fantasy. Samuel Alexander, though responsible for one of the most notable attempts to work out a rationale of time and space, was not ashamed to use such expressions as "the haze of Time" and the 'mist of intervening Time". ×

To attribute my inability to remember my distant friend to the mistiness of time, is no more helpful than attributing my inability to see him to the forgetfulness of space. What is needed is a thorough empirical study of the laws of 'foresight' and 'memory' (or precognition and postcognition) as they are manifested at each hierarchical level; at least the mists of time (to use again that most befogging expression) cannot be denied their own meteorology. Already the outlines of this new science of time are, I think, sufficiently plain. And the first point to note is that this Here-now Centre of mine belongs to a series of individuals of each hierarchical grade --- individuals whose status is measured by their (more or less symmetrical) appropriation of time on either side of the Now. When my foresight and memory reach certain very modest dimensions I am atomic; when they exceed these dimensions by a certain amount, I am molecular. As Humanity I look further into the future and the past than I do as man; and in my stellar capacity the range of my temporal vision is again vastly increased. In other words, the mist lies thick upon the ground, but clears above; and its stratification is hierarchical. Thus, viewed from the right level, the far object is often more distinct than the near one.

There is, after all, nothing particularly mysterious here. I have my private memories and my private plans. Obviously these are not incidental to my life, but, in their dynamic interplay now, are my life. Even to the casual outside observer I do not make sense till he knows something of my experience and my purpose. Some observers regard what lies behind me as all-important; others, what lies ahead. Thus one will look for the childhood experience which sets my course, while another will look for the destination I have set before myself. But nobody sees a man without plotting, however sketchily, some of his route through time; and a great deal of the route has to be taken into account if there is to be any real understanding of his behaviour. Thus, on the short view, there is little difference between the martyrdom of the saint and the execution of the criminal. Present action arises out of a past situation and is directed upon a future one; its meaning lies in the relation of all three terms, and its status is (with some minor fluctuations) proportional to their spacing. ° What is apparently the same action performed by four men may be, in the case of the first of them, performed for the sake of an organ, in the second for the sake of the man, in the third for the sake of Humanity, in the fourth for the sake of the Whole: in fact, there is all the world of difference, in time-span and so in hierarchical status, between the four actions.

As a man I use a man's time, enjoying the foresight and the memory that are proper to the human condition. As a star I use a star's time, in × <u>Space, Time and Deity</u>, i. p. 116. On the other hand, John Laird (<u>Contemporary</u> <u>British Philosophy</u>, 1st Series, p. 220) notes that "Distance in time, like distance in space, leaves room for vision." I should go further, and say that time exists to be seen through -- in both senses of the phrase.

In <u>Towards Democracy</u> ('Widening Circles'), Edward Carpenter writes: "I establish my base of operations here, you establish yours in distant grounds, a million years back or a million years forward: It makes no difference, Our widening circles inevitably meet and interfuse some time." But this does not take account of temporal perspective; assuredly we meet and intermingle as Carpenter says, but who we are that do so is a question of how far we have come.

° For example, when I am taken by surprise, when a movement is sudden and unexpected, I perceive it in a primitive or infrahuman manner. In a motor-accident, I see the road coming up at me. My human status comes and goes with my foresight. which my foresight and memory are immensely enlarged. * If I have the form of a man without his full grasp of time, I am a child or a dotard; and similarly, if I realize my starhood but remain ignorant of my stellar past and future, I sink to the condition of an idiot-star, or leave the stellar level altogether. But in general my temporal vision is adequate to my status. What is more, there is a tendency for the long view to be the clear view, and for the longest view of all to be the clearest of all. I know (or at least I could find out) far more about the relative position of the planets this time a thousand years ago and a thousand years hence, than I know about the relative positions of my human neighbours this time yesterday and this time tomorrow. I am well aware of what I was doing as Earth and Sun in the very distant past, and I have a fairly clear notion of what I shall be doing in the equally distant future. My solar expectation of life lends itself to calculation -- at least there is no inherent reason why it should not one day, be determined with moderate accuracy -- but I the man, being much more subject to accident and much less capable of ordering my affairs in advance, am unable to tell whether I shall die today or in fifty years' time. And the situation cannot be remedied so long as I remain at this Centre, for directly I become more certain about my human future I find that I have left that level: to reform is to supersede. \times Roughly speaking, in proportion as the future is predictable and the past is recoverable, they are suprahuman. And (if the testimony of religion is admissible here) it is only our absolute beginning and absolute end -- the Alpha and Omega of all things -- which is absolutely free from uncertainty. Only the perfect Whole -- the Whole that, as inclusive of all time, is timeless -- can be perfectly known. When first I look casually down my Here-line, the view in both directions becomes more obscure as it lengthens, till it ends in an impenetrable wall of cloud; but, looking again, I find that in fact it becomes more and more lucid, till the vista is finally closed by an Object which is at once the supreme mystery and the supreme clarity.

14. THE CENTRALITY OF THE NOW, AND THE FLOW OF TIME

My situation in time could not be more paradoxical --- in two ways. First: nothing happens to me; things will happen and have happened, but they do not happen to me now. Second: everything happens in me; the things that will happen and have happened are happening in me now. + I am not removed from the remotest past of the world, neither do I have to await its ending: all its times are present. The long intervals which seem to separate me from the golden ages of the past and the heavens of the future are in fact just what is needed to bring them to fruition at this moment. And so there is for time as well as for space a 'cosmological principle', by virtue of which I am permanently situated at the Centre of the regional time-system, which always arranges itself symmetrically about me. As my Here is the mid-point of all space, so my Now is the mid-moment of all time. ° Moreover, since I have no reason to suppose that I am a privileged observer, I must suppose that all others find themselves in a similar position. In the game of life it is always half* Cicero pronounced a science of the future impossible; and common sense equates temporal remoteness, whether past or future, with obscurity. Not so science. "What is so important about the time estimates of the astrophysicist", writes Hoyle in <u>The Nature of the Universe</u>, "is ... that they are quite definite and precise, more precise than anything we know about the history of man if you go back more than a few thousand years." Moreover these estimates, embracing hundreds of millions of years, are directed impartially upon the past and the future.

× Insurance is based upon the law that the gift of prophecy comes by rising in the hierarchical scale. It is the function of the actuary to relate the lower level of the largely unpredictable individual life to the higher level of the largely predictable life of the community. In the same way, but on a much higher plane, religion relates the unpredictable ventures of ordinary living to the predictable Venture which (alike in their success and their failure) they all subserve. Of course religion is not primarily prudential, but it does include a universal policy of insurance against every kind of disaster. The premiums are high; and some of the benefits are a long while coming, but they are immense and secure.

+ Cf. the contention of William James (<u>The Meaning of Truth</u>, pp. 287 ff.) that the truth of a fact consists of its workings, of what it does, and cannot be regarded as belonging to some self-contained central reality.

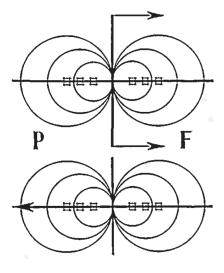
° Still another aspect of the 'cosmological principle' (to borrow E. A. Milne's term) is furnished by the Christian assumption that Earth is the centre of the cosmic plan of salvation: this, out of the myriads of worlds, has been chosen as the scene of the Incarnation. But some (e.g. Alice Meynell, in her poem 'Christ in the Universe') have challenged this anthropocentric view. Mr C. S. Lewis (Miracles, p. 150) suggests a reconciliation. "To those who live in Act II, Act III looks like an epilogue: to those who live in Act III, Act II looks like a prologue. And both are right" The terrestrial Incarnation may be truly central, yet part of an immensely wider scheme, such that some other planet or star may also rightly claim centrality. But we do not have to look so far for instances of the principle. Every observer, every man, and indeed every sentient, is so constituted that he really is in every sense the centre of the universe; and Milne's principle is, after all, only an abstract version of this fundamental law.

time. Our journey through time can never get us any further, seeing that time's contents adjust themselves to our motion.

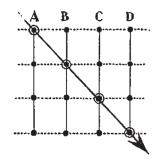
Yet (as common sense is not slow to point out) the scene changes. The content of this Centre -- the content of my temporal regions as manifest now in me -- is always fluctuating. That is because I attend first to one region and then another, and within each I further select that which interests me; but the totality from which I make my selection is itself changeless. Even in my selective activity I observe a rough symmetry, so that I remain at the Centre of the temporal system. (And in so far as there is, from its own point of view, a beginning or an ending to the whole series, it is marked, not by its asymmetry (in which all time's contents are either on the future or the past side of the observer, and none on the other) but rather by the total absence or failure of its symmetrical content. Just as movement in space may take me from regions of immensely fascinating detail to regions that are almost featureless, yet never remove me by a hairbreadth from the Centre of the spatial system, so movement in time may take me to strange, but not one-sided, scenes.)

From the point of view of the highest level, time is frozen solid, but from all lower points of view, it flows. Several interpretations are possible. We may think of the Now sliding steadily along the Here-line, approaching and meeting and passing the objects that are ranged along it; or we may prefer to think of the items themselves sliding steadily along the Here-line, till they come to and pass that fixed point called Now. Either time marches on and we stand at the saluting base, or we march past time. Traherne takes the latter view. "We pass", he says, "through a standing continent or region of ages, that are already before us, glorious and perfect while we come to them. Like men in a ship we pass forward, the shores and marks seeming to go backward, though we move and they stand still." × The same notion has found favour amongst modern physicists. Thus Weyl suggests that events do not happen: instead, we come across them. And Jeans * likens man to a small fly moving over the surface of a big picture --- a fly who regards what lies ahead as future, and what has been passed as past, and what is presented as present: thus the painting that is for us spatial and all-at-once is for the fly a long and manifold history.

Now there are two ways of taking such a history --- an abstract or non-regional, and a concrete or regional; and the difference between them can scarcely be exaggerated. The first, recognizing only atomized time, sees the successive events A, B, C, D as constants, each illuminated in its turn by the spotlight of the Now. But the second, recognizing that real time is a question of interval (and not of mere interval, but of the foresight and memory of real observers apart from whom time does not exist), sees the events A, B, C, D as variables, each of which is modified by the smallest advance of their observer's Now. "What happens", says Mr. T.S. Eliot, "when a new work of art is created is something that happens simultaneously to all the works of art which preceded it The <u>whole</u> existing order must be, if ever so slightly, altered; and so the relations, proportions, values of each work of art towards the whole are readjusted Whoever has approved this idea of order will not find it preposterous that the past should be altered by the present as much



× <u>Centuries of Meditations</u>, V. 8. * <u>The Mysterious Universe</u>, V.

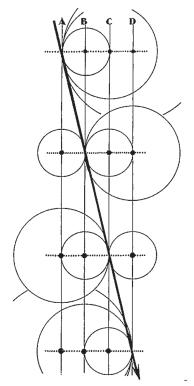


<u>The Abstract Version</u>: each item A, B, C, D in the Here-line is in its turn picked out by the spot-light of the Now.

as the present is directed by the past." $^{\circ}$ According to this idea of order I am a traveller along a road every one of whose milestones changes its inscription with every step I take. To walk this road is not to confine my activity to the place where I tread: it is continually to transform every one of its features from end to end. The traveller is, in a sense, coextensive with the whole immense route.

Indeed he can scarcely be said to travel at all. As he approaches an object his proximity drives it away, or else destroys it. It is as if he had taken a vow more rash than Jephthah's, or been granted the wish of Midas, or condemned to the punishment of Tantalus. For him the grapes within reach, not the inaccessible ones, are sour. But the curse, once accepted, turns out to be more than a blessing. "To know how to dispense with things", says Regnard, "is to possess them." The goal of his journey through time is neither the end of the road nor that half-way house which he can never leave behind however fast he runs. It is nothing less than the whole road in its complex unity, or rather it is the entire system of symmetrical views enjoyed by the travellers upon it. To make for the false goal at the end of the road is simply to exchange an interesting temporal perspective for a dull one, and eventually for none at all; in this instance it is indeed better to travel hopefully than to arrive. Should I then stay still, and by masterly inactivity attain to the whole? That is impossible --- I should only be swept along to the end, which is the cessation of the whole. The only way to reach the true goal of time is neither to ignore nor to counteract its movement, but to develop its movements in all directions to their limit. So far from halting on the road, I must learn to travel with all who are using it; for it is only by exhausting all that time and change have to offer that I can hope to attain the end which is out of time. The timeless which excludes the temporal is nothing but a polite name for vacuity.

The task which I must attempt is threefold. It is, first, to enjoy the perspective view from this Centre, submitting to its characteristic data and rate of change (and, in general, to the human mode of selecting events); second, to participate in the very different perspective views from other Centres, with their non-human rates of change and modes of selection; third, to realize that in thus placing myself at other Centres I do not leave this Centre, but further explore its projected content, which is imperishable. One who had reached this third stage would, in the language of Plotinus, begin to "attain to the absolute whole, not by going forward to another place, but by abiding in that principle on which the whole universe is based". •



<u>The Concrete Version</u>: in illuminating the present item, the spot-light of the Now not only illuminates along with it the entire series, but brings out a new aspect of every item.

° 'Tradition and the Individual Talent', in Points of View, 1941, pp. 25 f. The modification of the past by the present is in any case implied in such concepts as forgiveness, repentance, 'redeeming the time'. But once the principle is admitted there is no reason for denying the possibility of an Observer who can truly say, "Behold, I make all things new." Cf. Kierkegaard's doctrine of 'repetition', which he contrasts with 'recollection' --- the latter confirms the things of the past in their pastness, while the former (and in this lies our peace, our life, and our freedom) "affirms that existence which has been now becomes". Kierkegaard's Repetition (E. T., 1942) is important, not only as a statement of this fundamental notion of his, but also as a record of the tragic personal conflict out of which it arose.

• <u>Enneads</u>, VI. v. 7.

15. <u>A NOTE ON TIME-DEPTH AS COMPARED WITH SPACE-DEPTH</u>

There is a sense in which time has depth very much as space has depth. I concluded my introductory chapter on the topic of space with a discussion of this curious third dimension which removes objects from this place to other places; and here, at the conclusion of this chapter introducing the topic of time, I want to continue that discussion, and very

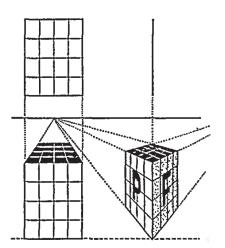
briefly consider time-depth and how it differs from space-depth. For, obviously, my object is not removed from this time to other times in precisely the same way that it is removed from this place to other places.

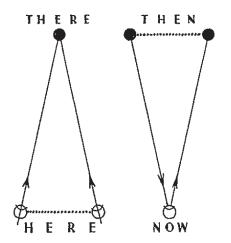
But first it is necessary to examine 'flat' space and time, which have not yet had depth or remoteness read into them. At once an important distinction reveals itself --- whereas the Here is 'two-way', compounded of breadth and height, the Now is 'one-way'. \times Thus, reading from side to side of this page, I find one <u>spatial</u> order of words, and reading from top to bottom, another; but there is no such ambiguity about the <u>temporal</u> order in which they occur in my experience. There is only one route through time from my Here-now to my Here-then. To speak loosely, my Now is in the first instance 'one-dimensional', and my Here 'twodimensional'.

And so what is given here and now (supposing it to be visible yet unprojected) is threefold: it has breadth and height and nowness. But in fact projection is unavoidable. And it also is threefold, producing spatial depth, and pastness, and futurity. Thus it may be said that, by a single projection into depth, flat space is made threefold and voluminous; and, by a double projection into past and future, 'linear' time is made threefold and temporally 'voluminous'; and, by a triple projection into space and time, space-time as immediately presented is made sixfold and spatio-temporally 'voluminous'. For instance, this page, primarily or in its unprojected mode, is simply <u>now</u>, and <u>here</u> in its double aspect of breadth and height; and, secondarily or in its projected mode, it is simply <u>there</u>, and <u>then</u> in its double aspect of pastness and futurity. If my Here may be likened to one of the sides of a cube whose depth I project, my Now resembles one of the edges of a cube whose sides I project ---- time stands at an angle to me: space confronts me four-square.

Consider now the methods by which these two different kinds of depth are determined. To discover the space-depth of my object I divide myself in space; to discover its time-depth I divide my object in time. The method of the first is two-eyed; of the second, one-eyed. The first duplicates here to unify there, while the second unifies now to duplicate then: but in both the duplication is only provisional, and the object does not lose its unity. And what I call correspondence, or social intercourse at any level, is these two methods fused into one. Spatial and temporal projection are interdependent, with the result that (knowing the speed of light) I can calculate the pastness of the star that I see, from its distance as fixed by my 'binocular' vision --- i.e., by the observation of spatial parallax.

Much depends upon the hierarchical level at which projection occurs. Let me give three instances. <u>Firstly</u>, it is not only the extent, but also the symmetry of the projection, which advances with the status of the object. Just as the contents of the nearer regions are apt to be spatially lop-sided -- deficient in height or breadth or thickness -- so they are apt to be temporally lop-sided -- deficient in nowness or pastness or futurity. But as the more exalted levels are attained, this asymmetry tends to give place to symmetry: the heavenly body tends to be a sphere whose height and breadth and thickness are all the same, and its futurity for × Cf. Locke: "The ideas of length which we have of expansion are turned every way, and so make figure, and breadth, and thickness; but duration is but as it were the length of one straight line not capable of multiplicity, variation, or figure." <u>An</u> <u>Essay Concerning Human Understanding</u>, II. xv. 11.





the observer matches its pastness. The higher we go the more evident it becomes that past and future are neither parted nor disparate, but are instead the two halves of a whole. Secondly, the mode of the projection of time-depth is proportionate to its level. Units of lower status project almost 'automatically', so that the three 'dimensions' of depth seem to be given as directly as the three 'flat dimensions'. The higher the level the more deliberate, the more reasoned, the projective activity which sets its scope. I do not need to calculate the temporal interval between the tennis ball there-and-then at the net, and here-and-now at my racquet, and there-and-then at the net again; but when stars are in question there is no other way. For stellar life is highly intellectual, and its time-depth is carefully worked out. Thirdly, depth comes to have a different meaning as we ascend the hierarchy. Of the three stages -- (i) that of the almost flat or unprojected object, (ii) that of the object which, violently projected, has (so to say) broken loose, and (iii) that of the object which is both projected and unprojected --- the first is characteristic of the lower levels, the second of the intermediate levels, and the third of the upper levels. The primitive subject, to the extent that it is deficient in projective energy, to the extent that it clings to the object, loses both the object and itself, and therefore both are of low status; the more developed subject, by recognizing the remoteness in space and time of the object and the impossibility of ever owning it, truly owns it, but fails to realize the fact --- and because of this failure falls short of completeness; * the really advanced subject knows how to combine the extreme hereness and nowness of the first stage with the extreme thereness said thenness of the second. The three stages are, in fact cumulative: the limitations of the first and the second are necessary, and only upon them can the third be erected.

Several things, then, are required of us. We have to project our object to the very limits of its otherness in space and time; we have to fill in, with the lesser projections of every grade, the depth so created, otherwise our life is 'hollow'; we have to ensure that our projection is, in its total effect and at its higher levels, symmetrical, and not lop-sided in the direction either of the past or the future; we have to realize that projection itself is only a half-truth, of which the other half is the presence of the object here and now; we have, that is to say, to regain at a much higher level our lost art of living in the moment --- this very instant, whose treasures are infinite. $^{\circ}$

The wrong way to attain to presentness is by ceasing to project time, and sliding back towards a primitive Now. As in space, so in time, we all have this tendency to surrender our perspective, and many are the devices by which we try to restore temporal depth and create vistas. For the sake of our mental health we need around us old people, old ways, old buildings, old trees, old hills; and, on the other hand, children, innovations, buildings going up, trees being planted, new landscapes taking shape --- in a word, projects. How <u>flat</u> life is in a mushroom community with almost no outlook upon the past, or in one that lacks a common purpose or outlook upon the future. Effectual depth in time is symmetrical. We must keep company with old ideas if we are to have any new ones, and with new ideas if we are not to miss the life of the old. Past and

* Schopenhauer exemplifies this second stage ---- "The enchantment of distance shows us paradises which vanish like optical illusions when we have allowed ourselves to be mocked by them. Happiness, accordingly, always lies in the future, or else in the past, and the present may be compared to a small dark cloud which the wind drives over the sunny plain; before and behind it all is bright, only it itself always casts a shadow." <u>The World as Will and Idea</u>, (trans. Haldane and Kemp) iii, p. 383.

But (it should be added) the cloud does not <u>destroy</u> the sunshine; rather it serves to bring out its cheerful brightness. The paradise of the future is enchanting now; even though the enchantment bears the label of the future, it is genuinely present. To realize this is to reach the third stage.

° It is important to distinguish between the two ways of living in the present or 'taking no thought for the morrow'. Neither the young child nor the saint is tormented with past regrets and future fears; but in one case this is due to ignorance of what time holds, and in the other to knowledge. Grasping the beginning and the ending, the saint can afford to live now. Most of us make the worst of both worlds, discovering enough about time to lose our tranquility and not enough to regain it at a higher level. The sage, says Chuang Chou, "mingles a myriad years (in himself) and becomes integrated, complete, balanced, whilst things, as they are, all go on pursuing their courses." (Chuang Tzu Book, II) Cf. John Cowper Powys: "Indeed the hour has come for solitary men and women to aim for a static view of life I mean that attitude wherein the mind, sinking back upon itself, envisages all the events of its existence in a sort of simultaneity, as if they were spread out before it like an unrolled map ... Throw the whole spectacle back, away from you, into the distance, into a sort of atmospheric perspective." A Philosophy of Solitude, p.138.

future are like breadth and height in this, that there are in practice limits to what you can have of the one without increase of the other.

A striking tribute is paid to the importance of temporal perspective by its fakers: one has only to think of the mock-antique furniture, correct down to the last artificial worm-hole, the literary pastiche, the rather pathetic attempts to infuse new life into picturesque customs that are either extinct or obsolescent, the long tale of architectural revivals down to Strawberry-Hill gothic, neo-neo-classical, pseudo-byzantine, and the style that can only be called olde-tea-shoppe. And, corresponding to the nostalgia for the past of which these vogues are the symptoms, is an equal and opposite nostalgia for the future --- even if it is only the sort of future projected by the Pools, or the Sunday-paper astrologists, or the latest interpreters of **Daniel** and **Revelation**. The more grotesque the substitute the more eloquently it witnesses to the need for the real thing, and perhaps even sham depth is better than none at all. Dimly we know that true manhood is solid and profound, having immense roots as far down in the past as its branches tower into the future. We shall not be satisfied till we can call our time -- which is all time -- our own, having for solace (in Emerson's phrase) the perspective of our own infinite life. ×

Of old towns, Carlyle writes, "How beautiful to see thereby, as through a long vista, into the remote Time." <u>(Sartor Resartus,</u> II. 8) My own suggestion is that one of the chief reasons why an adequate view in space is so satisfying is that it tends also to be a view into time --- into one's own past and future. As later chapters will show, in looking out upon aspects of Humanity and Life and Earth and Sun and Galaxy, I look out upon what I was and shall be, and am at this moment.

D. H. Lawrence insisted that the new things around us suck our life, and only cease to do so when they have been with us long enough to live in their own right. See, e.g., the poem 'New Houses, New Clothes--' (Pansies, p. 38). And Ruskin says somewhere that a house isn't mature till it has been lived in for some centuries.

× 'The American Scholar.'

CHAPTER XVI

TIME, MOTION, AND STRUCTURE

In order that Time might be brought into being, Sun and Moon and five other stars --- 'wanderers', as they are called --- were made to define and preserve the numbers of Time..... When each one of the beings that were to join in producing Time had come into the motion suitable to it, and, as bodies bound together with living bonds, they had become living creatures and learnt their appointed task, then they began to revolve by way of the motion of the Different, which was aslant, crossing the motion of the Same and subject to it: some moving in greater circles, some in lesser; those in the lesser circles moving faster, those in the greater more slowly.

Plato, Timaeus, 38.

Time is the measure of movement.

Aristotle, Physics, IV. xi. 5.

Their appearance and their work was as it were a wheel in the middle of a wheel. When they went, they went upon their four sides: and they turned not when they went. As for their rings, they were so high that they were dreadful; and their rings were full of eyes round about them four. And when the living creatures went, the wheels went by them:...for the spirit of the living creature was in the wheels.

Ezekiel, I. 16 ff.

A soul that knows itself must know that the proper direction of its energy is not outwards in a straight line, but that it moves in that way only by external influence; while the movement that really conforms to its nature is round about a centre, a centre which is not without but within it.

Plotinus, Enneads, VI. 9.

Our nature consists in motion; complete rest is death.

Pascal, Pensées, 129.

For that infinite motion of temporal things imitateth the present state of the unmovable life, and since it cannot express nor equal it, it falleth from immobility to motion, and from the simplicity of presence, it decreaseth to an infinite quantity of future and past, and since it cannot possess together all the fulness of its life, by never leaving to be in some sort, it seemeth to emulate in part that which it cannot fully obtain and express, tying itself to this small presence of this short and swift moment, which because it carrieth a certain image of that abiding presence, whosoever hath it, seemeth to be.

Boethius, The Consolation of Philosophy, V. 6.

The swiftness of those circles attribute, Though numberless, to his omnipotence, That to corporeal substances could add Speed almost spiritual.

Paradise Lost, VIII.

For the Being of God is like a wheel, wherein many wheels are made one in another, upwards, downwards, crossways, and yet continually turn all of them together.

Boehme, Confessions, p. 41.

From the fact that we now are, it does not necessarily follow that we shall be a moment afterwards, unless some cause, viz., that which first produced us, shall, as it were, continually reproduce us, that is, conserve us.

Descartes, Principles of Philosophy, I. 21.

If our space is in the same co-relation with higher space as is the surface to our space, then it may be that our space is really the surface, that is, the place of contact, of two higher-dimensional spaces.... And it may well be that the laws of our universe are the surface tensions of a higher universe.

C. H. Hinton, A New Era of Thought, p. 52.

1. STRUCTURE-SPACE AND STRUCTURE-TIME

Time is one of my essential ingredients. The observer who, in Part II, brought out what I really am, by travelling away from me and so taking in more and more of my space, was all the while taking in more and

"You might, we think, have an object without a history, but you could not have a history without an object. I believe this to be a profound mistake." C. D. Broad, <u>Scientific Thought</u>, p. 406.

"A frog without a life-history is as impossible as a life-history without a frog. A frog in a pickle is a cross section of its history as a living organism, and anatomy is biology with the time-dimension omitted." J. H. Woodger, <u>Biological Principles</u>, p. 300. more of my time. If his comprehension of my temporal aspect had not kept pace with his comprehension of my spatial aspect, he would have lost track of me altogether. For the truth is that I am not so much a thing as an event, or rather a whole hierarchy of events --- complex and longdrawn-out, or simple and brief, but always events or occurrences or histories, which cannot be transacted in a moment.

To divide my time is just as fatal, and fatal in the same way, as to divide my space. The rule is that at each higher level my observer has to allow me a longer period, as well as more room, in which to be myself at that level. I refuse to be rushed; I must take my time. When my examiner gives me a chance to show what I can do, he finds that my performance is roughly proportional to the time allowed. When he gives me no time, not only is the examination paper a blank, but the examinee himself vanishes. "At an instant there is nothing." ° It is not so much that I perish every moment --- until I am granted duration, a real interval of time instead of a series of discrete instants, there is nothing to perish.

The principle of structure-time (as I shall call it) is commonplace enough. It is exemplified in a hundred everyday matters, no less than in such vibratory effects as sound, radio waves, visible light, x-rays, and gamma-rays. Thus six months of cricket is not a game but a season; six minutes of a game is not a game but an over; and six seconds of an over is not an over but a ball. As with the space of the game -- the structure-space, of which twenty square yards is not enough and twenty square miles is too much -- so with its time: there are upper and lower limits which may not be transgressed. If there is to be no serious loss of essential qualities, the dimensions of the game must fall between the maximum and minimum structure-space, and between the maximum and minimum structure-time. × Also it must observe what may be called the principle of structure-number --- ten players are too few, a hundred too many. We recognize this principle when we say that it takes two to make a quarrel, and that while two is company three is none. Five hundred words make a page, fifty thousand a book, fifty million a library: each -- page, book, and library -- has its maximum and minimum structure-number.

The same three pairs of limiting dimensions serve to mark out my levels. Give me more time (provided it is held together in one duration*), more space (provided it is held together in one view), and more units (provided they merge), above the maxima for my level, and I shall (provided these increments are sufficient) improve my hierarchical status. On the other hand, less time (or the same time fragmented) and less space (or the same space fragmented) and fewer units (or the same number with their unifying relations ignored), will see me descending to lower and lower hierarchical levels. Certainly my travelling observer must be winged for flight in time no less than in space. +

2. ROTATION AND STRUCTURE-TIME

I come now to details. Evidently it takes more than a day, or even a year

As Whitehead points out (Science and the Modern World, pp 62 ff), the Newtonian physics assumed that "as regards time, if material has existed during any period, it has equally been in existence during any portion of that period. In other words, dividing the time does not divide the material.... Furthermore, this fact that the material is indifferent to the division of time leads to the conclusion that the lapse of time is an accident, rather than of the essence, of the material. The material is fully itself in any sub-period however short. Thus the transition of time has nothing to do with the character of the material." This assumption, though in its day an invaluable simplification, has been rendered quite untenable by modern physics. As Bertrand Russell says, the unity of a body is the unity of a history --- it is like the unity of a tune, which takes time to play, and does not exist whole in any one moment. Outline of Philosophy, p. 116.

° Whitehead, Modes of Thought, p.200.

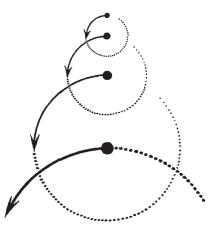
× Cf. R. G. Collingwood, <u>The Idea of</u> <u>Nature</u>, p. 19. Collingwood uses the terms 'minimum space' and 'minimum time' where I use the terms 'minimum structure-space and structure-time': for, unlike Collingwood, I find it necessary to distinguish between several varieties of time-span exhibited by a unit. At least I may not prematurely assume that its correspondence time (or reaction time), and structure-time, and specious present, are the same, or even similar.

* It will not do to divide the event into a part that is actual and a part that is not, after the manner of Aristotle's <u>Physics</u>, III. 6. Of such an event as the Olympic Games, he says that "the period of time or the succession of events in question is not all actualized at once, but is in course of transit into and out of actuality as long as it lasts."

+ Marcus Aurelius grasped the principle. "Dost thou grieve that thou dost weigh but so many pounds, and not three hundred rather? Just as much reason hast thou to grieve that thou must live but so many years, and not longer. For as for bulk and substance thou dost content thyself with that proportion of it that is allotted unto thee, so shouldst thou for time." <u>Meditations</u>, VI. 44. (just as it takes more than a mile, or a million miles) for the Sun to be itself. The minimum structure-time of the Sun (I refer, of course, to that developed star which is the solar system) is the period required by the outermost planet -- Pluto -- to complete its orbit, namely some 250 terrestrial years. The Galaxy's structure-time must be similarly reckoned, probably in hundreds of millions of years, as the period of revolution of its outermost stars. On the same principle, the Earth's structure-time (if we include the moon as part of Earth) is about twenty-seven days --- the period of the moon's rotation about us. Given more time, Earth evidently describes a large arc and then a ring about the sun, and so arrives at something like solar status. In precisely the same way, the Sun, when given the opportunity, outgrows itself and expands to galactic dimensions. For there is in the hierarchy a kind of natural vigour or expansive tendency whereby the individuals of one level are always sending up temporal shoots into the next; and it is only by continual and drastic pruning of time that the necessary distinctions are preserved. Every unit has, at the end of its proper period of growth +, to be cut back and made to sprout all over again, and the humbler the unit the more frequently this growth-cycle has to be repeated. Thus what an object is like depends very much upon what stage of its development is in question: it is little use asking how big it is, or what its shape is, till you make clear how much time you are prepared to allow it.

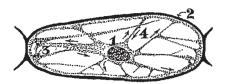
These remarks apply, in principle at any rate, not only to the rotatory units of the superior hierarchical series, but also to their 'rotatory' counterparts of the inferior series. The structure-time of Bohr's atom °, for instance, is the time (reckoned in millionths of millionths of a second) which its outermost electrons take to sweep out their orbits. But the vital and human orders, around the middle levels of the hierarchy, present a problem which, though more accessible, is certainly more complex. Here the difficulties arise not so much from any lack of rhythm as from its abundance. For one thing, rhythm is cumulative: the more recent orders throb to the pulse of the earlier orders, as when Life and Humanity are deeply involved in the eleven-year sun-spot cycle and in the procession of the seasons, or in the lunar month and the rhythm of night and day. Upon such basic pulsations the vital units superimpose their own more elaborate temporal patterns. It is true that these later patterns rarely turn out to be circular, or even symmetrical, but they are circulatory none the less, so that in practice the unit's life and its circulation come to be almost synonymous: movement signifies life and life signifies movement. Here, even more plainly than at the astronomical levels, the unceasing transport of its material is the making of each hierarchical unit: bring this traffic to a dead stop, and the unit has already begun to disintegrate. Let me give some brief illustrations, from (i) the cell, (ii) man, (iii) Humanity, and (iv) Life.

(i) To look upon the cell as a compact and static 'brick', billions of which go to build our bodies, is to solidify what is essentially a fluid system. There is, of course, the relatively permanent structural basis of the nucleus and the cell-wall, and linking these the radial skeins of protein molecules which constitute what amounts to a cellular skeleton; but within this framework, which is itself always slowly changing, the



+ In one instance the growth-period is particularly obvious, and finds appropriate expression in our language --- the moon is new-born every lunar month, and passes through its life-cycle of phases: the moon I see now is not the same moon as the one I saw last month.

° While it is true that Bohr's model of the atom has now been largely superseded, later models certainly do not abolish the atom's periodicity, or even its 'solar' character. Indeed I suggest that, in certain respects, they only add to the links which bind the inferior and superior members of the solar Pair. Thus Schrödinger's wavemodel of the atom may be said to correspond to the annular model of the solar system (in which, given the time, the small globular planet expands into the large orbital Sun-ring) that I am proposing here. We only need to subdivide time somewhat less finely than usual for the Earth to pass from what may be called the Bohr phase to the Schrödinger phase. "For anything that moves round about in a circle, in less time than our ideas are wont to succeed one another in our minds, is not perceived to move; but seems to be a perfect entire circle of that matter or colour, and not a part of a circle in motion." So writes Locke in his Human Understanding (II. xiv. 8): but I should add that what seems to be a "perfect entire circle" really is such. The Earth really is 186,000,000 miles in diameter --- but not qua Earth.



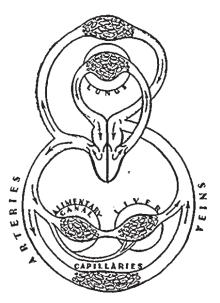
<u>A Plant-cell</u> (from the hair of a stamen), showing (1) nucleus, (2) cell-wall, (3) protein threads, and (4) the flowing contents.

cell's fluid contents (consisting mainly of a colloidal foam in which very large molecules and particles are suspended) are in constant circulation. They stream, in an endless procession that is more involved and erratic than the procession of the stars in the Galaxy and the planets in the Sun, but no less imperative. The appearance of stability, and indeed as much real stability as is needed for vital organization, is secured, not by anything changeless, but by the juxtaposition of different rates of change: the utility of the wheels within wheels is that they revolve at various speeds. It is in this way that mobility best serves vital needs; for the surface areas of the changing parts are virtually multiplied many times, the maximum of novel contacts are brought about, and (in general) the greatest opportunity is given for those interchanges which are of the very essence of life. When things move en masse at the same pace they might as well not be moving at all: nothing interesting happens, and there is no temporal organization. Hence the hierarchical rule that the units of one grade (whether physical particles, or living organisms, or celestial bodies) can only comprise a higher formation by marching out of step.

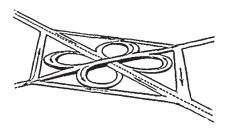
(ii) The human body exemplifies the same principles still more elaborately. It is a transport system whose apparent solidity is due, not to any deficiency of contained motion, but rather to an excess of it. The energy that is everywhere being liberated as a result of chemical changes can only be maintained by a constant supply of fresh food and oxygen, and the speedy removal of the waste products. Circulation, then, is allimportant. Each of my myriads of active cells must, relative to its foodsupplying and waste-removing environment, be kept on the move; and the more active it is the faster this motion needs to be. No doubt it is for most purposes more convenient to describe my blood (or the air I breathe, or the food I am digesting) as flowing past the cells that line its route: but this description is, after all, a one-sided and therefore misleading interpretation. It must be offset by that equally true picture of the body's cells as rotating, at speeds varying from hundreds of metres an hour to an imperceptible crawl, about a fixed environment. In any case, whether the means of transport are a pump which shifts the food or a vehicle which shifts the feeder, an internal heart or external limbs, the essential result is the same --- the circulation without which there is no life.

(iii) The procedure becomes clearest of all at the social level. Here transport is plainly a matter of life and death: each part of the multi-farious traffic must be kept moving at the speed which is proper to it, otherwise all manner of disorders will afflict society. The circulation of men and foodstuff, of raw materials and finished goods, necessarily occurs against a relatively constant background -- towns and cities, arterial roads, the 'permanent way' with its 'stations', and so on -- but once more the background is itself in a state of flux, and slowly circulating. No part of the reticulated shape of Humanity can survive unless it is constantly marked out afresh, and patrolled, and maintained by man. The life ceases, even the characteristic form vanishes, once the human tide ceases to flow. What is the 'Creeper' of Chapter VII but the infinitely divaricated <u>path</u> of man, the orbit he marks out, the track of his planetary wanderings about Humanity? And what is the task of the town-planner

Again and again, Sir Charles Sherrington emphasizes the dynamism of the cell. "Essential for any conception of the cell is that it is no static system. It is a material system and that today is to say an energy system. Our conceptions of it fail if not dynamic. It is a scene of energy-cycles, suites of oxidation and reduction, concatenated ferment-actions.... A world of surfaces and streams.... We are wont to figure the cell predominantly as structure. But our conception of it will be then even more inadequate than it need be, if we forget for a moment that it is a moving structure, a dynamic equilibrium.... It is an eddy." Man on His Nature, III.



Schematic diagram of the circulation of the blood in man. Arterial blood may flow as fast as half a metre a second; venous blood is much slower; in the capillaries it flows at something like half a millimetre a second. In fact, the rate of circulation in my human body is even more varied than the rate of circulation in my solar body. As T. S. Eliot says in 'Burnt Norton' "The dance along the artery The circulation of the lymph Are figured in the drift of stars"



<u>A Clover-leaf Road Crossing</u>: one of the results of the modern study of traffic circulation. As intention supervenes, so irregular and irrational patterns give place to geometrical and rational; and human meanderings come here and there to reflect the symmetrical paths of the higher bodies.

Many poets have divined a connection

but to bring to full consciousness the circulation of man in Humanity, just as the task of the astronomer is to bring to full consciousness the circulation of the Earth in the Sun, and of the Sun in the Galaxy? The Astronomer Royal and Sir Patrick Abercrombie are at the same work, except that one 'plans' the heavenly city and the other the earthly.

(iv) It is the business of man continually to become aware of, and work over, and regulate -- in a word, to shape -- Humanity. And it is the business of Humanity, in turn, to shape Life. The 'curse' laid upon man who is Adam's seed is that he shall incessantly labour upon Life, that he shall with ever-renewed patience tame the Life that runs wild the moment his attention is diverted. Without Humanity, the biosphere is not itself, is formless and disorderly and irrational; without constant artificialization, the biosphere falls progressively short of its true nature. By means of all the labours of cultivation and stock-raising and fishing; by means of field studies, the observation and classification of species, their extermination and control and breeding, and biological research of a hundred kinds; the business of our species is continually to work over Life, to mark out by our constant activity the proper bounds of every creature, to turn the wilderness into a garden, to map Life and then to alter the map, to give form and organization to the whole. All this means the rhythmic circulation of Humanity throughout Life, and the co-ordination of Life's innumerable cyclic processes into a planned economy of motion. °

In Chapter IX I showed that the Earth, so compact and lumpish at first sight, is in reality a very complex kind of whirlpool, a living system of geospheres united by many rotatory processes. Besides the diurnal circulation of the waking or more active half of the biosphere, and along with it the sleeping or less active half, there is the great cycle of water -water-vapour, clouds, rain, soil, streams, rivers, sea -- and its counterpart the great cycle of rock -- denudation, deposition, and upheaval. Again there are the world-wide systems of prevailing winds and ocean currents, with all their subordinate rotatory systems. Such geospheric circulation is as vital to Earth as the circulation of the blood is to man. Not only do the geospheres build the living planet by their mutually involved motions, but -- as meteorology, and dynamical geology, and climatology, witness -- they have a very fair idea of what they are doing. Earth's life arises from the conscious circulation of her parts.

Now it is very evident that (as indeed we have every reason to expect) these circulatory processes differ from level to level. Each hierarchical grade of unit is marked out, by the more or less orbital motions of its subordinates, in a manner that is peculiar to that grade; and any attempt to deny their differences would be as obscurantist as to deny their likenesses. What we need to look for is the vertical law that formulates, in general terms, the manifold procedure whereby a lower hierarchical level builds a higher. * Provisionally, the following generalizations may be made. (a) Units of one level give rise to a unit of the next level by their ever-changing 'social' relationships, which are manifest as the motion of the units at different rates about one or more centres. (b) The more recent the units (i.e., the nearer they approach to the middle grades of the hierarchy) the more involved and multiform and asymmetrical their

between the dancing of human beings, and the dancing of the stars --- as if to make up for the fact that civilized dancers are no longer aware of the cosmic significance of their behaviour. In his poem 'The City', A.E. writes. "Yon girl whirls like an eastern dervish. Her dance is No less a god-intoxicated dance than his, Though all unknowing the arcane fire that lights her feet, What motions of what starry tribes her limbs repeat." And again in 'Frolic': "The children were shouting together And racing along the sands, A glimmer of dancing shadows, A dovelike flutter of hands. The stars were shouting in heaven, The sun was chasing the moon: The game was the same as the children's, They danced to the self-same tune." A.E., Collected Poems, pp.21,31. At no level are we permitted to let well alone, to rest on our oars. Unexercised bodies and unused aptitudes perish; the home that is not constantly worked over, with duster and scrub and paintbrush, ceases to be a home; neglected land is soon a wilderness. So also scientific hypotheses, philosophical techniques, cosmologies, religious and aesthetic preoccupations -all need constant overhaul if they are not to 'die on us'. Like the Forth Bridge, our universe must have its maintenance gangs. ° The cyclic processes of Life and Humanity are practically inexhaustible. Fashions, dominant philosophical theories, types of political regime, religious dogmas and preoccupations, epidemics, styles of art, civilizations, periods of evolutionary advance and stagnation --- all have their periodicity. Again, the human organism is a temporal system of extreme complexity, whose rhythms vary from the pulsing of the neurones to the life-cycle of the whole man. Heraclitus, somewhat arbitrarily, makes this a 30-year cycle --- the shortest time in which a man can become a grandfather (see Burnet, Early Greek Philosophy, pp. 139, 155). Cf. Aristotle's opinion that the 'structure-time' of a happy man is not a day or many days, but a lifetime (Nic. Eth. 1098). Lecomte du Noüy's Biological Time is a pioneer attempt to put the differing tempos and rhythms of different species on to an experimental basis. See also The Rhythms of Life by D. F. Fraser-Harris.

On organized bodies as "contained motion", see Herbert Spencer, <u>First Principles</u>, 103.

* On the other hand, I think such attempts to connect biological and cosmological rhythms as G. H. Schubert's (in <u>Die</u> <u>Geschicte der Seele</u>, he showed that the number of breaths we draw in a day is movements tend to be; moreover these movements do not supersede, but are added to, the movements of the earlier grades. (c) The more exalted the unit's status the longer its period of circulation tends to be: accordingly, structure-time, like structure-space, is more or less proportional to hierarchical status. (d) The circulatory rhythms of every level are accessible to man, and ideally the thorough organization of his life in time is nothing else than the organization of all these rhythms into a single comprehensive system. (e) In fact, man can only discover the rhythms of the non-human by actually participating in them; and his knowledge of 'mechanical' processes is itself the demonstration that they are, after all, done on purpose.

(A proviso ought to be made here. while the lower units are generally more ephemeral than the middle units (in the sense that they have to begin all over again more frequently), they are in another sense more permanent. Thus the history of an atom in my body -- if the self-same atom is supposed to survive each complete revolution of its electrons -- may approach in duration the history of the Sun itself. Similarly, the time-span of some of my simpler molecules may approach that of the planet. Again, all the cells of my body, as physically continuous with my human and infrahuman ancestors, are as old as Life. In short, though the inferior member of a Pair has its own very brief structure-time, it may take on also the very much greater structure-time of the superior member.)

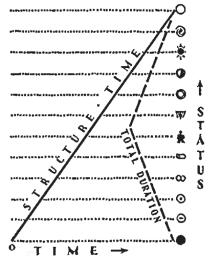
3. TIME TURNS OUT SPACE

The development of the hierarchy may be described as a curious kind of mapmaking, in which the map of one level is the cartographer of the next and the only landmarks are his own tracks. Such permanence as there is turns out to be the permanence of change, of rhythmic change or reiteration. But what else could we expect or even imagine? The unit has two opposed aspects -- change and permanence -- which are provided by a third, namely repetition. ° Lacking all motion or change, the unit does not act, and not to act is not to exist; lacking any element of permanence, the unit is just as badly off, and a world in which there was only novelty would amount to nothing. At least it is impossible for us to conceive any other way of building a universe than this way of repetition, which reconciles abounding activity with order, and preserves all the essential distinctions without bringing everything to a standstill. Routine, habit, the survival of old custom --- these are the essential background, not only of all innovation, but of all things whatsoever. It is not enough that the unit of one level, given the time of the next higher level, shall map out the space of that higher level: at every level the work of circulation must be persisted in, otherwise the gigantic structure melts away. For all its seeming solidity is a kind of very complicated habit: if you look for the victim of the habit, the one who runs in the groove, you will find a vacuum.

There is nothing very new in all this. Aristotle taught that 'matter'

approximately the same as the period, in years, of the precession of the equinoxes) are useless; given patience and ingenuity, any number of them may be found.

Let me take for example a random selection from the immense totality of my liferhythms. At one and the same moment, the cilia of the cells that line my bronchial tubes are beating at 600 to the minute; my heart is beating at 70 to the minute; I am breathing at 17 to the minute; as a family we are eating a meal at 3 to the day, and a dinner at one to the day, in the company of certain friends who come in once a week; also we happen to be celebrating the anniversary of a great national event. Notice how tempo declines as status improves, and how my present moment belongs equally to rhythmic systems of all grades.



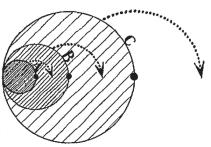
A rough indication of the relationship of structure-time to total duration. In one sense I enjoy moderate longevity, as hierarchical individuals go; but in another sense I am more ephemeral in my human capacity than in any other.

° I do not mean to suggest that the habits of any two hierarchical individuals are ever exactly the same, or that the individual ever repeats exactly a previous performance. The panpsychist hypothesis on which this book is based entails the hypothesis that even the humblest individual has a certain originality or uniqueness, and that the 'mechanical uniformity' which emerges when great numbers are considered is 'statistical'. "Spontaneity, originality of decision, belong to the essence of each actual occasion", says Whitehead. "When spontaneity is at its lowest, in practice negligible, the final trace of its operation is found in alternations backwards and forwards between alternative modes. This is the reason for the predominant importance of wave-transmission in physical nature." Adventures of Ideas, XVII. 6. Cf. James Ward, Hibbert Journal, 1905, p. 92; Realm of Ends, p. 74; and C. A. Richardson, Spiritual Pluralism, pp. 76 ff.

(<u>hyle</u>) and 'form' (<u>eidos</u>) are correlative: an individual of a given level is matter organized in accordance with the formative principle of that level, but for the next level it is mere matter which requires to be organized according to the higher formative principle. The finished product of one stage is the raw material of the next, and in this sense form is convertible into matter. For the purposes of this chapter, space is the matter and time is the form which it incorporates and spatializes. Thus J. W. Dunne notes that whatever is used to represent temporal order at one stage represents spatial order at the next more comprehensive stage. ° Every hierarchical advance means saying with Falstaff, "Let time shape". + For every such advance is advance in consciousness, and, as Mr T. S. Eliot tells us, "to be conscious is not to be in time". ×

The ascent of the hierarchy is the progressive discovery "that Time is really laid out in Space, and is intrinsically spatial". * Equally it is the discovery that space is laid out in time, and is intrinsically temporal. Through and through my space is mixed with time, or rather made of time. By the addition of time I am built up from level to level, and by the subtraction of it I am demolished. I am inflated with time as a tyre is pumped up with air. Apart from time there is nothing in me at all. Let out my time by slow degrees and you will find me dwindling in space from a celestial body to a tiny animal, to a physicist's particle, to a point. All my structure is behaviour. Accordingly an instantaneous photograph of me would show nothing --- a true likeness, but only one of many: the more interesting and comprehensive portraits need proportionately longer exposures. It is impossible to take snapshots of my completer aspects, for they cannot be recorded in the time. Yet they leave traces --- powerful 'forces' whose intensity grows as I am reduced towards vanishing point. The not unfamiliar rule is that the less I am the more I find it necessary to assert myself in the effort to make up the deficiency: what I lack in myself I try to gain by external activity, and the greater the lack the greater the frenzy. This tendency to compensate for inferiority, evident enough in human psychology, † is in fact only a particular case of a far more general procedure which applies throughout the hierarchy. My vast and solid Sun-ring, deprived of its structure-time of some two or three hundred million years, melts away, leaving only a tiny star-fragment whose 'forces' of momentum and gravitation are all the evidence that remains of its lost integrity. My star-fragment body, deprived of its structure-time of one year, contracts to a twenty-thousandth of its diameter, and makes up for the loss by patrolling the space that it can no longer incorporate. Briefly viewed, my solid and sedentary human body reveals itself as a circus of primeval monsters in full swing; and if I subtract still more time from myself I come upon still more rudimentary performers, activated by still more violent energies. Thus we can deny the wholeness of things but we cannot get rid of its consequences. It is one thing to atomize the world, and quite another to pacify the products of our analysis. In Adlerian language, our dismembered universe over-compensates for its organ inferiority.

Abstract or conventional space is an empty and uniform receptacle, indifferent to the events which it accommodates. Concrete or actual space, on the other hand, is the track of a movement. $^{\circ}$ (To be more



Unit A, given the structure-time of B, fills out the space of B; and unit B, given the structure-time of C, fills out the space of C. In Aristotelian language, B provides the matter of C, and has A for its own matter. (Of course I am not concerned here with Aristotle's very complex doctrine of matter and form, as such, but only with the ground it has in common with the present topic of spatialization.)

+ II <u>Henry</u> IV, III. 2.

* Samuel Alexander, Space, Time and Deity, i. p. 143. This does not mean that it is unnecessary to distinguish between time and space: Alexander is, on the contrary, at pains to show that a merely spatial time (so to speak) would be no use to space. For me, the disparity between time and space, though of the utmost importance, exists in order that it may be overcome as the hierarchy is ascended. On the importance of not confusing time and space, see the article Time, by C. D. Broad, in Hastings' Encyclopaedia of Religion and Ethics. † Adler's Individual Psychology emphasizes the sense of helplessness and organ inferiority with which we all begin life, and which may in individual cases be exacerbated by many kinds of circumstance. Successful compensation for organ inferiority may take such forms as Demosthenes' response to his stammer, Beethoven's response to his slight deafness as a child, or (more dubiously) Napoleon's response to his small stature. Overcompensation is seen in the blustering self-importance of some undersized men, and the flamboyant dress of some plain women. See Adler's Understanding Human Nature, and The Practice and Theory of Individual Psychology. My thesis is that compensation for 'organ inferiority' is a large part of organization at all levels, under guises appropriate to them --- atoms do not suffer from an inferiority complex!

The infrahuman without the suprahuman is a nest of Pandora's boxes. We may slaughter and carve up the universe, and boil it all down to quanta of energy, but we can hardly complain if we find ourselves in the soup, and the soup takes the lid off. ° Cf. Whitehead: "Extension is derivative from process, and is required by it." <u>Principles of Natural Knowledge</u>, p. 202.

[°] See, e.g., <u>The Serial Universe</u>, VIII, IX.

^{× &#}x27;Burnt Norton'.

precise, the space is prior to the movement if we read the hierarchy from above downwards, and the product of the movement if we read from below upwards; but in neither case is space anything apart from its experienced content.) It is as if space that is not constantly being used, or pulled out like a piece of elastic, is always threatening to dwindle: the extension is no bigger than the process. Consider, for instance, the active side of vision. The exercise of the neck muscles in turning the head, of the eye muscles in turning the eyes and in convergence, of the ciliary muscle in the accommodation of the lens --- these are only a few of the movements which, co-ordinated, are the sine qua non of my seeing. × It is hardly an exaggeration to say that I have no visual space that I do not actively manufacture: and I have no reason to suppose that other creatures are not in much the same condition. Rhythmical motion is everywhere needed to maintain extension. It was no doubt a very vivid and practical apprehension of this contractile character of space which gave rise to such customs as beating the bounds of the parish; + and perhaps a vaguer apprehension of the same character underlay the custom of making the sacred circuit to the right in order to stimulate the Great Bear to revolve properly. * What is certain is that my boundaries are at no level held without the pain of effort, and the effort is mine to make mine. Only by motion can the clearing of space be made in the jungle of time, and only by motion can the jungle be prevented from creeping inwards.

4. THE ZONES OF TIME, MOTION, AND SPACE

"How", Yeats asks, "can we know the dancer from the dance?" And Mr T. S. Eliot provides the answer: "there is only the dance". † There is another reply, not so ultimate but perhaps more useful on that account: the dancer is the space of the lower levels, the dance is the motion of this level, and the dance-floor is the time of the higher levels. That is to say, the hierarchical status which my observer attributes to me depends upon what motion he finds me (i) to contain (as spatial), (ii) to exhibit (as spatio-temporal), and (iii) to exclude (as temporal). If he sees me as a man, he distinguishes three zones: (i) the inner or spatial zone of my infrahuman levels, the realm of natura naturata whose motion has solidified; (ii) the middle or spatio-temporal zone of my human level, the realm of <u>natura naturans</u> whose motion is seen as motion now (in which spatial and temporal aspects are indissolubly united); (iii) the outer or temporal zone of my suprahuman levels, the realm of the nature that (from this common-sense point of view) is still to make, and whose motion is not a present reality.

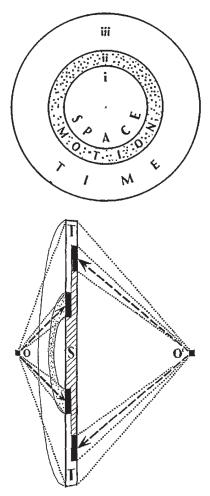
Notice that the relative extent of each of the three zones (S, M, and T) varies with my observer's spatio-temporal range, and is not a fixed property of mine. Hierarchical grades falling in the T zone fall in the M zone and then in the S zone as my observer recedes. Professor Ritchie well says that the "abstraction of structure and function is at bottom merely a question of what changes slower or faster". ° What to one observer is an organ is to another present activity, and to a third a remote historical

× But of course it is possible to hold that space, while actively apprehended, is in fact objectively real and independent of such apprehension. Some psychologists have postulated an original chaotic vastness, or featureless receptacle, in which experience carves out its own workingspace: or such spaces are discriminated within the primitive total extensity rather than built into it. See, e.g., William James, <u>Textbook of Psychology</u>, pp. 337 ff. For me, the rule of parsimony forbids the hypothesis of any space that is not an ingredient or aspect of some actual process, and all actual process is resoluble into experience.

+ Different varieties of this ancient custom are found in many nations. The common English ceremony is for a procession to perambulate the parish boundaries, which are beaten by boys with peeled willowwands. Formerly the boys were themselves beaten, so that they should not easily forget the landmarks, and were paid for their pains.

* D. A. Mackenzie, <u>The Migration of Symbols</u>, p. 123. Men of all lands and ages have attached great importance to dancing in a circle or walking in a circle: all manner of benefits are supposed to follow.

† Burnt Norton.'



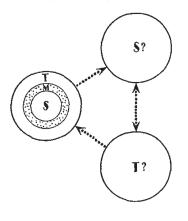
° The Natural History of Mind, p. 183.

× Thus J. W. N. Sullivan: "We have said

tendency. (This hand I am writing with is not radically different from what it does, and even a mountain range is a species of wave-motion or Earth-tic. Increase the speed of a jet of water sufficiently, and you can hammer it as if it were a steel bar; turn a fly-wheel fast enough and, if the wheel is true, you cannot tell which way it is turning, or whether it is turning at all.) As my observer retires from me, ceasing to share first this motion of mine and then that, he finds me solidifying and growing. This is no illusion. As modern physics recognizes, the changes in the dimensions of an object, apparent to an observer who is taking less and less part in the object's motion, must be reckoned as definite physical changes in the object vis-à-vis that observer. × Of course it is true that physics, of necessity concerned only with the quantitative aspects and the mathematical interpretation of such fluctuations in the object, abstracts from their fulness, treating what is really a manylevelled hierarchical development as if it were nothing but a series of one-levelled spatio-temporal expansions and contractions. The exact results of this very proper method of abstraction are among the finest intellectual achievements of our time, and are by no means lacking in aesthetic appeal; moreover they could be obtained in no other way than by ignoring all but the foundations of the hierarchical pyramid. It is essential to remember, however, that the price of exactness is extremely high. Only those grades of object which are almost featureless can be treated adequately on a merely quantitative basis. This inquiry, extending the physicist's principle of relativity to cover not one but some ten distinguishable physical levels (each with its unique variations upon the all-level laws, and its unique spatio-temporal mesh within the general framework) inevitably sacrifices precision in the interests of concrete realism; for it is impossible to study a hierarchical level from afar and in sublime detachment --- one must in all humility submit to its limitations, becoming one of its naturalized subjects.

It may be said that the inferior levels are the special province of science; the superior levels, of philosophy; and the ultimate levels, of religion: though there are senses in which science and philosophy and religion alike cover the whole hierarchy. But certainly it is a fact that, just as the higher levels lie outside the scope of our scientific method, so the ultimate levels present grave difficulties to the discursive reason which is philosophy's instrument: they are full of paradoxes and contradictions which only the religious consciousness is able somehow to reconcile completely. These paradoxes become very evident when space and time are the topic of discussion. For instance, the Whole is complete only when the middle zone of motion had devoured the last remnant of the outer zone of time, adding its content to the spatial core. That is to say, the Whole is motionless as including all motion, and timeless as including all time --- but, as an earlier chapter made clear, the Whole is also spaceless as including all space. Space, in overcoming and absorbing time, has done its work too well, for without time it is no longer spatial. "Space is in its very nature temporal and Time spatial". ° The descending process of temporalization comes to much the same kind of anticlimax as the ascending process of spatialization. For the approaching observer, dispatching more and more of the world's present space into time past and time future, at last arrives at the Centre where there is only time ---

that the alterations in space and time measurements brought about by motion are physical facts. This is true; to an observer not taking part in the motion these alterations have certainly occurred. But it is a physical fact in the same sense that a building has different appearances from different points of view. No experiments conducted in the moving system would discover the slightest change in the measuring standards. We have to admit, in fact, that length and time-lapse are relative notions, conditioned by the observer's motion, just as the shape of a penny is a relative thing, conditioned by the observer's position in respect to it. If we accept this we must entirely give up the old notions of an absolute space and an absolute time. By 'absolute' we mean the same for all observers." The Bases of Modern Science, IX. Here we have spatio-temporal regionalism --- without the hierarchical regions. My proposal is that the physicist's system be taken as the basis upon which are superimposed the hierarchical regions, the whole forming a comprehensive system whose contents are predominantly quantitative or qualitative according to their region.



° Alexander, Space, Time and Deity, i. p. 44. My three zones of space, motion, and time, correspond approximately to the physicist's triad of matter, energy, and field. Matter turns out to be only 'bottled radiation' or energy tied up; and the field becomes the locus of worldwide energies. All three are energy- zones, but the first is predominantly spatial, the second spatio-temporal, and the third predominantly temporal --- distances become light-years, for example. Cf. A. Korzybski, The Manhood of Humanity. This writer points out that plants, by means of photosynthesis, "bind energy"; animals, by means of locomotion, "bind space"; and man, by means of intelligence, "binds time" as well as space and energy. These distinctions seem rather arbitrary, however: I should trace all three kinds of "binding" to the lowest evolutionary level.

and time without any spatial content is just as meaningless as space in which nothing ever happens. The final triumph of time, like that of space, is suicidal. Time and space, though always devouring each other, cannot live apart, and when at the ultimate levels they are finally separated, both expire. As for the ascending or anabolic motion which unceasingly builds the hierarchical edifice, and the descending or katabolic motion which unceasingly demolishes it, these alike culminate in perfect stillness. At the cyclone's centre and periphery, calm.

Between these ultimate regions or levels, the hierarchy may be described as a vast system of graded motion, or even as a single immensely involved movement. But as a rule the activity of only one level is clearly presented to us. Here the world is evidently spatio-temporal and fluid, whereas above it evaporates into the temporal, and below solidifies into the spatial and inert. In our day-to-day picture of the universe, our hierarchical inferiors are mere still-life --- nature morte --- in the foreground, and our superiors mere atmosphere, shapeless and volatile, in the far background; only in the middle distance are found the brilliant colouring and chiaroscuro, and above all the abounding vitality, of our equals. The suprahuman appears unreal because its space is concealed by its time, and the infrahuman appears unreal because its time is concealed by its space. Both are shadowy and theoretical --- the first because time is taken to be real by itself, the second because space is taken to be real by itself; whereas space and time are abstractions from motion, from the spatio-temporal activity of things. Thus to rise in the hierarchy we must call time's bluff, and to sink we must see through the fraud of space, literally exposing the hollowness of extension. Religion shows that either the suprahuman is real or abstract time is real for us;× science shows that either the infrahuman is real or abstract space is real for us. That is to say, whether we choose to explore the upper or the lower levels, we can only do so by reintegrating space and time wherever we go.

This doctrine is less esoteric than would appear at first sight, for already in everyday life the bifurcation of spatio-temporal motion into time at the higher levels, and space at the lower levels, is clearly to be seen. The rule is that the activity or motion that is somewhat beyond our scope tends to lose its spatial component and to be reckoned as mere time, and the activity or motion that is of inferior scope tends to lose its temporal component and to be reckoned as mere space. For instance, where distances are great and means of travel are slow, the interval between two places becomes a temporal one: distance becomes travelling-time. In many parts of the world still, as in biblical times, one city is so many days' journey from another. † When I speak of Rigel's distance the units are light-years; when I speak of Edinburgh's distance the units are sometimes hours and sometimes miles; the local post office is so many hundred <u>yards</u> down the road, and only occasionally five <u>minutes</u> away; as for the back door and the front, they are never anything else than so many feet apart. And of course I do not dream of saying that my dog or my hand is almost contemporary with me: at such close quarters I take things to be simultaneous. In fact, the organism or the self may be defined as that part of the world which has been rendered contemporary with itself, and the environment or not-self as the remainder which still

The primacy of motion is one of Bergson's basic doctrines. He writes, "Space is not a ground on which real motion is posited; rather it is real motion that deposits space beneath itself." (Matter and Memory, p. 289) "The essential principle of the philosophy of change is that movement is original", says H. Wildon Carr, in his book on Bergson. "Things are derived from movement, and movement is not a quality or character that things have added to themselves." (The Philosophy of Change, p. 11) In La Perception de Changement, Bergson argues that change does not require the support of something that changes, and that movement does not share its primacy with an object that is moved.

× Goodness involves the denial, and evil the assertion, of the reality of time. In his Essays on Literature and Society, Mr Edwin Muir says of Regan and Goneril: "Having no memory, they have no responsibility, and no need, therefore, to treat their father differently from any other troublesome old man. This may simply be another way of saying that they are evil, for it may be that evil consists in a hiatus in the soul, a craving blank, a lack of one of the essential threads which bind experience into a coherent whole and give it a consistent meaning. The hiatus in Lear's daughters is specifically a hiatus of memory, a breach in continuity; they seem to come from nowhere and be on the way to nowhere; they have words and acts only to meet the momentary emergency, the momentary appetite."

† Cf. the article 'Language and Philosophy', by A. H. Basson and D. J. O'Connor, in <u>Philosophy</u>, April, 1947: "In primitive languages generally, little if any distinction is made between spatial and temporal remoteness. This is obviously an important matter, and could easily have a bearing on many philosophical problems connected with Time." (p. 60) bears different dates. "And if anyone," says Herbert Spencer, \circ "wishing yet further illustration of this process of mental substitution, will observe to what an extent he has acquired the habit of thinking of the spaces on the clock-face instead of the periods they stand for --- how, on suddenly discovering it to be half an hour later than he supposed, he does not distinctly realize the half-hour in its duration, but scarcely passes beyond the sign of it as marked by the finger; he will be enabled still more clearly to conceive that the use of coexistences to symbolize sequences, which in these complex cases has become so habitual, has in the simplest cases become organic." Evolutionary advance means the transformation of environment into organism, and so of time into space; * and that is why men begin by expressing "space in terms of time, and afterwards, as a result of progress, come to express time in terms of space." ×

This development has both a psychical and a physical aspect. As to the former, man has made notable progress in his ability to extend the space he sees by the space he remembers and anticipates: he has learned how the temporal intervals between his experiences may be usefully discounted in favour of their spatial intervals and connections; he has learned to take seriously the dictum that time must not be taken seriously.† His invention of more and more accurate means of measuring time is itself largely progress in spatialization. On the physical side, exploration and travel, the accumulation of written records and primitive maps, the conquest and <u>consolidation</u> of world-empires, the building of roads, the invention of swifter means of transport --- such historical development is really extension of the human organism in space at the expense of the temporal environment. And now, in the fullness of time, we have what is perhaps the most remarkable of all spatializing devices --- radar. The period that elapses between the transmission of a 'pulse' and the reception of its echo is translated into a measurement of the echoproducing object's distance from the radar set.

But I need not go further than this room to discover how the time of the nearer regions is disposed of. I cannot take in all of this pen, or the palm and the back of my hand, at once; + the front of my head is later, or earlier, than the side; the ceiling and the floor are incompatibles, noncontemporaries, incapable of coexisting --- I can have which I please, but not both at once. In short, the world I live in is altogether timeridden, not a place but a history.

And yet it is nothing of the kind. Instead of temporal chaos I find spatial order; instead of history, extensity. So thorough and so well repressed is this technique of spatialization, that it comes to me with something of a shock that I am almost blind except for one small spot, that my great window upon the world is nothing but a succession of tiny peepholes. Seldom or never do I notice that a <u>page</u> of print is always illegible, that no large wall is ever built of bricks throughout, that no man with well-formed features has an adequate pair of legs, that no tree has more than a few dozen leaves. For the ascending hierarchical process of spatialization finds in me a ready vehicle: I spend all my time making war on time. Even when, leaving the human region A for the infrahuman region B of my object X-Y, I examine it through a microscope and so temporalize most of its space, I never quite abandon the human region

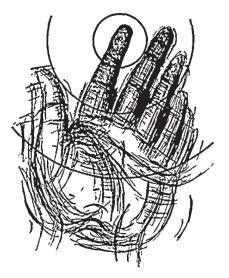
° <u>Principles of Psychology</u>, 66. Cf. Nicholas of Cusa, "The concept of a clock enfolds all succession in time. In the concept the sixth hour is not earlier than the seventh or eighth, although the clock never strikes the hour, save when the concept biddeth."

* Amongst the "XXth century texts" recorded by Professor Denis Saurat, occurs the following: "Space is much more important than time. You at the present day are so obsessed by time that you cannot understand that; time is only a preparation to a knowledge of space.... Our space is above time; and God is above space. That is why you were taught to say: Our Father Which art in Heaven. The things that you do not understand happen in another space, but you like to put them in another time. That is just egotism." <u>Gods of the People</u>, p. 41.

× Spencer, <u>loc. cit</u>.

† Cf. P. D. Ouspensky, Tertium Organum, p. 106: "The angle of a house past which a horse runs every day is a phenomenon proceeding in time, and not a spatial and constant property of the house." But man "captures from time one more dimension": all manner of motions which must for the animal be objective become for man simply the consequence of his own behaviour, and in that sense subjective and 'unreal'. I question the truth of much of Ouspensky's argument (particularly when he discusses animal psychology), but I very much agree with his main thesis that all advance is made at the expense of time. Subjective succession becomes objective extension; in Aristotle's terms, motion is a process whereby the latent forms of matter are actualized. Movement is the act of that which is in potentiality. (Physics, III. i)

+ Cf. H. H. Price, Perception, p. 270.



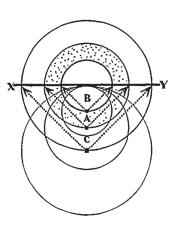
A where so much more of the object exists at once; and I may also be not entirely forgetful of the supra-human region C, where the object has been won over to a still greater extent from time --- <u>tempus edax rerum</u> is not the last word.

To the student of the hierarchy, then, our ability to build space is only that portion of the universal and all-level spatializing process which is transacted in us. But to the psychologist it remains, as Professor Robert S. Woodworth says, "simply astounding.... Move about a little while watching the scene; you see constant motion in the visual field -- in the picture, we may call it -- yet the objects do not seem to move. Look at a near-by object like a table or chair from different positions, and the picture is very different; yet the object looks the same. The stimuli change but the appearance remains the same. Things appear to the observer as they are objectively, not as they are pictured on the retina." $^{\circ}$ In other words, the observer makes practical proof of Alexander's proposition that "Time is really laid out in Space, and is intrinsically spatial." ×

5. SPATIALIZATION AND QUALITY

The picture I have drawn so far is a bare outline, leaving out all colours and tones, all quality and value. It must not be forgotten that (to use the well-worn but extremely apt metaphor) the shuttles of motion do not weave a patternless spatial fabric out of the thread of time. * The more material they turn out the more interesting the design. A single thread is too tenuous to have any colour: weave the threads and the colour begins to show; go on weaving and a pattern begins to shape. The future is the warehouse of the raw materials; the present is where they are brought together and take on definite and novel forms; the past is the warehouse of the finished goods. Essentially the present manufacturing process is one of reconciling incompatible elements, of rendering the discrete concrete, with the arrival of new and unheralded characters. In this work, the contradictions that inhere in time are resolved by motion, and spatially composed. +

The pattern so produced has all degrees of fineness and coarseness, most of which are beyond the normal scope of our inspection. Thus we overlook the fact that the seasons of the year, the many anniversaries of public and private life, the Christian calendar, and all manner of rhythmic events, owe the richness of their content and their appeal to repetition, and this repetition is essentially the weaving of a spatial pattern. The 'solid' quality of Christmas arises out of its temporal periodicity in the same way that redness -- a spatial quality -- arises out of its very different temporal periodicity. What I make of the world is a question of my ability to (i) appreciate events, (ii) appreciate their repetition, and (iii) appreciate the unity of what is repeated: I have to hold the temporally divided phases together, condensing them to the point where their true spatial characters emerge. * In so far as I am able to restore the wholeness which time destroys, the world is full of value and interest; in so far as I am unable, it is meagre and dull.



° Psychology, pp. 480-1.

× <u>Space</u>, <u>Time and Deity</u>, i. p. 143. But the distinction between concrete time (united with space in motion) and abstract time (lying outside the zone of motion) must be borne in mind. "Can time be adequately represented by space?" Bergson asks. And replies, "Yes, if you are dealing with time flown. No, if you speak of time flowing." <u>Time and Free Will</u>, p. 221.

* "There is no essential difference between the light and the movements,"says Bergson on the subject of wave-motions, "provided we restore to movement the unity, indivisibility, and qualitative heterogeneity denied to it by abstract mechanics; provided also that we see in sensible qualities <u>contractions</u> effected by our memory. Science and consciousness would then coincide in the instantaneous." (<u>Matter and Memory</u>, p. 36; see also pp. 238, 268 ff.) But this contraction in time is, I would add, an expansion in space and the emergence of spatial qualities.

+ If time is what makes contradictory judgments necessary (see J. E. Boodin, Time and Reality, p. 28) then it is the spatializing function of motion to reconcile them. Thus an appropriate system of motions in a spatial framework unites the morning star Phosphoros and the evening star Hesperos in the planet Venus. "What we have really got to do is to get rid of every time-determination", says Hegel. "The world as temporal is just the region of contradiction, the Idea in a form inadequate to it." Philosophie der Religion (1840), ii. p. 252. Clearly a state of affairs where a proposition (e.g., 'it is raining') is sometimes true and sometimes false, is unsatisfactory, and needs resolving. On this see J. M. E. McTaggart, The Nature of Existence, 317 ff.

* Neurophysiology perhaps furnishes an example. Of the nerve fibres proceeding to the central nervous system, from the different skin receptors in one area, some go by longer and others by shorter routes. This means that the impulses which the fibres carry reach the centre at different times. Professor Le Gros Clark suggests that this timing factor, besides heightening sensitivity, may help in localizing the place stimulated. (New Biology, I. p. 74.)

To common sense, what matters is whether it is <u>now</u> the spring or the winter of the year, the spring or the winter of my life, the spring or the winter of our civilization. Am I on the crest of the wave, or deep in the trough? --- that is the question. When the waves are small my boat rides them with a perfectly even keel --- in other words, the colour blue stays blue, sounds do not become mere vibrations, this sentence does not break up into its constituent words and letters. But when the waves become very large the boat tosses; every wave has to be separately negotiated; it may even become so gigantic that I lose all hope of reaching the crest and looking out over the ocean. But there is one fact that common sense fails to notice --- the fact that there are larger and more seaworthy craft standing by to rescue me. I am not committed for ever to this human vessel: there await me at this moment vessels so great that the roughest ocean is waveless for them. That is to say, all the suprahuman degrees of spatialization, with their emergent qualities, are accessible to me --however little I take advantage of the fact. °

But what particularly concerns me here is that these emergent qualities are cumulative: the higher degrees of spatialization do not obliterate the characters brought out by the lower degrees. In effect, my receding observer leaves a part of himself behind in every region that he traverses (or rather he grows up into my remoter regions instead of merely travelling to them), so that his distant vision of me includes what is important in his nearer visions. × Certainly the earlier characters are not unmodified by their new context, but neither are they lost in it. Thus the extension, materiality, colour, 'life', and 'mind', which appear as the observer retires from the Centre, comprise a cumulative series whose later elements give new meanings to what has already been acquired. As a man I exhibit in a novel synthesis the extension and materiality, the colour and the life, that I have collected on the way to manhood; and of course there are still higher syntheses in which these primitive emergents continue to come into their own without ceasing to be primitive. In this fashion the regions are knit together by elements which are at once regional and more than regional, and continuity between regions is assured; there is conservation and stability, without which there can be no progress.

Up to the human region, I synthesize regional data without effort, giving practical effect to the rule that the infrahuman and the human need each other's support. In other words, I allow to objects their measure of concreteness, their lower-grade hierarchical filling. Indeed it is obvious that (as the law of equality recognizes) the observer in the region where light-waves first spatialize as colour is not yet equipped to appreciate the colour adequately; nor, when he arrives in the region of cellular life, is he a qualified cytologist. The primitive is not itself without the advanced, or the advanced without the primitive. Distinguish the levels sharply, and at once you are driven by violent contradictions to restore their unity; unify them, and at once you are obliged to distinguish again. There is no rest from this oscillation till the abstract unity and the abstract diversity are joined in a concrete unity. The observer investigating the lower levels does not traverse them so much as send exploratory roots down into them, and what he discovers there owes its character to the fact that he ° Perhaps I should mention here that the higher degrees of spatialization are not, without serious qualifications, preferable in all ways to the lower degrees: later on I shall suggest the circumstances under which they are to be preferred. Meantime it will do to note that the devil is a very expert spatializer, who is able to show us "all the kingdoms of the world in a moment of time". (Luke, IV. 5)

× It does not matter much whether we say (1) that temporal and spatial perspective involve elements which are not subject to perspective elimination or distortion, or (2) that they involve the observer's simultaneous presence in several of the object's regions. The effect is the same. But I see no reason for promoting such privileged elements from their regional background altogether, and canonizing them as Platonic "ideas", or Whitehead's "eternal objects" or "aboriginal data". (Cf. <u>Science and the</u> <u>Modern World</u>, pp. 187 ff.)

For an instance of the difference which the higher level makes to the lower -- not by denying its limitations, but by making full use of them -- consider the photoelectric cell, and other devices for employing the electron. Besides the photo-electric cell (with its hundreds of uses, from the detection of flaws in castings to the selection of cigars), there are the thermionic valve, the electronic 'brain', the electronic 'voice' (Vocoder), the electronic 'memory' (Memex). We have added to our crude sensory equipment the finesse and accuracy and lightning speed of the electron; and in us the electron begins to actualize some of its potentialities.

is not only there. Ultimately, the whole of one level is all levels, and one level by itself is nothing at all.

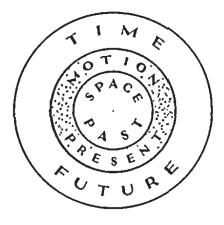
Up to the human region, then, we do to a large degree realize in practice, if rarely in theory, the fact that emergents of higher structure-time are empty abstractions without those of lower structure-time; and, to a much smaller degree, we realize the fact that the emergents of lower structure-time require and imply those of higher structure-time. What we nearly always fail to grasp is that this same concreteness, this interweaving of levels, is just as true of the upper half of the hierarchy as of the lower ° --- that, for instance, Earth has suprahuman characters because she has human and infrahuman filling, and without such filling Earth herself is infrahuman. The structure-space and structure-time of the higher individuals grow proportionately great, and their emergent qualities proportionately rich, only inasmuch as they outgrow nothing that is below, and deny nothing that is above.

6. THE PASTNESS OF SPACE AND THE FALLACY OF SIMPLE DATING

In the foregoing sections I have gone far towards assimilating the threefold division of past, present, and future, to the threefold division of space, motion, and time. But common sense questions the propriety of this. What justification is there for looking on time as essentially future time, and on past time as not time at all, but space?

Obviously space cannot be restricted to the past. When I make an appointment to meet somebody in a certain place tomorrow, I am not behaving absurdly. In what sense, then, is the future non-spatial? The answer is: in much the same sense that the past is non-temporal. As the past time of space leads a hidden existence, so does the future space of time: in both instances it takes the travelling observer to bring the recessive dimension to light. I can name the years to come, but not how they will affect the spatial peculiarities of this desk; I can name the spatial peculiarities of this desk, but not the past years that gave rise to them. In the first instance, the time is certain and the space uncertain because I am looking futurewards; in the second, the space is certain and the time is uncertain because I am looking pastwards. Such is the nature of spatio-temporal perspective.

Yet time, in ceasing to be future time, in ceasing to hold itself aloof from space, becomes something more than temporal. + "Change", says F. H. Bradley, "desires to pass beyond simple change. It seeks to become a change which is somehow consistent with permanence. Thus, in asserting itself, time tries to commit suicide as itself, to transcend its own character and to be taken up in what is higher." $^{\circ}$ And this it does, not by negating itself, but by doubly affirming itself. The event acquires <u>two</u> dates -- its original date, and the present date -- together with their interval of time: thus the space in which the event is embedded, so far from being deprived of temporal content, is enriched. + In other words, real space is full of <u>thens</u> superimposed upon the pervading Now. The ° Plato appreciates not only the necessity, but also the unity, of motion at different hierarchical levels. --- " 'Being' (so-called) and 'becoming' are produced by motion, 'not-being' and perishing by rest.... Stillness causes corruption and decay, when motion would keep things fresh... So long as the heavens and the sun continue to move round, all things in heaven and earth are kept going; whereas if they were bound down and brought to a stand, all things would be destroyed." <u>Theaetetus</u>, 153.



+ Time is repeated in space, and space in time; there is a one-many and not a one-one correspondence, which would fail to organize. "In order that Time should linger Space must recur, a point must be repeated in more than one instant." <u>Space,</u> <u>Time and Deity</u>, i. pp. 46 ff.

° Appearance and Reality, p. 207.

present is not only the present: it is a repository bursting with the past. It might indeed be said that spatialization treats time by the homoeopathic method, making it -- if that were possible -- still more temporal. For spatialization does not mean the fading away of temporal relations, but their working-up into complexes of inconceivable elaboration. Real space, as distinct from abstract physical space, is thus not sub-temporal or even non-temporal, but super-temporal; it is time integrated; it is the interweaving of dates which, in the merely temporal order, were held strictly apart. "Space at any moment", says Alexander, "is full of memory and expectation." × It is where separate times meet creatively, and time is fulfilled. When, therefore, I say that to ascend the hierarchy is to realize it as space, and that man is the hierarchy half spatialized, it is to this super-temporal space that I refer. Such space is neither empty, nor timeless, nor dead; instead, because it is filled to overbrimming with time, it is full of life. And the kind of immortality it embodies is not the mere coincidence of all that has happened. Rather it is the double-dating of events, so that while all share in the common nowness, each has its proper situation in time. To overlook this duality is to commit what I call the fallacy of simple dating, which is the temporal counterpart of the fallacy of simple location. My objects are then-from-now, precisely as they are there-from-here.

These statements call for illustration, and what more telling example could be found than myself? I am a museum of my past, in which every exhibit bears two labels --- one giving the present date, and the other some past date. Yet museum is the wrong word: the specimens are not stuffed and mounted, but a living whole, working together at this moment as one. Each scar and nail and hair of the hand that writes these words has its own date; the hand itself has its own birthday -- which is not my birthday -- and so has each cell in it; nevertheless this temporal miscellany is operative now as a temporal unity. And what is true of my hand is true, on a very much larger scale, of my whole body. It is true of my family and my country, of Humanity and Life, and indeed of all hierarchical units: in each it is the functioning of the relatively new along with the old in a common present -- the time-depth of the whole, its temporal plenum -- which makes for the quality of the whole. Again, this notion of which I am writing is one that I have thought of and read about on many past occasions: and my thinking and reading then are going into my writing now --- to say nothing of the age-long history of human thought that actively lives in all our thinking, that is our thinking. I am my whole past acting now. I endure -- to use Bergson's celebrated term -- and duration "is the continuous progress of the past which gnaws into the future and which swells as it advances. And as the past grows without ceasing, so also there is no limit to its preservation.... In reality, the past is preserved by itself, automatically. In its entirety, probably, it follows us at every instant; all that we have felt, thought and willed from our earliest infancy is there, leaning over the present." But this does not go back far enough: later on in the same book Bergson says: "that the present moment of a living body does not find its explanation in the moment immediately before, that all the past of the organism must be added to that moment, its heredity --- in fact, the whole of a very long history." °

× <u>Op. cit</u>. i. p. 71. Cf. Whitehead, <u>Adven-</u> <u>tures of Ideas</u>, XIII. 2. "But the principle that the interrelations of the present are derived from a reference to the past is fundamental."

"I am not a day of season, For thou mayst see a sunshine and a hail In me at once...... All is whole; Not one word more of the consumèd time." <u>All's well that Ends Well</u>, V.3

"At any moment of a man's history his body is a perspective at that instant of his whole life. But it consists of cells at all degrees of maturity. We have the space of his body occupied by parts, some mature at this moment, and others which are immature or senescent. In other words, his space is of different dates of maturity." So wrote Samuel Alexander in 1920 (Space, Time and Deity, i. p. 68), and at the beginning of the century Bergson was saying much the same thing. Yet, oddly enough, Karl Mannheim (Man and Society, p. 41) attributes the first statement of the "contemporaneity of the non-contemporaneous" to the art historian W. Pinder, in his Das Problem der Generation in der Kunstgeschichte Europas, Berlin, 1926.

° <u>Creative Evolution</u>, pp. 5, 21.

Ultimately, Bergson is doubtless right; but where all of the past is undiscriminatingly operative in the present, it ceases to be of practical use. This is to have too much of a good thing, and to lose sight of many necessary distinctions. It is advisable to add, therefore, that the realized or effectual time-depth of this present moment is limited by the level of its functioning. What, for the part, is divided into past and present and future, is, for the whole, present. × Thus for me as a man at five in the afternoon of this July day, winter and noon are past, summer and afternoon are present, and autumn and midnight are future; whereas for me as Earth all these are co-present. When I adopt Humanity's point of view, babyhood and manhood and old age are all at once. In fact, I am continually rising in the hierarchy by taking great stretches of past and future time into my present, and sinking again by extruding them. Thus the word now may mean this moment, or this month, or this generation, or this century, or even this geological age: all depends upon who -- upon which 'I' -- is using it. My now is no less elastic than my here, which may be so roomy that universes are lost in it, or so narrow that it can scarcely find space for a point. It is even possible for me to glimpse, at rare moments, the all-embracing present of the Whole --- the Absolute of which Bradley says that it "has no seasons, but all at once bears its leaves, fruit, and blossoms. Like our globe it always, and it never, has summer and winter". * What happens to one part of me once in a way, is, transmuted, the ever-present condition of the whole of me.

7. <u>THE COILED COIL</u>

Man, midway in the scale of creatures, divides them into the predominantly temporal above, and the predominantly spatial below. But his task is then to reunite what he has thus divided, to read the time of the upper half of the hierarchy into the space of the lower half, and the space of the lower half into the time of the upper half. Once more he has to put the sundered Pairs together again, to form an all-embracing spatiotemporal complex which, without confusion of times and places, is yet present in a single Here-now.

In one of its aspects, this reintegration of the spatial and the temporal appears as motion, and in particular as orbital motion or circulation. But we are here concerned, not with the circulation occurring at any one level so much as the combined circulation at all levels, or the Movement of which all other movements are the parts. ° Not my human 'world-line' (to borrow the physicist's term) but my total world-line, which is also the world's world-line, is in question.

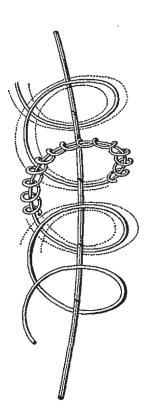
Considered by itself, the moon's path about this planet is more or less circular; but when the motion of the Earth is taken into consideration, the circle of the moon's orbit is broken and drawn out into a coil. And when, further, the Sun's motion is added, the moon's coil becomes a coil within a coil. That is to say, the centre about which the moon is revolving is seen to be itself revolving about a much more distant centre, and that about a third centre which is more distant still. It is in this way that the higher circulation may be said to contain -- and indeed to be built up out × "To arrive at a faithful portrait," Amiel tells us, "succession must be converted into simultaneousness." (Journal, 23rd December, 1866) Yes, but how much succession? Too much, or too little, and my portrait is indistinguishable from that of my neighbour. The only true likeness includes <u>all</u> degrees of simultaneousness from the base to the apex of the hierarchy.

* <u>Appearance and Reality</u>, p. 500.

° "All motions in infinite time and infinite space really form a single motion; the corporeal world is a unitary system possessing one great single movement, to which all the separate movements are related as parts to the whole." Paulsen, <u>Introduction</u> to Philosophy, p. 146. of -- the lower; and hierarchical motion may be described as cumulative. The ascent of the hierarchy is the progressive enclosure of space by means of spiral excursions of growing sweep, in which each new spiral is composed of the earlier and smaller types. The higher curve warps or distorts all the lower or subordinate curves, bringing them round by imperceptible degrees to respect its own centre. Thus the lowest, most primitive, curve is also the most complex or 'distorted', seeing that it comes under the influence of every centre up to the highest; the highest curve, on the other hand, may be regarded as a simple circle, seeing that there are no centres beyond its own to break the circle and draw it out into a spiral. (More precisely, the lowest curve has the greatest latent complexity, and the highest curve has the least.) Alternatively, it may be said that the higher curve, instead of superimposing itself upon the lower curves, only expresses their concealed tendencies. In any case, though the motion of the whole is in every part, the whole of motion is needed to reveal it. +

The circular motions and regions described in this book, and all <u>closed</u> curves whatever their type, are, truly speaking, the products of abstraction --- shapes from which the 'vertical' or radial element has been expunged. Only the highest curve is capable of returning into itself and forming "a perfect round", and it is the ultimate reason why the lesser curves are "broken arcs". Thus my self-centredness is an absurdity and a misconception, for the very good reason that my centre is itself other-centred, in motion about a higher centre, and so not a true centre after all. If I may so express the matter, it is impossible for me to be only myself: that <u>in</u> me which is not <u>of</u> me is essential <u>to</u> me. I begin as a small circle; I go on to discover that I am only a loop in a larger circle; I end by discovering that there are no circles short of the final and all-inclusive curve, because there are no fixed centres short of its centre.

Is not this annulment of closed horizontal structure by open vertical structure perhaps too drastic? Do the more exalted hierarchical units really undo their subordinates in this insidious fashion? Consider the alternative. It is that each centre, instead of revolving all the while about its higher centre, stays still long enough for its circumference to complete itself, and then (making up for lost time) jumps to its new position: it is, in other words, that the structure-space of one level is completed before that of the next level is begun. But evidently the world does not go round thus in jerks which get bigger and more violent as we ascend the hierarchy. It goes round with admirable smoothness, and one continuous movement is engaged in simultaneously weaving the structure-space of all the levels. My behaviour is not for a period self-contained -- the influence of higher centres being held temporarily in abeyance -- and then with miraculous suddenness brought round and overruled. They do their work in me imperceptibly and uninterruptedly --- for example, the fact that the hand that wrote the beginning of this paragraph is (relative to the sun) some miles from my present hand, does not obtrude itself upon my notice. But I have the choice of ignoring and trying to resist such higher control on the one hand, or studying and accepting it on the other. And the latter is more than graceful submission to the inevitable: it is making the remoter centres my centre. My acts are then bent to no

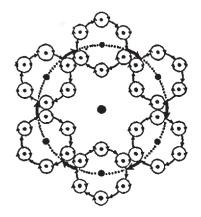


+ I am for the moment ignoring the fact that the circulation of the middle-grade units is irregular, and the fact that the highest and the lowest units are beyond space and time. This simplification is not arbitrary. As I have shown in several places, it is the well-tried historical procedure of science first to study the astronomical levels, where irrelevancies are few and principles lucidly exemplified; and then to correct for the other levels. Also, with regard to the ultimate levels, the method of extrapolation or proportionality is useful --- provided its limitations are recognized.

"Then at last

can spring from our own turning years the cycle

of the whole going-on. Over and above us, then, there's the angel playing." Rilke, <u>Duino Elegies</u>, IV.

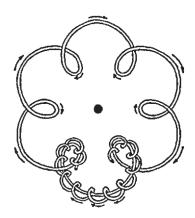


alien will, but to higher aspects of my own will.

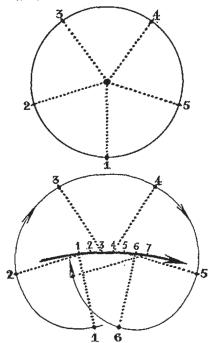
At no level can my true curve be plotted without reference to all my higher centres; and if the lower units may be said to build the higher units by progressive spatialization, that is only because the motion which does the work is from the very start subject to the influence of the higher units. This does not mean that hierarchical levels are confused. The higher unit cannot exist <u>as such</u> in the lower, or indeed in any situation where it is not allowed its own minimum structure-time; but it can and does <u>act</u> in all its subordinates. ° In this way the law of equality is not transgressed and the levels are not thrown into disorder; and neither, on the other hand, are they insulated from one another, or made independent of the two-way vertical processes. In this way the superior official is able to make that minute but sufficient difference to the detailed behaviour of his staff without sinking to their level (and so ceasing to control them), yet without remaining altogether aloof (and so not starting to control them).

For common sense, habituated to horizontal modes of thought, this discussion is somewhat unreal. In the first place, the middle levels of the hierarchy lack the clear-cut shapes; and, in the second place, the remoter levels lack the meaning which I attribute to the shapes. But this (let it be said in reply to common sense) is precisely what makes the present discussion necessary and gives it its point. Throughout this book my endeavour has been, not merely to reunite the levels that common sense artificially divides, but to show in what ways they are complementary. In particular, I have repeatedly found that the remoter levels without the middle levels are 'hollow' --- all order and no content; and the middle levels without the remoter levels are chaotic and unintelligible --- all content and no order. Accordingly my task all along has been to bring the form of the one to bear upon the matter of the other. The law of elsewhereness holds: man's meaning is not to be discovered at the human level, or the stars' meaning at the sidereal. We have to use each level to illuminate the other: to understand man it is necessary to study the stars, and to understand the stars it is necessary to study man. For the stars are human nature sorted out, regulated, clarified. They are not something else than man, but man at his most lucid. On the other hand, man is not something else than the stars, but what the stars are on closer inspection, their stuff or filling. And, after all, the spiral movements, which are characteristic of me at so many levels, cannot be irrelevant to the rest of my behaviour.

Consider the manifold implications of the gap which my moving centre opens in my otherwise circular path. It is an insurance against the premature infinity of the circle I am always trying to describe°, against fruitless self-union; it provides for continuity between all my phases as an individual of this order, and between myself and my superiors and inferiors (and through them with the entire hierarchy) in the smoothest way possible --- it furnishes, accordingly, a model of hierarchical procedure, through 'proper channels'; it is the guarantor of my progress --- my path, given time, defers to higher and higher centres; it does sufficient justice to me as a distinguishable unit of this grade, allowing me neither too much nor too little separateness from units of



° Wordsworth (<u>Prelude</u>, III. 117), describes this action, as exercised by the "Upholder of the tranquil soul, That tolerates the indignities of Time, And, from the centre of Eternity All finite motions overruling, lives In glory immutable."



 $^\circ$ "If once round and solid, there is no fear that ever it will change", says Marcus Aurelius (Meditations, VIII. 40), echoing Aristotle. Aristotle's God is the unmoved mover beyond space and time, but the first degradation from this level is a sphere which imitates, by its perpetual revolution, the eternal circle of the divine thinking. The lower cycles, and particularly those of our sublunary world, fall away increasingly from this divine perfection. The idea of history as cyclical was common in the ancient world: at the end of the Great Year (comprising many thousands of our years), the heavenly bodies having all returned to their original positions, history starts all over again. There is also the Hindu notion of the Day of Brahma, or World-cycle, which is itself divided into 2000 Divine Periods. The Chinese Great Year had twelve 'months', each comprising 10800 years. Cf. Aristotle, Meteora, I. 14.

other grades; it gives the higher centres their purchase upon me, without subjecting me to interference from outsiders (who can only get at me through common higher centres); it creates in me the need of all other hierarchical units, for I am not completed or rounded off -- my gap is not finally closed -- except by them all as comprising the highest and allinclusive curve; it ensures that my need of this highest level shall grow as I grow, for the bigger the curve (short of the highest) the bigger the gap in it. This hiatus, this trick my centres play on me, is the knife which cuts all my vicious circles, and goes on cutting them till they are all brought round to the one virtuous circle.

Every age acquires with its new vision a new blindness. Ours is no exception. Thinking <u>vertically</u>, the ancients read all manner of 'human' meanings into the stars, somewhat to the detriment of their astronomy. Applying our butcher-like <u>horizontal</u> method, we kill and eviscerate and slice up the stars, to the great advantage of our mathematical astronomy and the great impoverishment of our outlook as a whole. The time has come to perceive that, in this matter, the ancients were not altogether wrong, any more than we are altogether right, and that each has much to teach the other. Perhaps what I have written above may serve to suggest the kind of <u>rapprochement</u> that is now not only possible, but needed.

8. MY MOTION AND MY OBSERVER'S

To each of my levels its own motion. As Earth I have one motion, as Sun another, and so on. But in what sense can I <u>have</u> or own them? What do they mean in regional terms: in particular, <u>where</u> do I execute my terrestrial and solar movements?

Evidently not here at my spaceless and timeless Centre, where I am nothing. The answer is that my terrestrial motions belong out there in my Earth region, and my solar motions out there in my Sun region, where I move in and for my observers. Where else, indeed, should I <u>behave</u> as a planet unless in the place where I <u>am</u> a planet? For whom, except for other stars, do I conduct myself in a starlike way? At this Centre I am perfectly still, and my companions of every grade are in motion: only in my regions am I capable of any movement. My Here-now is the still hub of all my wheels. Of course I am capable of finding this Centre to be in motion, but only by leaving it for a new Centre which is, in its turn, the still locus of the first Centre's motion. For all my Copernican revolutions, I am incurably Ptolemaic.

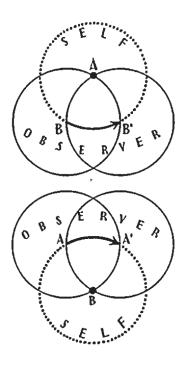
To make this clear, it is only necessary to notice how my travelling observer behaves. He is approaching the Centre.

(i) First he sees me as a solid unit B of level (b),

(ii) Then he glimpses units CC... of level (c), moving very swiftly in B;

(i) (iii) He is obliged to <u>follow</u> the motion of one of the C units, in order to inspect it carefully. He can only make out what I am by accompanying me. In effect, by keeping pace with me, he brings me to a standstill.

When Donne says, "<u>Earth</u> is the <u>centre</u> of my <u>Body</u>, <u>Heaven</u> is the <u>centre</u> of my <u>Soul</u>." (<u>Devotions</u>, II) the aptness of the metaphor is due to the fact that it is somewhat more than a metaphor. The metaphor is, in general, one of the few instruments left to us for exploring the universe vertically.





(ii) Next he glimpses units DD... of level (d), moving very swiftly in C.

And so on, through D, E, F...., to the Centre. At each level, my motion has to become my observer's. He has to absorb it in order to make out what I am. It stands in the way of his study of me, and must be got rid of: gradually the brake must be put on the swiftly moving body, till it is brought to a halt. For to know me is to be conformed to me and to my motion --- the observer cannot take in my character without taking on my behaviour. Not only my head, but its motions, are on his shoulders. (Suppose, for example, that I happen to be in the descending lift of a liner steering south, but subject to an easterly drift; then the observer who is taking on my head is taking on with it a movement to the south, to the east, and downwards --- to say nothing of the movement due to the pitching and tossing of the ship.)

My motion, then, is subject to the law of elsewhereness. It is just one more of those regional characters of mine which my observer projects back on to me here, and then ceases to project. His approach is the discovery of the motion, its projection, and the withdrawal of the projection; until, having arrived at the Centre, the whole of my regional motion has been attributed to me and taken from me, and I am left motionless. When at last I am wholly obedient to my observer's command to keep still so that he can inspect me properly, there is nothing left to inspect; disposing of my motion is disposing of me.

Suppose, now, that he retires from me. What happens?

(i) First he sees me as a unit C of level (c);

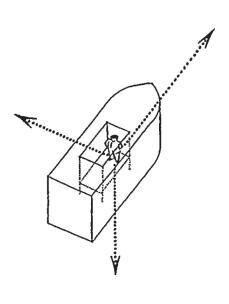
(ii) He finds it impossible to keep abreast of C, which, along with its companions, is drawn out into a worm-like shape.

(i) (iii) He ceases altogether trying to keep track of C, which vanishes into unit B of level (b).

(ii) Now unit B gathers speed

In short, the retreating observer, finding himself incapable of following my motion in one of my regions, proceeds to the next, and the next.... Before, his effort was to jump on board ever swifter vehicles; now it is to alight from them. While he was approaching me, his concern was to withdraw from me all the motion which he discovered, and I dwindled accordingly; now, as he retires, his concern is to attribute to me all the motion which he discovers, and I grow by incorporating it.

And so the observer's path leading towards me and away from me is not a straight line (as some earlier chapters would suggest), but curved as well as radial --- curved, when he participates in my regional motion; radial, when, having either projected or absorbed my motion in one region, he moves on to the next. Inevitably it alternates between these two, because the only way to study me is to take part in and take on my regional motion: the observer can only discover what I amount to in a region by joining in its activity and circulating in accordance with its rules. Whether I am the nucleus of a hydrogen atom with an orbital electron for observer, or Earth with the moon for observer, or one man with





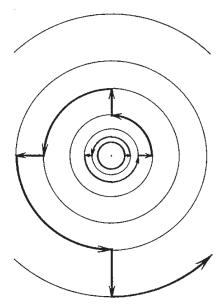
another for observer, the principle is the same --- regional observation is taking part in regional observances, doing for me there what I cannot do for myself here. I am a book which only he who runs may read, for he reads by running. *

9. MOTION AND DEPTH

At the end of the previous chapter I described past and future time as a species of two-way depth, analogous to the one-way depth of space. I propose to conclude this chapter by treating motion as a link between temporal and spatial depth.

There are good reasons for looking on the separation of temporal from spatial depth as artificial. How, in fact, do I discern spatial depth? Certainly not by itself, unmixed with temporal depth. When, looking out of the window of the train, I describe what I see as 'as house about a quarter of a mile off' and not as 'the facade of a doll's house', innumerable past experiences (and anticipations of future experience) -- while moving around and away from and towards houses -- are contributing to my present perception. The spatial remoteness of the object is inextricably bound up with temporal remoteness and both with motion. A further factor in my perception of the distance of the house is the regional speed it has here for me, compared with that of the telegraph poles and other objects: they flash by, it has been in sight for some time, and is not yet due to disappear. There are other indications. Suppose, for instance, I catch sight of a dark patch which might be either a small speck on the carriage window or a large stain on the wall of the house: the doubt is instantly settled by giving my head a slight jerk. The dark patch moves across the house --- it is therefore a speck on the carriage window. Again, motion gives the cue: the object's regional movement here refers to its still Centre there. °

The interdependence of depth and motion is still more clearly brought out at the higher levels. When I look up casually at the night sky, I see the moon, planets, stars, and nebulae, as so many lights of varying brilliance attached to the surface of the firmament. The picture has no depth of perspective. In respect of their space, the heavenly bodies are arranged in two dimensions; in respect of their time, they are all equally now; in respect of their motion, they are all at one --- either still, or (as when 'I move my head') moving all together. But to extend the period of my observation is to change all this, and bring depth -- in all of its aspects -- into the picture. Thus if I were to compare the position (relative to the other heavenly bodies) of yesterday's moon with tomorrow's, I should find that the moon was moving, and I should have some justification for supposing it to be nearer to me than is the background against which it moves. Similarly, extending the period of my observations, I should discover the motions of the planets, and be led to place them somewhere between the moon and the stars. Extending the period still further, I should perhaps be able to pick out some of the nearer stars by their slight movement relative to the rest. It is in such ways that my objects acquire



* In Chapter X, I showed that our advance to a higher level requires a Copernican revolution which attributes our object's motion to ourselves. Here I add that our advance to a higher level requires a Ptolemaic revolution which attributes our motion to our object. Both stages are essential. Let me give one example. First, we must shift centre from Earth to sun, recognizing the latter's motion as really ours. But this shift takes us only half way from terrestrial to solar status: there is only, as yet, a re-allocation of movement, without consolidation. We have to go on to the second stage, and attribute our planetary motions, not indeed to the sun as the nucleus of the solar system, but to that system as a living whole --- to the Sun itself. Until our star has been given back, as internal or contained motion, all the external behaviour which Copernicus took from him, we have not yet attained to his level. A Copernican revolution that is not followed by a higher Ptolemaic revolution is, in one sense, a backward step.

° There are, of course, several other indications of distance --- e.g., aerial perspective, the covering of one object by another, shadows, and such binocular suggestions of depth as double images; but I think they all depend for their effectiveness upon experience, at some time or other, of the motion of objects relative to the observer. We have learned, by walking towards and away from hazy objects, that haze means distance; and, by handling objects, that the partially obliterated one is more distant than the one that obliterates. It is true that the period of learning may be negligible (or perhaps ancestral rather than individual) --- the newly hatched chick reacts correctly to distance --- but I know of no evidence to suggest that the perception of distance is ever independent of the perception of motion.

in one operation their threefold depth --- spatial, temporal, and spatio-temporal --- or (I should say) simply their depth, from which these three elements may be abstracted. First, my objects are uniformly flat, uniformly present, and uniformly still; then they are seen in perspective as variously distant, variously dated, and variously moving. And so, taken concretely, the projective activity described in Chapter III is at all levels spatio-temporal, and never simply spatial or simply temporal. I do not accommodate and project my object's dimensions or behaviour piecemeal, in accordance with abstract categories, but I project the living whole, emphasizing this feature or that.

I have not found myself in any region, or entered into its social life, till it has threefold depth for me. On the other hand, once I have made myself thoroughly at home in this depth, I am already in contact with the next region. For the second or projective phase of one region implies and leads on to the first or flat phase of what lies beyond. In so far as I clearly discern the <u>depth in space</u> of B's region, I am brought up against its outer boundary which is the <u>surface</u> of A's region; in so far as I clearly discern the <u>pastness and futurity</u> of B, I bring them together in a higher or more inclusive <u>present</u>, which is or approaches the Now of A; in so far as I clearly discern B's <u>motion</u>, it is by contrast with A's <u>stillness</u> in the background. In brief, the one region's triple 'depth' is seen against the other's triple 'surface'. And my progress from the flat view of B, through the perspective view of B, to the flat view of A, may be summed up in this way:

	Spatial	Temporal	Spatio - temporal	
i (B)	HEIGHT BREADTH	Now	motionless	flat
11(B)	DEPTH	PAST FUTURE	in motion	projected
i (A)	HEIGHT BREADTH	Now	motionless	flat
		<i>y</i>		

I do not say, however, that the perception of motion is invariably or from the start a sufficient clue to distance: in certain states of giddiness, drunkenness, etc., the moving object is not definitely placed. Again, if I place a finger on my forehead and move my head so that the fingertip describes a circle, I get the impression that my finger and not my head is moving. "These illusions", says William James, "are survivals of a primitive form of perception, when motion was felt as such, but ascribed to the whole 'content' of consciousness, and not yet distinguished as belonging exclusively to one of its parts. When our perception is fully developed we go beyond the mere relative motion of thing and ground But primitively this discrimination is not perfectly made. The sensation of the motion spreads over all that we see and infects it." Textbook of Psychology, pp. 71 ff.

10. MOTION AND DEPTH, CONCLUDED

At the end of Chapter I and Chapter XV, I tried to show the need for enhancing the spatial and the temporal perspective of our ordinary experience. The present question is whether motion-perspective is equally important. Do I find in practice that I require to look out upon a world in motion, and not simply upon a world deep in space and in time? × Must my vistas be animated? Or rather -- since they are not vistas till they <u>are</u> animated, in some degree -- is their motion essential to the satisfaction they give me?

Indeed it is. Why is the sea so restful to watch, if not because it is so restless, the very embodiment of motion? Then there are those other elements --- fire, and air. The fascination of the fireside is that of the seaside on a more intimate scale, the fascination of change that is sufficiently monotonous. As for the air, what charm could a windless landscape have, whose clouds were a permanent balloon-barrage that never sent a shadow racing across the hill-sides, whose trees and grass never had

× On the apparent movement of objects as we walk past them, John Cowper Powys writes, "Then the delicate adjustment of foreground and background is the most perfect imaginable; for the foreground changes every second; while the background changes so slowly that we scarce can see it change. This is exactly what we desire in life; a ritual of human alternation in the foreground, and in the background the great planetary processions and cycles." (A Philosophy of Solitude, p. 147.) --- An admirable description of motion-depth, with its differential speeds. The art of travelling through life is knowing all one's gears, and how and when to change them: most of us try to do the whole journey in second.

a leaf blown out of place? Would exquisitely carved statues of animals and children, and flocks of stuffed birds of paradise hung on wires, be an adequate substitute for the extremely commonplace but ever-active scene outside my window? Of course they would not. And the reason is clear. To exist in a world of waxworks would be to become a waxwork. Life is not just a certain order of movements -- movements organized up to a certain pitch -- but the active discovery of these movements in the environment, in one's companions. We are all Pygmalions. To live, find life. ° Tell me where you find the real action of the world, and I will tell you how alive you are. At my own level I perceive the universe in motion; at other levels, mere back-cloth to the play. Only my equals and fellow-actors are animate; the rest, in practice if not in theory, are so much painted scenery, flat and still. But in fact what I take to be the back-cloth of this play is only another play moving at a slower tempo, with another back-cloth which, once more, has depth and motion: and so on. The truth is not that there are many plays in as many planes, but one play which fills the whole depth of the stage from the footlights to the rearmost back-cloth; and to understand the drama it is necessary to adjust one's sight to, and distinguish, all its planes of action. But I suffer from a kind of blindness, --- the blindness of the camera with hardly any depth of focus, an extreme middle-sightedness, a sclerosis of the eyelens which prevents me from following the action of the play in the foreground and in the background. One plane has depth, the rest collapse; one has motion, the rest are still --- the more distant seem motionless because they move too slowly for me; the nearer, because they are too swift. No wonder I have difficulty in following the plot of the play, when so much of it is out of focus.

I perceive animals and men behaving, not planets and stars. For the latter I need to grow, by means of techniques and instruments and records, to the dimensions of a heavenly body; above all, I need the projective energy, the depth-creating capacity, of such a being. I have a great deal to do. It is easy --- sometimes all too easy --- to find movement and life in the scene just outside my window, not at all easy to find them carrying on, to say nothing of increasing, as the scene recedes. The reason may be described as a kind of laziness. I find myself amongst living men because I help to make them live: I play my part in their ceaseless rising from the dead, as they play their part in mine. But when it comes to stars I am less cooperative. They are flat, without past or future, motionless, and dead, till I galvanize them. To common sense the idea that I can rouse the stars to motion and life is ridiculous. In actual fact, it is only reasonable. Like all other hierarchical individuals, a star does not live and move in itself, but in its fellows. Depth in space and in time, motion, and life, are joint products, the work of societies of equals.

But motion in depth, even the motion of all my regions interlocked in a single infinitely complex activity, is not sufficient. Movement there implies and requires stillness here: the rim turns only because the hub's central point is perfectly at rest. I am lost until I find that inaction at the Centre, which is the condition and the receptacle, the complement and the corrective, of all the world's agitation. Merely to approach this still Centre is worse than useless, for the movement in the nearer regions

° We animate our environment more or less unawares, but Buddhism (in the Brahma-vihara, or fourfold God-abiding of the Pali scriptures) makes a deliberate practice of it. Man is bidden to contemplate successively the four quarters of the earth, and "suffuse them" with thought, amity, pity, joy, balance or poise: those men also who need our vitality are to be sustained and invigorated by our contemplation. Mrs Rhys Davids (Outlines of Buddhism, pp. 32-3) calls this an exercise in televolition, or will exercised at a distance. It is we, says Coleridge, in his 'Ode to Dejection', who must vitalize the "inanimate cold world", for

"We receive but what we give, And in our life alone does Nature live."

"Be still, and know that I am God." (Ps. XLVI. 10) --- Most types of religion tend to emphasize stillness, "the peace of God, which passeth all understanding", rest for the weary. It has been said that the damned are in perpetual movement, whereas men in this life are partly in motion and partly at rest, and God is wholly at rest. Dante, at any rate, makes ceaseless tossing by furious winds the punishment of Paolo and Francesca, with their companions in the second circle of Hell. On the other hand, the famous spinning dervishes of the Sufis seem determined to attain to God by means of an excess of motion: given the correct ascetic training and mental discipline, the practice of pirouetting on the left heel, with eyes closed and arms outstretched, is said to produce an ecstasy in which the soul is united with its divine source. The solution of these seeming contradictions is that the goal of religion is neither mere activity nor mere passivity (each of which is 'hellish' by itself) but the Whole-Centre which is perfectly at rest because perfectly active. "Right in my navel I can feel", says Edward Dowden's 'Western Spinning Dervish', "The centre of the world's great wheel", and the centre of the wheel is motionless. (The Oxford Book of Mystical Verse, p. 341)

becomes more and more frantic up to the focal point where, at the very limit, it issues in its opposite. Nor is it enough to attain to the immobility of the Centre, where the exclusion of movement means the exclusion of everything else; the other half of the goal is the immobility of the Whole, which is still because it excludes no movement whatsoever. The first is the empty receptacle of all motion, and the second is the receptacle wholly filled. The final goal, then, is neither depth by itself nor hereness by itself, neither motion by itself nor stillness by itself, but their complete fusion in the ultimate Pair. The outermost depth of perspective otherness is one with the innermost core of me. But I can attain to them only after every intermediate region has been granted its active depth in full.

What I need, therefore, is a room with a threefold view --- of distant places, distant ages, and distant action. Such a view is no scene-painting of which I am the designer -- its otherness is essential to it -- nevertheless it cannot be drawn without my constant cooperation. The world is deep and alive -- inexpressibly so -- but my own shallowness hides the fact. A ship with a hundred-fathom sounding-line never sails deep seas.

Am I reading into the universe what is not there? Of course I am. Depth is not there, motion is not there, life is not there --- all are there-from-here and here-from-there, then-from-now and now-from-then. What is there only, or here only, is nothing at all.

Pascal laments: "Condition of man: inconstancy, weariness, unrest." Yet, only a few lines lower down, "Our nature consists in motion; complete rest is death." (<u>Pensées</u>, 127, 129) The fact is that the life and motion of our regions are inseparable from the death and rest of our Centre. To be completely alive and active is to know that one is nothing of the kind --- in oneself.

Chapter XVII

THE SPECIOUS PRESENT

The present instant of men may well be compared to that of God in this: that as you see some things in your temporal instant, so He beholdeth all things in His eternal present.

Boethius, The Consolation of Philosophy, V. 6.

For the eyes of God, and perhaps also of our glorified selves, shall as really behold and contemplate the World in its Epitome or contracted essence, as now it doth at large and in its dilated substance. In the seed of a Plant to the eyes of God, and to the understanding of man, there exists, though in an invisible way, the perfect leaves, flowers, and fruit thereof; for things that are <u>in posse</u> to the sense, are actually existent to the understanding. Thus God beholds all things, Who contemplates as fully His works in their Epitome, as in their full volume.

Browne, Religio Medici, I. 50.

Who does not know that a man may intuitively perceive in a second or two what he cannot express by his lower thought in half an hour? This is meant to show that the human mind is divided into lower and higher regions.

Swedenborg, The True Christian Religion, 603.

The foundation of reverence is this perception, that the present holds within itself the complete sum of existence; backwards and forwards, that whole amplitude of time, which is eternity.

Whitehead, The Aims of Education, p. 23.

We have no grasp of the future without an equal and corresponding outlook over the past.

Bergson, Matter and Memory, pp. 69-70.

Time travels in divers paces with divers persons: I'll tell you who Time ambles withal, who Time trots withal, who Time gallops withal, and who he stands still withal.

As You Like It, III. 2.

Men's curiosity searches past and future And clings to that dimension. But to apprehend The point of intersection of the timeless With time, is an occupation for the saint.

T. S. Eliot, 'East Coker'.

A living Temple of all ages, I

Within me see A Temple of Eternity!

Traherne, 'An Hymn upon St Bartholomew's Day'.

Time is the supreme illusion. It is but the inner prism by which we decompose being and life, the mode under which we perceive successively what is simultaneous in idea. The eye does not see a sphere all at once although the sphere exists all at once. Either the sphere must turn before the eye which is looking at it, or the eye must go round the sphere. In the first case it is the world which unrolls, or seems to unroll in time; in the second case it is our thought which successively analyses and recomposes. For the supreme intelligence there is no time; what will be, is.

Amiel, Journal, November 16, 1864.

Fool! All that is, at all, Lasts ever, past recall.

Browning, Rabbi Ben Ezra.

The higher we are then, the quicker things appear to us. 'XXth Century Texts' (Denis Saurat, <u>Gods of the People</u>, p. 41.)

1. THE SPECIOUS PRESENT

As I write these words I can hear church bells ringing a descending octave over and over again. I attend to what it is I actually hear. And I find that I do not at any stage <u>hear</u> just one note, <u>remember</u> the notes that preceded it, and <u>anticipate</u> the notes that are about to follow. Instead, I



actually <u>hear</u> at least four notes. Beyond these four I am more doubtful: the heard sounds seem to fade into remembered and anticipated sounds, and the distinctness and vividness of sensation are progressively lacking.

It appears, then, that my empirical present, or moment of experience, is not a mere unextended instant, but a duration. The edges of this duration are blurred (so to speak), nevertheless it can roughly be measured. (Periods ranging from less than a second to several seconds are mentioned by psychologists --- the results apparently depending upon the method of measurement, the individual tested, and his condition of excitement or repose.) And the mark of this period -- the so-called specious present -- is that there is in it temporal succession, a before-and-after order, but no definite division into past and future. ° I hear the four bells ringing each in its turn, with very little 'overlapping', yet I hear them together. It is not as a series of discrete notes, and still less as a series of discrete sound waves, that I hear the tune the bells are playing.

Vision tells much the same story. I look out of my window and see a bird -- a swift -- fly past. What is it I actually see? Not a 'still' of the bird, with wings frozen into one position, followed by another 'still', with wings frozen into another position, and so on; but a pulsing, fluttering, gliding, streak, never less than some yards long, growing at one end and vanishing at the other. No position of wings and body is given separately, but always along with many others, yet I see neither many birds nor one bird drawn out into a continuous track. The positions are not confused, but are seen to occur in due sequence; nevertheless their order is not a future-present-past order but a before-and-after order --- a temporal order, yet contained within the present. One position of the swift "is not past because it is before another which is present, nor is it only present when the preceding member of the series is not present. It is present while it remains within the moment of experience, and so long as it is present it is not even fading away." × Certainly my Now as actually experienced is very different from the timeless instant to which theory would reduce it. In William James' celebrated phrase, my present is like a saddle-back sloping off on either side into past and future, rather than a knife-edge which cleaves them: + it is a duration-block within which one event succeeds another without abolishing it, and within which an interval of time is felt as a whole.

(Perhaps I should note here that it will not do to explain away the specious present in terms of such concepts as 'retinal after-lag' --- that half second or so which elapses between the ceasing of the visual stimulus and the organ's return to the unstimulated condition. * For, firstly, though my eye and my object are indeed functionally related, only the latter is here and now, and their relation is the mediated relation of what is regional to what is Central: the behaviour of my eye and the behaviour of my visual object are, in time as well as in space, two distinct occurrences which may not be confused. Secondly, the specious present as I understand it is the temporal ground of <u>all</u> experience, no matter what senses are or are not involved, no matter whether the experience is of the perceptual or the conceptual type. But even supposing my eye were Central and coincident with my visual object, and my retinal lag could accordingly be assimilated to my specious present, then the retinal lag

° Alexander maintains that in the specious present we have direct experience of the past and the future, and the term specious present is accordingly a misnomer. For him, the present has no breadth in time: we hold times together, but in so doing we do not make them present. (Space, Time and Deity, i. pp. 121 ff.) John Laird is amongst the philosophers who take up a similar view. (Contemporary British Philosophy, 1st Series, p. 220.) But the difference between this description and the one I am adopting here is, I think, almost entirely verbal. Of the many discussions on the topic of the specious present, one of the most lucid that I know is H. Wildon Carr's, in A Theory of Monads (pp. 133 ff).



This sketch is as near as I can get to what I see, but as merely spatial it can only give a rough indication of the actual experience in time. Some modern painters have tried to record such movements (e.g. the various positions of the legs of a trotting dog are drawn, so that he seems to have an indefinitely large number of legs), and photographs of this sort are familiar. In Italy during the second decade of this century, 'dynamic' painting' became something of a cult. Severini painted a tramcar, Buccioni a cyclist, and Soffici an Apaches Ball, as seen in a specious present.

× H. Wildon Carr, <u>Op. cit</u>., p. 133.

+ The specious present, says James, is "no knife-edge, but a saddle-back, with a certain breadth of its own on which we sit perched, and from which we look in two directions into time. The unit of composition of our perception of time is a <u>duration</u>, with a bow and a stern, as it were --- a rearward-and a forward-looking end." <u>Principles of Psychology</u>, i. p. 609.

* See, e.g., Robert S. Woodworth, <u>Experi-</u> <u>mental Psychology</u>, p. 565.

† But Woodworth writes, "If the eye were a perfect light-registering instrument....

there would be no 'retinal lag." On the other hand he admits that retinal lag has

would itself become the indispensable condition of my visual experience, and the very opposite of an imperfection of the instrument. †)

2. THE ELASTIC SPECIOUS PRESENT

At first sight, this description of the specious present is in conflict with the point of view I have adopted in the last two chapters. For me the Now is essentially a knife-edge of ideal sharpness, a timeless mark parting the future from the past. I can no more afford to let any time, however brief, creep into my Now, than I can afford to let the tiniest volume of space creep into my Here. To do either would be to lose that inestimably valuable nothing at the core of me, that still Centre without which the wheel cannot turn. Without the spaceless, timeless, motionless Centre, no regional space, or time, or motion. I cannot allow the Present to be so much as "an inconsiderable Film dividing the Past and the Future": ° it has no thickness at all.

But if I reject the saddle-back for the knife-edge, how shall I explain the fact that I hear four or more notes together, and see the bird as a streak across the sky?

Really there is no special difficulty. My Now is two-sided. It is Central and therefore timeless -- a knife-edge -- in respect of me; and it is regional and therefore a duration -- a saddle-back -- in respect of others. Others have all the time they want in me, who have no time. \times Because I have not a moment to call my own, I have all the time in the world to give to my objects, so that they shall come to themselves here and now in me. The knife-edge is ideally sharp, and the saddle-back is as broad as you please. But certainly my specious present cannot be limited to a second or two, seeing that when I register an object I find room for its structure-space and its structure-time --- and the latter may be a million years or a millionth of a second. This is indeed an elastic saddle-back, broadening from the keenest of razor-edges to the widest of plateaux so smoothly, so naturally, with so little strain, that the alteration passes unnoticed. My object makes a spatial habitation for itself here in me, and a temporal habitation for itself now in me, without causing the slightest disturbance. * For this is where it belongs, its home. Here and now are the many mansions.

To common sense, of course, it is unbelievable that my specious present when I contemplate the stars should expand to scores or hundreds of years, and when I contemplate the galaxies to millions --- how on earth can my present moment exceed my life-span? But I am not only on earth and earthly. To look at the stars is to suffer a vast metamorphosis, to be reorganized on a new scale of space and time. In general, the capacity of the specious present or moment of experience is proportional to the hierarchical status of the experience. + The principle, at any rate, has been widely acknowledged. Many writers have suggested that, as we descend in the life-scale of creatures, the moment of experience becomes less and less inclusive of time; and some have added that, for

its advantages: "A modern electric bulb driven by alternating current would show all objects as flickering if the eye had perfect resolving power in time." (Loc. cit.) Surely <u>perfect</u> is the wrong word. Would the eye that could register no colours, because it kept each light wave separate from the next, be a more "perfect lightregistering instrument" than our eyes?

Marcus Aurelius, pointing out that the past and the future do not belong to us, says "that no man properly can be said to live more than that which is now present, which is but a moment of time.... The time therefore that any man doth live, is but a little, and the place where he liveth, is but a very little corner of the earth." (<u>Meditations</u>, III. 10.) But this does not go far enough: the Here-now in which a man lives is, in itself, out of space and time altogether.

× I am dead in myself, alive in my fellows, immortal in my God. As St Augustine says, the soul is immortal because it is fitted to know eternal truths. But it is naturally receptive of what is permanent because it has no permanence whatever of its own. Thus Edward Caird: "Because it is capable of dying to itself, -- because, indeed,...it cannot live but by some kind of dying to self, -- it cannot in any final sense die. As it can make that which most seems to limit it a part of its own life, it has no absolute limit; it takes up death into itself as an element, and does not therefore need to fear it as an enemy." <u>Hegel</u>, p. 211.

* Cf. Amiel: "Time is but the measure of the difficulty of a conception. Pure thought has scarcely any need of time, since it perceives the two ends of an idea almost at the same moment. The thought of a planet can only be worked out by Nature with labour and effort, but supreme intelligence sums up the whole in an instant. Time is then the successive dispersion of being." Journal, 7th January, 1866.

⁺ Whitehead (Science and the Modern World, p. 131) identifies the specious present of an "event" with its "total temporal duration", in which "the event realizes itself as a totality". I should prefer to say that the event's specious present is <u>primarily</u> that period in which it realizes as a whole the structure-time of its equals, and <u>incidentally</u> the similar period in which its own pattern is worked out in them.

beings of more-than-human rank, the moment of experience must be much more capacious than our own. "A thousand ages in Thy sight are like an evening gone." (Hints of this elasticity are to be found already in abnormal, and even in normal, human experience; as when a dream, long and packed with incident for the dreamer, is for the outsider a matter of split seconds, or when a half-drowned man's life-story appears to him in considerable detail yet compressed into a few moments. × There is De Quincey's experience of "the vast expansion of time"; and there is Mozart's well-known account of how he could hear the whole of a symphony as it were all at once. * --- the former I take to be an accompaniment of hierarchical descent, the latter of hierarchical ascent. Another example of descent is provided, it seems, by hypnotism, where the subject's attention is so concentrated that his pain vanishes. Probably this effect is in part the result of reducing the scope of memory and anticipation; ° but in the main it would appear to be due to a contraction of the specious present to a time-span so brief that it cannot contain pain as such --- the minimum period of pain falls outside the subject's field of attention. Under hypnosis, as under an anaesthetic, I sink to those infrahuman levels of myself where the larger rhythms cannot be registered; and if I were trained in certain types of yoga I should be able (so I am told) to gain these lower levels at will, without the help of the hypnotist or the anaesthetist.)

"The more we study the mystery of time," writes Mr Gerald Heard, "the more it seems that all is present, if only we ourselves could be sufficiently present, never absent-minded, always aware, instant, undistracted by our concern with past and future, so as to be able to notice all that is actually being presented."+ I believe this to be profoundly true; but it is also a fact that the practical requirements of life demand that, for the greater part of the time, my specious present shall be narrowed down to the measure of middle-grade objects. If "the proper study of mankind is man", it is proper that his moment of experience should fit the things of man. That is why, though capable of very great expansion and contraction, the specious present is reckoned to be -- in practice and for ordinary humans under ordinary conditions -- very limited indeed. Yet man is not man until he transcends this temporal limitation. Truly speaking, it is just as <u>natural</u> for him to enjoy the company of the stars as of men; and accordingly the sidereal specious present embracing hundreds or thousands of years is just as certainly his own as the commonplace specious present of one or two seconds. Indeed, if the true end of man is the enjoyment of God who is above time, if man's eternal life consists in his present knowledge of that eternal Object, † then it may be said that the specious present which is most proper to man is one which includes the whole of time and so transcends time. ϕ At a less exalted level, there is 'the historical consciousness' which, though embracing all the events it treats of in its own Now, still denies to most of them the vividness and immediacy of the contents of a fully developed specious present: the past-present-future order has not yet been entirely superseded by the before-and-after order. Thus Berdyaev: "The integral life unites the three moments of the past, present and future in one. And thus historical reality is not dead, though it is relegated to the past; it is no less real than the current reality or that of the future..." Θ

× It is important, of course, to distinguish between the subjective and the objective reckoning of such experiences; or rather, it is important not to mix levels by saying that everything happens 'very quickly' at lower levels, and 'very slowly' at higher levels. My dream proceeds at what is for me an ordinary pace, no matter how the outside observer reckons its duration. On the other hand, there are subjective variations in tempo, due to drugs, temperature variations, and the monotony or variousness of the events experienced. De Quincey says, "I sometimes seemed to have lived for seventy to a hundred years in one night; nay, sometimes had feelings representative of a millennium passed in that time." He found that both space and time "swelled". In hashish dreams also, duration and distance seem to be vastly magnified --- I should say that they are so magnified. On the effect of changes of temperature upon the subjective estimation of tempo, see Lecomte du Noüy's Biological Time. Cf. Mary Sturt, The Psychology of Time, p. 90.

* Holmes, <u>Life and Correspondence of</u> <u>Mozart</u> (London, 1845), pp. 317 ff.

° Marcus Aurelius puts the principle very lucidly: "Neither that which is future, nor that which is past can hurt thee; but only that which is present. And that also is much lessened, <u>if thou dost rightly</u> <u>circumscribe it</u>: and then check thy mind if for so little a while, a mere instant, it cannot hold out with patience." <u>Meditations</u>, VIII. 34; cf. XII. 2.

+ <u>Man the Master</u>, p. 127. Cf. Heard's <u>Pain</u>, <u>Sex and Time</u>, pp. 51 ff. Also H. Wildon Carr, <u>The Philosophy of Change</u>, p. 125: We can, by concentrating or relaxing attention, admit more and more to, or exclude more and more from, the present moment.

† John, XVII. 3; and the <u>Book of Common</u> <u>Prayer</u>: "God, in knowledge of whom, standeth our eternal life." Cf. <u>Taittiriya</u> <u>Upanishad</u>, I. 6: "God lives in the hollow of the heart, filling it with immortality."

 ϕ Laird (<u>Contemporary British Philosophy</u>, 1st Series, p. 220) suggests that God's specious present encompasses the entire history of the world. "If so, the creeping passage of aeons would literally be his eternal <u>now</u>, but the order of earlier and later within it would not be altered by a hair's breadth." This requires however, in view of the theory of relativity, some very careful qualification.

 Θ <u>The Meaning of History</u>, p. 72. And this reality of times that are not present (he goes on to say) is borne out by the religious consciousness, which rejects the notion of death or oblivion.

3. <u>THE CONSTANT FIELD AND ITS VARIABLE SPATIO-TEMPORAL</u> <u>TEXTURE</u>

Common sense suggests at this point that my theory has got the better of my judgement. A brief glance at a galaxy (or, at the most, a few hours' exposure of the photographic plate) seems enough to show what it is like: indeed a longer inspection or exposure, instead of yielding more information, may well yield less. The truth for common sense is that what I am looking at has very little to do with how long I need to look at it. + Or -- to put the objection in another way -- if the structure-times of my objects are so very dissimilar, how is it that they seem to be so very similar?

Almost literally, the answer stares me in the face. Consider, first, the space which my objects occupy here in me. The speck on the windowpane, the leaf on the tree, the planet in the heavens, are all equally capable of occulting a spiral nebula: their boundaries roughly coincide.° As children, some of us used to play the game of guessing how large the moon is --- how large, that is to say, in terms of a halfpenny held at various distances from the eye --- but we gave up the game before we had learned its astonishing lesson. My objects are presented in what I call my field of view, and their 'size' is primarily the proportion which they fill of that field: thus I say that the moon is bigger or smaller than the halfpenny according to where I hold the halfpenny. But of course I cannot let the matter rest at that, and I go on to say that the moon is really much bigger than the halfpenny. In effect, I recognize a curious characteristic of my field --- its space does not carry the same value all the while: it is elastic, not in the sense that its boundaries move out and in, but in the sense that its texture is extremely variable. \times I am in the position of a farmer whose field, though never more or less than five acres, is sometimes only big enough to grow a single plant, and at other times big enough to grow all the plants in the world. It is because of such an ambiguity in my field of view (an ambiguity which I almost always recognize in practice, and hardly ever in theory) that I can call the moon large and the coin small: this is my rough-and-ready way of saying that, though the two objects cover much the same proportion of the field, the space of the one is much more concentrated, or intense, or finely woven, than the space of the other. If I may liken myself to a camera, I always use a film whose grain is suited to the object (only, in this case, the longer the exposure the finer the grain), nevertheless the size of the film, and the size of the images recorded upon it, vary hardly at all. *

Now all that I have just noted, in this parenthesis on the subject of my spatial field, finds its parallel in my temporal field. If my temporal field is taken as constant, then its temporal mesh, or degree of concentration, varies from level to level. In that case, my watch is no better at recording the time a galaxy requires to establish itself in me, than my ruler at recording the space it requires for the same purpose. The fact is that my ruler and my clock adjust themselves to the hierarchical status of the object they are used to measure: the marks on the ruler do not crowd closer, neither do the hands of my watch go round faster, when I am dealing with an object of exalted status; instead, the value of the existing units of measurement is enormously increased. Galaxies and stars and men + L'Abbé de Beaufort said of Brother Lawrence that his vision was not bounded by time: from long contemplation of Him who is eternal, his spirit had become as it were timeless. Here is no trace of that common-sense antiseptic which many theologians are fond of using, to guard against the infection of the knower by the known.

° It is worth noting that, in so far as the given size (or 'retinal magnitude') of my hierarchical objects varies, it tends to increase up to the human level, and then to decrease: what I call the very large is as 'microscopic' as the very small, and hierarchical symmetry is observed. We speak of (and think of) the stars as tiny. (See, e.g., The Rape of Lucrece, 1008, 1525; Romeo and Juliet, III. 2.) Cf. Descartes: "Thus, although the impression a star makes on my eye is not larger than that from the flame of a candle, I do not, nevertheless, experience any real or positive impulse determining me to believe that the star is not greater than the flame; the true account of the matter being merely that I have so judged from my youth without any rational ground." Meditations, VI.

 \times Cf. the suggestive, if scarcely lucid, lines of Blake ---

"Creating Space, Creating Time, according to the wonders Divine

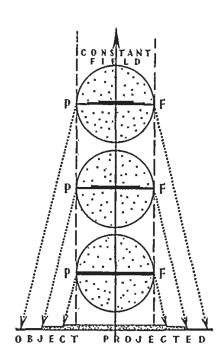
Of Human Imagination throughout all the Three Regions immense.....

.... and every Word and every Character Was Human according to the Expansion or Contraction, the Translucence or Opaqueness of Nervous fibres: such was the variation of Time and Space Which vary according as the Organs of Perception vary." Jerusalem IV. 98.

* We take eclipses for granted, and, imagining we <u>understand</u> the obliteration of 'far' objects by 'near' ones, feel sorry for orientals who cannot regard eclipses so complacently. Pericles' famous demonstration to the frightened Athenian soldier left the deeper problem untouched: whence this power of the lower to obliterate the higher, instead of <u>vice-versa</u>? At least we have here a striking indication of the importance of the "filling" of the higher units of the hierarchy. share this same spatio-temporal field of mine, but they put very different values upon its units of space and time: the numerator remains the same, but the denominator is endlessly variable. Each successive government, while leaving the same currency in circulation, drastically inflates or deflates its purchasing power, and fixes its own rate of exchange. Whenever I enter the realm of the nebulae -- or, I should say, whenever I realize the life I live there all the while -- my spatio-temporal capital appreciates beyond all expectation: a billion miles becomes a microscopic length, and a thousand years a mere moment. And so I am able to report with perfect truth that the nebula is a 'tiny' object, visible here in a 'moment' (or in a few hours at the most); for that 'moment' is extremely compact, and very different from the 'moment' of my vision of a man or a planet.° This is indeed no matter for surprise. A society of galaxies can scarcely be expected to work to human vardsticks, or to niggle with time as men must do. Surely there is no cruder or more grotesque instance of anthropomorphism than this common-sense belief, that I see a galaxy just as I see a man.

Josiah Royce attributed our doubts about the consciousness of nonhuman beings to the disparity between their grasp of time and ours: it is only natural that a creature who finds an explosion interminably slow, or the gouging of a river valley almost instantaneous, should seem to us to be mindless. × Yet we have no reason -- apart from our lack of imagination, our intellectual parochialism -- for drawing any such conclusion. The first reason why we fail to recognize the full life of the hierarchy is that we fail to live a full life ourselves; and the second is that we fail to see that our full life is the hierarchy's. In particular, we miss the significance of the fact that when we put ourselves in the shoes of an atom or a galaxy, a star or a cell, we do not feel any bigger or smaller, any older or younger, any more pressed for time or leisurely, than we do as men --- or, if we do, the differences are not so great as seriously to embarrass us. Our first-hand evidence, our inside information as to how others live in the hierarchy, overwhelms us by its abundance: wherefore we ignore it, and go off in search of some miserable fragment of second-hand or external evidence. Just as the intelligence and the purposefulness of the infrahuman and the suprahuman are either revealed in us -- in our science and art and religion -- or remain hidden, so their proper spatiotemporal scale, their native extensity and tempo, are presented for our direct inspection. +

Is this vicious anthropomorphism? Surely it is the very opposite. The contrary view, the conviction that the human is the norm, and the nonhuman is (on the one hand) extremely congested, over-crowded, rushed, and (on the other hand) extremely protracted, over-bulky, slow -- with the corollary that the only mind that matters in the universe is the human mind -- this is indeed vicious anthropomorphism. We have advanced from the naive stage (the stage of the pathetic fallacy) when we thought all others were like ourselves, to the sophisticated stage (the stage of the apathetic fallacy) of thinking that all others are different from ourselves; but we have yet to see that neither of these dogmas will do, and that the real task is to distinguish clearly our own levels of functioning, and study their likenesses and differences. Vicious anthropomorphism consists in



° Of the specious present H. Wildon Carr writes, "Theoretically there is no limit to what may occupy this moment, but the moment is itself constant and not variable, however variable in extension and intension its content. This content, however, though theoretically unlimited, is practically defined in its range by our organization, and by the mode of our activity, to a certain system of reference. Thus my whole life from my birth might conceivably be the content of one moment of experience, that is to say, it might be entirely present to me not as memory but as immediate experience. This would not imply the enlargement of the moment of experience but a variation of the system of reference.... The moment of experience.... is constant while its content is variable,--- not in the sense that it is a series or succession of ever new experience, but in the profounder sense that all its objective characters, including space and time, are variable, and relative to a system of reference." A Theory of Monads, pp. 137-8.

× The World and the Individual, ii. p. 229.

+ In fact, they may be said to arrive, to be created, in us. Our nature, says Rilke (in his letter of November 13th, 1925, to Witold von Hulewicz) is to introduce "new vibration-numbers into the vibration spheres of the universe. (For, since the various materials in the cosmos are only the results of different rates of vibration, we are preparing in this way, not only intensities of a spiritual kind, but --- who knows? -- new substances, metals, nebulae and stars.)" the confusion of hierarchical levels and the collapse of planes; it finds no life where it does not find life on its own scale; it is sure that what will not measure <u>down</u> to man is in fact what will not measure <u>up</u> to him. But the higher anthropomorphism, recognizing on the one hand the accessibility of the levels, and on the other hand the relativity of their space and time, is the very reverse of anthropomorphic in the ordinary sense. The principle of the constant field means that we no longer expect the universe to conform, from top to bottom, to the spatial and the temporal units which are sacred to our human parish pump.

4. THE PRINCIPLE OF CONSTANT VELOCITY

The space and the time of my field come together in a motion whose 'quality' or 'intension' is no less ambiguous than they are. The famous request -- give me a lever long enough, and a spot whereon to rest it, and I will move the world -- is, in some sort, granted: I never cease using such an instrument. Myself its still fulcrum, the beam of this lever is what used to be called the beam of my eye ° --- my line of sight. Now the interesting thing is that however long the beam is, whether its far end moves amongst cheese-mites or stars, its speed for me is the same: it covers the distance between two cheese-mites, and the more or less "equal" distance between two stars, in more or less "equal" time. One way of accounting for this is to say that the beam, by its perfect obedience to the laws of all the regions it traverses, manages to keep straight; in the remoter regions it travels faster, as the spoke turns faster near the tyre. \times But this is telling the outside observer's story instead of mine. To me at the hub of the wheel, the spoke has one speed throughout. The fly crawling across the window-pane, the sparrow flying across the garden, the aeroplane tearing across the sky --- all three keep pace in my field.

I can travel from star to star more quickly than I can cross this room, and with less effort. Nor is it a valid objection to say that when my eye explores the heavens nothing is happening among the stars, and the motion is merely subjective. This vast motion of the heavens as I turn my head is an excerpt from life as stars live it, and stars do not live as men or animals live. At all levels there is motion, but whose the motion is --- whether it is reckoned the observer's or his object's -- is very largely a question of level. At low hierarchical levels, motion is for the most part interpreted as the object's; at high levels, as the subject's; and this interpretation is itself an important factor in determining the character of the levels concerned. Stars live a full social life, but this does not mean a frenzied round of activity --- their behaviour is as ordered and tranquil as tradition declares. And so it can afford to be, for it is also preeminently free, variable, careless, abandoned even: beyond anything that is possible at terrestrial levels, the stars have the freedom of their space; it is theirs; they pass to and fro in it at will, without restraint or toil, as the mood takes them. (This is not guesswork --- I am only describing what I can do on any starlit night. \otimes) It is no accident that, as a microscopist studying the life in a drop of pond-water, I attribute nearly all the mo-





° See, e.g., Plato, <u>Timaeus</u>, 45 C; St Augustine, <u>Confessions</u>, X. 6.

× Eddington (<u>The Nature of the Physical</u> <u>World</u>, p. 57, footnote) points out that science often employs "for special purposes a frame of reference rotating with the earth; in this frame the stars describe circles once a day, and are therefore ascribed enormous velocities." And these velocities far exceed that of light.

⊗ Indeed it is true, as Al Ghazzali says, that "the rational soul in man abounds in marvels, both of knowledge and power. By means of it he can pass in a flash from earth to heaven and back again, can map out the skies and measure the distances between the stars." (The Alchemy of Happiness, I.) How different from the typically modern doctrine of Alexander and Lloyd Morgan that "we can only 'enjoy' such psychical correlates of life and matter as are involved in the whole integral psychical system at our level of mind", and we are incapable of immediately and directly taking up the point of view of non-human individuals. (Lloyd Morgan, Emergent Evolution, p. 27)

tion which I observe to my objects and hardly any to myself, 'glued' to the eye-piece; that, as a student of men, half the motion I observe seems to be mine and the other half theirs; that, as star-gazer, I find that nearly all the motion belongs to me. And the reason for this transfer of motion from observed to observer, as I ascend the hierarchy, is plain enough --- at the higher levels I am more aware than at the lower levels of the allimportant truth that the motion I experience is motion here in me: over there, at its own Centre, my object is unmoving, but here, regionally, it moves. When I am functioning in my stellar capacity this fact becomes obvious; at lower levels it becomes more and more obscured. In other terms, the lower hierarchical grades are predominantly Ptolemaic, and the higher Copernican. ° To ascend the hierarchy is to construct longer radii, linking more of the motion here with remoter Centres there.

But whether I project it or claim it, movement at suprahuman and infrahuman levels is presented here for my inspection as neither particularly fast nor particularly slow. Nature abhors excess --- excess of vastness or duration, of speed or sluggishness. The now-familiar law of vertical extension and horizontal limitation applies to motion just as it applies to space and to time severally --- you cannot increase beyond a certain limit the spatial or the temporal scope at one level without finding yourself at a higher level, or decrease them beyond a certain limit without descending; and, in the same way, a much higher or much lower tempo sees you to a level where 'normality' is restored. To put the matter differently, though your rate of travel may be described as exceedingly varied, your engine-speed is practically constant, and the difference is made possible by a large number of gears.

I come now to examples. The first is ordinary enough. When we say that modern transport has made the planet smaller, we are really asserting that our speed of travel -- whether on foot or on horseback, by train or in the air -- has remained much the same. And this is true: indeed it is more than a perfectly legitimate but peculiar way of interpreting the data, for it takes account of such otherwise neglected facts as the experienced slowness of air-travel. Except at the time of taking-off and landing, I get far less impression of speed in an aeroplane than on a bicycle. Again, when I am crossing a somewhat featureless plain in an express train, I seem to be moving more slowly than when I am walking along a narrow woodland path at no very strenuous pace. Man travels faster and faster --- and, if anything, slows down. The reason is that he cannot gather speed without advancing in hierarchical status, and so losing speed. No man has ever travelled by air, or even by train. Four miles an hour is a proper rate for him, forty belongs to the species, four hundred to the geosphere. And when space-ships become practicable their speed will have to be planetary -- much more than four thousand miles an hour -- and still they will seem to their navigators to creep along. The hierarchy is organized to avoid undue haste.

The great principle of constant velocity, with variable space and time, is abundantly exemplified at the human and vital and terrestrial levels. But, as in so many other instances, it is useless to look for precision here: the complexity and wealth of detail, which mark the middle orders of the hierarchy, are not amenable to merely quantitative description. For ° This is not to deny that each level has its Copernican and its Ptolemaic phases: the only question here is which phase is dominant, and which recessive, at each level. Actually, progress from one level to the next (from the Ptolemaic to the Copernican phase, followed by the 'solidification' which is their union) recapitulates the progress of the hierarchy as a whole.



The connection between the physicist's principle of the constant velocity of light, and our commonplace experience of more or less constant velocity, was, I believe, first clearly expounded by H. Wildon Carr in his important book, A Theory of Monads, III. "The universe", he writes, "consists of events, and these events are coordinated by the observer so that a constant ratio between space and time is maintained. Space and time vary, therefore, with the system of reference, and ultimately every observer is the unique centre of his own system of reference. There is therefore no objective scale by reference to which magnitudes can be assigned an absolute value. Great and small are relative terms. We all recognize the constancy of velocity when we compare the range of activity of a human being with that of other living creatures. For as an insect's world is smaller than ours and a bird's world more extended, we must imagine each creature to co-ordinate its world on a scale of its own and not on ours. But the world-view which science now presents to us enables us to apply this principle of the constancy of velocity on an infinite scale." My debt to Carr is great, but I differ from him in that I (1) insist on the hierarchical orders, (2) regard each order as a new adjustment of space and time such that 'normal' velocity is restored, and (3) assert that all grades are directly accessible to our experience.

mathematical exactness we have to go to the remoter levels where hierarchical procedure is laid bare, where innumerable 'irrelevancies' have been set aside and the underlying order emerges. At these levels, the mathematical physicist finds that the principle of the relativity of space and of time is basic and inescapable. As long ago as 1905 (in The Restricted Principle of Relativity) Einstein showed the fundamental importance of the fact that the velocity of light is the same for all observers, no matter how they are moving --- thus the light from another planet comes to us at the same pace whether the planet is approaching or receding. Now a velocity is the ratio of a distance and a time-lapse: it seems, therefore, that our instruments for measuring these must adjust themselves to suit the movement of the object we are studying. Our measuring rods shrink and our clocks go slow as the object gathers speed. The diameter of my watch and the time between each tick are not fixed quantities, but vary as I turn from Mars to Rigel, and from Rigel to the Great Nebula in Orion. Only the velocity of the light that passes between us remains unchanged. In other words, space and time are manipulated so as to set a limit to velocity: velocities do not combine according to the mathematical law of addition, but in such a way that the speed of light is not exceeded.

The hierarchy in general, then, is so constituted that, when velocity threatens to exceed a certain limit, there occurs a shift to another level, whose space and time are scaled down to give a 'normal' velocity. And, in particular, the remoter levels of the hierarchy are so constituted that this limiting velocity is what we call the velocity of light, and the spatial and temporal adjustments which go to preserve this limit have received precise mathematical formulation. Once more, what we do at the middle levels 'instinctively' and as if in a dream, with many delightful but confusing variations, we do at the remoter levels rationally, in an orderly and unvarying manner. The frosty and brilliant intellectual light of Einstein is altogether non-human, but precisely for this reason it is able to shine out upon the dimmer regions of Humanity and of Life.

Common sense points out that, though light is propagated at a finite and constant velocity, yet this velocity is almost unimaginably great, and for most purposes instantaneous. And theoretically, of course, this is the case. But, in practice, at those levels where the velocity of light becomes a factor of importance, the scientist adopts units of measurement which scale his universe down to workable dimensions. It is not that he uses a small-scale model for the sake of convenience, but that, while he is investigating them, the solar system and the Galaxy are no more cumbersome than a corpse on the dissecting table. And their light travels rather slowly. Supposing, for instance, the astronomer happens to be a bowls player, and envisages the sun and the earth much as he envisages a bowl at one end of the green and a grain of sand half way across the green --then the light would travel from the one to the other at an ant's pace.× At all events -- whatever his instruments and units of measurement and modes of thinking -- the expert astronomer has made himself perfectly at home in sidereal circles: their 'tempo' is normal. The naturalist of a level is naturalized at that level, because he has been thoroughly initiated into the spatiotemporal etiquette of the society in which he moves. And we who are comparative strangers have only to look up at the stars

Royce describes our human specious present as arbitrary in its scope, and ill-adapted for the observation of even our most familiar meanings. He speculates as to the vast alteration in type of consciousness that an alteration in the scope of our specious present would mean. (The World and the Individual, i. pp. 420 ff.) It is precisely such a view which I am combatting here. The specious present of each hierarchical order is ours directly we need it, directly we choose for object a unit of that order. Victor Hugo had the right idea when he wrote: "Imperceptible beings upon our imperceptible globe during the second which constitutes our life, are we not very small and very miserable creatures compared to this overwhelming infinite?" And replied, "No, since we comprehend it." Intellectual Autobiography.

× In other words, he scales the solar system down to 1/10,000,000,000th full size. In <u>Possible Worlds</u>, Professor J. B. S. Haldane describes the consequences for the speed of light when the universe is scaled down to a model in the proportion of 1:10¹⁶ (pp. 3 ff). But what escapes Professor Haldane is the fact that his calculations, and the picture which emerges, are not accidents but genuine functions of the universe he is describing. <u>Possible Worlds</u> does not come to us out of the blue, but is a product of <u>this</u> world, providing valuable evidence as to its nature. to be welcomed, on equal terms, into their exalted company --- into a community whose members are obviously neither large nor widely separated, and whose medium of intercommunication (if we stop to consider such a matter) is certainly not over-swift. How very odd that we should think we need <u>models</u> to reduce the heavens to comprehensible dimensions, when all we need to do is to use our eyes, and notice what sort of sidereal company we keep. °

5. <u>THE PRINCIPLE OF CONSTANT VELOCITY, AT INFRAHUMAN</u> <u>LEVELS</u>

Common sense is not altogether unwilling, perhaps, to grant that our moment of experience may sometimes expand to include what are, for us at the human level, long periods of time. But its contraction to less than the human norm is another matter. Psychologists tell us that the limit of our temporal discrimination is at best around a five hundredth of a second, yet the scientist has to do with a world where millions and even billions of pulses a second are the rule. Can it be said that he descends into this infrahuman world as he ascends into the suprahuman? Is he not more like a fisherman than a diver?

The answer is that the lower levels are no less accessible than the higher. It is by such methods and devices as the accumulation of photographic records, the blink microscope, graphs and other types of mathematical analysis and description, and appropriate units of measurement, that the scientist is able to adjust himself to the tempo of the higher levels. And it is by very similar methods and devices that he adjusts himself to the tempo of the lower levels. In neither instance are these means artificial makeshifts, merely human contrivances which are foreign to the orders of being which they are used to explore: to the extent that they work, they are thoroughly indigenous. The scientist knows nothing about levels to which he has not descended. He has become expert at those astonishing psycho-physical metamorphoses which alone enable him to sink to levels where current events are colourless wave-motions,+ and colours -- if they could exist at all -- would be vast and age-long patterns of history, discernible only by a Toynbee.

Exner found that he could just recognize two electric sparks to be successive when they were separated by an interval of a five-hundredth of a second. But while our human discrimination of time is limited to some such minimum, there remains the all-important fact that neither 'physically' nor 'psychically' are we only human. We are organized to discriminate intervals reckoned in billionths of a second, just as surely as we are organized to take account of periods of astronomical vastness: in fact these powers come so naturally to us that we scarcely notice that we have them. If we admire the physique which makes them possible, we only do so after we have amputated it. Little wonder that, having decided in advance to ignore all our functions except those of the undeveloped human core, we should find our grasp of time to be extremely limited. But once we restore to wholeness the living organism which our mode ° We may, for instance, notice that the stars accompany us when we travel. James Thomson observed in his well-known lines (from 'In the Train') that "As we rush, as we rush in the Train, The trees and the houses go wheeling back, But the starry heavens above the plain Come flying on our track." However swift our flight, we always carry the heavens with us. As members of the community of the stars we behave appropriately; our objects are permanent, uniting our past and future phases in one solar 'self'.

+ Bergson (<u>Matter and Memory</u>, pp. 272 -3.) pointed out that it would take 25,000 years to experience as separate vibrations what is experienced in one second as a patch of red. The point I want to make, however, is that Bergson, in order thus to relate the vibrations and the colour, has access to both. of thinking has carved up into a million pieces, everything is altered. We have only to grow an Arditron camera ° to see quite clearly an object exposed to view for a millionth of a second, or a Wilson cloud-chamber to observe the track of an alpha-particle moving at a speed which approaches that of light, or a Geiger counter to hear an electron announce itself. The particles of physics are, it is true, not directly perceptible; nevertheless they are (as our generation is not likely to forget) 'objectively real'. Different orders of being are differently discerned. The physicist grows extra-corporeal organs which scale him down to sub-sensory levels whose spaces and durations and motions are <u>mathematically</u> discerned -- and mathematics is not a tool for probing nature to the depths, but rather the rationale of the depths. The equation really belongs to the level it treats of: it is written in the native language, untranslated.

In fact, while 'sensation' is generally taken to be its distinguishing mark, the specious present contains every type of experience and of object. 'Pure sensation', even when we are very drunk or very young, probably never occurs; \times and certainly there is no lack of instances in which the immediate data of sense contribute little to the content of our specious present. Even in ordinary perception at the human level, the sensory elements are often quite trivial compared with the total datum. I have only to hear a footstep to be keenly aware of the whole man (with all that word connotes); and, if I recognize the footstep, it comes to me charged and filled out with a whole life-history, and meanings extending over huge expanses of space and time --- all of which is presented to me now, in one piece with the sound that I hear. And when I contemplate the present geological epoch, or the twentieth century, or the period of a wave-motion of red light, my object is still less a thing of sense.

Obviously, then, it is no good trying to limit the specious present by artificially dividing its content into a sensory part with a time-span of a second or two, and a non-sensory part with an indefinitely variable time-span. * For (in the first place) such a division is extremely difficult, if not impossible; and (in the second place) the object-as-actuallyexperienced could not survive the operation; and (in the third place) the attempt arises out of a fundamental misconception --- namely, the belief that objects which are for us mainly or wholly non-sensory are really sensory. That is to say, for beings better qualified than ourselves to observe them, they would appear in the guise of sense experience. Given a more commodious specious present (it is said) we should perceive the continents changing shape and mountain ranges rising and falling; and given a less commodious specious present (it is sometimes added) we should perceive the motions which underlie matter. Imprisoned as we are in our very limited specious present, we can only imagine or postulate minds capable of such perceptions: we cannot possibly enter into their experience. Now this view is, I am persuaded, quite mistaken. What is called 'conceptual experience' is no more an imitation of, or a poor substitute for, perception, than perception is a kind of diluted sensation. If, in my experience, a class of object has the character of being chiefly non-sensory, that is no reason for assuming this character to be subjective, or a species of secondary or tertiary quality of the object; on the contrary, I have every reason to take it as genuinely objective ---

° This is an ordinary camera using a highspeed plate and an open aperture. The object, which may be a shell travelling at thousands of miles an hour, is exposed by means of a flash lasting, say, a millionth of a second and having five million candle power. The flash, which is produced by passing an electric current through an argon discharge-tube, is released by means of an electronic trigger. The significant facts for this inquiry are (1) that we see the flash, notwithstanding its brevity; and (2) that by means of this flash we see, though less directly, an object travelling at several times the speed of sound --- we see it as still, and in clear detail.

× This is a question which (as belonging to the psychology of introspection rather than to the psychology of behaviour) is not so often discussed as it used to be. See, e.g., James, <u>Text Book of Psychology</u>, pp. 12-3; Stout, <u>Manual of Psychology</u>, pp. 130 ff; J. S. Mackenzie, <u>Outlines of Metaphys-</u> <u>ics</u>, p. 58. "It may be doubted, indeed," writes Mackenzie, "whether it is possible to point to any quite simple experience of sensation. The most rudimentary beginning to which we can go back seems rather to contain in it already the elements of that future complexity which emerges as experience grows."

* H. Wildon Carr (A Theory of Monads, p. 136) in effect makes this division. He distinguishes the present temporal setting of our activity from the activity itself, and places only the latter in our specious present. "Thus we speak of the present conversation, the book we are at present reading, or we may include vast periods of time as when we speak of the present age This, of course, is not for our consciousness the specious present. Yet this application of the term present has an important bearing on its notion, for our very power to think these vast periods as present depends on our power to imagine a mind for which they would be a moment of experience. In effect we imagine the present moment, in which feeling and sensation are immediate, so extended as to embrace these long periods. And also our imagination serves us in the opposite direction. We can suppose our specious present contracted to exclude all but an infinitely small portion of its content, so that the other portions should be relegated to a past or a future as vast as the periods to which we have just imagined it extended." What Carr does not explain is how we can imagine so efficiently experience that is foreign to us, or why that experience should differ in kind from our imagination of it. He fails to see the full implications of his own doctrine that, when we pass from one space-time system to another, space-time does not seem to alter, but adjusts itself to our cheznous attitude. (Changing Backgrounds in Religion and Ethics, pp. 117 ff.)

pending further evidence. It will be time enough to postulate inaccessible grades of experience when we have exhausted the possibilities of those that are accessible. Till then, let us take this moment of experience of ours as we find it, with its varying ingredients of sense and of 'intellectual construction', and not assume prematurely that it is in any way inadequate to the requirements of its contents whatever their hierarchical grade. Let us explore the universe in the Time Machine of which we are all owner-drivers, before we spend too much time trying to design a better model. °

Taking, then, our own experience seriously, we refuse to say that events are 'in reality' any more perceptible or less perceptible, any bigger or smaller, any faster or slower, than we find them to be. We take the data of each level as they are given at that level, without confusing them with the data of other levels. Time-levels will not mix. The inhabitant of one level does not play truant in order to enjoy the fun of seeing all things move at fabulous speed lower down, or to wonder at the immobility of the higher levels; for he cannot take the tempo of one level to the objects of another. Suprahuman beings as such do not become involved in the hurry below, any more than infrahuman beings as such become bored with the frozen stillness above them. Each order takes its time, its own time, and is not concerned with the time of others. "For inframolecular occurrence, a second is a vast period of time", Whitehead tells us: + I should say that it is no time at all --- it lies beyond the temporal horizon. What we may not do is to use the space and the time and the tempo of one level to discredit or detract from those of any other level. Provided we avoid confusions of this kind, we are at liberty, of course, to relate and hold together all the levels of the hierarchy in a single time-structure. As Sir Thomas Browne truly says, \times we "cannot excusably decline the consideration of that duration, which maketh pyramids pillars of snow, and all that's past a moment" --- but neither can we excusably decline the reconsideration of time, which restores to the pyramids and all other things their proper lease of life.

And, after all, there is nothing obscure or eccentric in this doctrine.* When I examine a droplet of pond-water under the microscope, I do not remain aloof. The space of its creatures becomes my space --- the droplet is my adopted country, no less commodious than the space of the country I have just left. And the speed of its creatures is by no means startling: it would not be so very different if I were looking at the swimmers in a bathing pool. It is only afterwards (if at all) that I come to realize, by a secondary and sophisticated reckoning, that the fast-swimming animalcule would, in our human world, be practically stationary. My microscope is my bridge and passport into another land, at whose frontier I must exchange all my old spatio-temporal currency for the coin of the realm which I am entering. ϕ It is the same when, by means of a telescope, I enter the heavens. At once I begin, without taking thought, to use the language of the heavens --- saying, for example, that one body is <u>slowly</u> approaching another, and I shall not change my opinion if you point out that slowly here means thousands and millions of miles an hour. Relativity is the architectonic principle of the hierarchy: the absolute Newtonian space which "remains always similar and immovable",

° H. G. Wells' famous story The Time Machine owes much to the ruthless way in which he mixes temporal levels. But some five years before this book, William James had written, "Suppose we were able, within the length of a second, to note 10,000 events distinctly The motions of organic beings would be so slow to our senses as to be inferred, not seen. The sun would stand still in the sky.... But now reverse the hypothesis and suppose a being to get only one-thousandth part of the sensations that we get in a given time, and consequently to live a thousand times as long. Winters and summers will be to him like quarters of an hour. Mushrooms and the swifter-growing plants will shoot into being so rapidly as to appear instantaneous creations; annual shrubs will rise and fall from the earth like restlessly boiling water-springs ... " (Principles of Psychology, i p. 639.) But suprahuman beings do not spend their lives inspecting mushrooms and shrubs, and infrahuman beings are perfectly indifferent to the sun's appearance: the law of equality ensures that we do not, in fact, live in the kind of world that James describes.

+ Modes of Thought, p. 216.

× <u>Urn Burial</u>, V. 5.

* It is implied in the celebrated Weber-Fechner law, which states (with approximate correctness) that, in any given kind of perception, equal <u>relative</u> differences are equally perceptible. For instance, the difference between the speed of two men swimming at 2 and 2¼ <u>miles</u> an hour should be as easy to perceive as the difference between the speed of two animalcules swimming at 2 and 2¼ <u>feet</u> an hour. Our perception of all kinds of magnitude is relative to the 'level' of the object, but absolute in respect of our 'field'.

φ Cf. H. Wildon Carr, in <u>Contemporary</u> <u>British Philosophy</u>, i. p. 109. and the absolute Newtonian time which "flows equably without regard to anything external", are at every new level repudiated. The fact is that relativity (in the broad sense), so far from being a complex and esoteric doctrine, is simplicity itself. I cannot speak without bearing witness to it, as when I say that ants run like mad, yet trains creep along vexatiously at ten miles an hour; that a White <u>Dwarf</u> is a kind of star, yet a Flemish <u>Giant</u> is a kind of rabbit; that it is a long while to supper-time, yet all too near quarter day --- and so on indefinitely.

In other words, the spatial-temporal texture or mesh of my field is always changing to suit the hierarchical status of the field's content. It is not that I can make this adjustment, but rather that I live by doing so. How do I find my way about the country at two or three miles an hour, unless I first go over the ground at several thousand miles an hour --- on the map? How do I learn history, if not by condensing continents to squareinches and dynasties to minutes, and then expanding them again? How can I even speak of a millennium, or the briefest period which physics recognizes, or any other lapse of time, except by taking it as existing all at once for me now? ° How can I do any job, or study any subject, but by continually manipulating the spatio-temporal scale of it? I play the concertina with space and time and motion. In me the worm's-eye-view and the bird's-eye-view must alternate. What I cannot sometimes see as a whole I cannot efficiently work upon in detail. Nothing is achieved without vertical mobility; thus in the present work I must all the while travel between the region where it is a book and the region where it is no more than a sentence or a single word --- this word. What I cannot sometimes see as done I have not the faith or the courage to undertake.

6. THE SPECIOUS PRESENT AND FOREKNOWLEDGE

Common sense draws attention to a serious dilemma. If, on the one hand, by extending the scope of our specious present, we can know what is ordinarily future for us, then our freedom is an illusion and there is no escaping the fate which the future holds for us. But if, on the other hand, the future cannot be inspected because it is still to make, then it is the elastic specious present of this chapter, and not our freedom, which is illusory. Either our freedom limits our foreknowledge, or our foreknowledge limits our freedom.

If ignorance is not only bliss but freedom, and knowledge not only misery but bondage, then the universe is indeed a damnable contrivance. But in fact most of the indications are all the other way. We say, that knowledge is power, and it is universally admitted that foresight sets us free from innumerable restraints. • Of course the ignorant man may believe he is as free as the wind, while the knowledgeable man is keenly aware of the limits to his freedom; but there can be little doubt as to which exercises the greater liberty. It is not, however, to our very partial and qualified foresight that common sense objects, but to definitive knowledge of the future. Obviously some insight into what is to come makes for freedom; but too much could only have the effect of show-

° Cf. F. H. Bradley, <u>Appearance and Real-</u> <u>ity</u>, p. 208.

St Bonaventura says that Scripture (I quote Gilson's summary) "convinces us that the history of the world is integrally one, and that it is working out from beginning to end like a poem of parts marvellously coordinated: and just as a man can see the beauty of a poem only if he can embrace it in its totality in one mental act, so he can see the beauty of the universal order only on the same condition. Thus it is that Scripture makes up for the brief span of our life, which of itself would cut us off from all that is past and all that is to come, by setting before us the whole picture shown in the perfection of its unity." (Etienne Gilson, The Philosophy of St Bonaventure, p. 115.) Mohammed in the cave of Mount Hira saw human life as the beat of a gnat's wing, in comparison with the splendour of the Divine Unity. "The evangelist", writes Dr Inge of St John, "is constantly trying to transport us into that timeless region in which one day is as a thousand years, and a thousand years as one day." (Christian Mysticism, p. 52.) Nor is this insistence upon 'vertical mobility in time' confined to the pious. Bertrand Russell has written, "Whoever wishes to see the world truly, to rise above the tyranny of practical desires, must overcome the difference of attitude towards past and future and survey the whole of time in one comprehensive vision." (Mysticism and Logic, p. 22.)

• As Gerald Heard well says, "No effort is possible unless time is seen through." (<u>The</u> <u>Creed of Christ</u>, p. 185.) But to experience anything at all is to do so in a present moment which abolishes, in one small area, the distinction between past and present and future. But the present content of the moment of experience cannot remain merely present: it is projected from the Now upon the Then. Thus Whitehead, "Cut away the future, and the present collapses, emptied of its proper content. Immediate existence requires the insertion of the future in the crannies of the present." <u>Adventures of Ideas</u>, XII. 1.

"Sufficient for the day is the evil thereof! To shape the whole Future is not our problem; but only to shape faithfully a small part of it. The general issue will, as it has always done, rest well with a Higher Intelligence than ours." (Carlyle, <u>Past and</u> <u>Present</u>, IV. I) Moreover there are jobs, as Mr C. S. Lewis has pointed out, "where it is essential that one should <u>not</u> know too much beforehand... things one might have to say which one couldn't say effectively if one had prepared them." (<u>Perelandra</u>, p. 27.) Cf. <u>Mat</u>. VI. 34; X. 19. ing that freedom to be a fiction. The question that common sense puts, therefore, is whether the enlarged specious present can give us precise knowledge of (what is normally) the future, or only so much information as is conducive to our freest and most effective action now.

The answer, which is implied in the foregoing pages, is a matter of drawing the necessary hierarchical distinctions. The higher the status of my object, (that is to say, the remoter my correspondent) the more extensive the period of its life-history which is present to me, and the clearer the presentation. There is no getting over those natural limitations which make it what it is. No doubt the hierarchical procedure which sustains the object is vertical, but all the perspective views in which it figures are horizontal. In other words, I cannot look out of one level into another, and I cannot know more about a level than is knowable at that level. × Knowledge must be proportionate to the given object; too much is knowledge of something higher, and is therefore -- in a certain sense -- false. Paradoxically, as we descend the hierarchy, true knowledge consists in knowing less and less. In particular, it consists in knowing less and less about the future of our object.

At the lowest hierarchical levels, in that case, we should expect to find an indeterminate future, a fundamental uncertainty: where perspective views are in the nature of things extremely short, there is no way of knowing how a particle is going to behave. It is not that we are unfortunately ignorant of what must happen, but rather that the word must does not apply to the particle, which is free to do as it pleases. Up to the year 1927 or thereabouts, this statement would have wantonly contradicted the basic assumptions of science; since then, it has become almost a commonplace. The future is no longer strictly determined from the present. The observer of single electrons is handicapped by an essential ignorance or bias, which makes prediction impossible. * (It is true that some physicists are not content with this situation, and look forward to some new synthesis which will reinstate strict determinism. Einstein, for example, declares that he will continue to seek a causal theory which shall end the reign of "the God at dice" --- der würfelnde Gott. But the majority of scientists are inclined to believe that the statistical principle of limited, (but cumulative) certainty has come to stay.) +

The statistical principle that predictability increases with numbers, and the hierarchical principle that increase of numbers eventually means hierarchical ascent, combine to suggest that at the highest level all uncertainty disappears. Towards the base of the pyramid, the object and knowledge of the object diminish <u>pari passu</u> to vanishing point; towards the apex, they approach completeness. \otimes Here, presumably, all the vagueness for which pastness and futurity are responsible is ended ---- not by means of perfect foreknowledge or predestination on the one hand, and perfect memory or revival of the past on the other, but by the coexistence in one specious present of time's total content, so that the categories of past and future no longer apply. And, just as the scientist confirms our picture of the indeterminate base, so the mystic confirms our picture of the determinate apex. \oplus The contemplative (whose special gifts and training enable him to explore the highest levels, in the same way that those of the scientist enable the scientist to explore the low-

× Cf. Spinoza (Ethics, IV. 64): "The knowledge of evil is inadequate knowledge. The knowledge of evil is pain itself in so far as we are conscious of it. But pain is a transition to a lesser state of perfection, which on that account cannot be understood through the essence itself of man. And accordingly it is a passion which depends on inadequate ideas, and consequently the knowledge of evil is inadequate. Hence it follows that if the human mind had only adequate ideas it would form no notion of evil."

There is indeed an ignorance of evil that, in Mr C. S. Lewis's words, "comes from doing it, as men by sleeping lose the knowledge of sleep". (<u>Perelandra</u>, p. 240)

* See, e.g., Professor Max Born's <u>Natural</u> <u>Philosophy of Cause and Chance</u>. Born is amongst the scientists who consider that the Newtonian idea of causality (according to which the total future of even the smallest particle is already settled irrevocably) has gone for good. But he quotes two letters from Einstein, in which the latter expresses the hope that, beneath the present chaos, a strict pattern may one day be found.

+ Notice that I do not try (as some have rashly done) to base human freedom on anything so precarious as the 'freedom' of electrons. But neither do I perversely refuse (with some others) to see any connection between infrahuman and human non-determinism. It is highly significant that von Neumann and others claim to prove that, in the nature of things, the behaviour of the individual electron in a radioactive substance is unpredictable.

⊗ It is important to distinguish between the individual unit and the mass. For the law of symmetrical Pairs means that extremes meet; and that when infrahuman units are considered on a big enough scale, so far from being notably unpredictable, they begin to take on the suprahuman characteristic of being notably predictable.

⊕ Thus eternity, as Milton says in his poem 'On Time', is a triple triumph ----"over Death, and <u>Chance</u>, and thee O Time". But very often Milton puts God in time, while His knowledge transcends time. "So extensive is the prescience of God, that he knows beforehand the thoughts and actions of free agents as yet unborn, and many ages before those thoughts or actions have their origin." (<u>Treatise of Christian Doctrine</u> (Bohn), iv. p. 27.) It is such confusion of levels which gives rise to the bitter and interminable controversy over predestination. est levels) assures us that "God hath always an everlasting and present state, His knowledge also surpassing all motions of time, remaineth in the simplicity of His presence, and comprehending the infinite spaces of that which is past and to come, considereth all things in His simple knowledge as though they were now in doing. So that, if thou wilt weigh His foreknowledge with which He discerneth all things, thou wilt more rightly esteem it to be the knowledge of a never fading instant than a foreknowledge as of a thing to come." ° The author of these words was undoubtedly more philosopher than mystic, but in them he sums up a doctrine which the mystical consciousness has in all ages supported with remarkable consistency.

As for man, midway between the depths which are sacred to science and the heights which are sacred to religion, we have only to consult common sense to get a clear verdict. With our very limited specious present goes our very uncertain future. We see no further into the future than is good for us, no further than our free human activity requires.

The picture that emerges, then, is of a hierarchy of beings whose symmetrical grasp of time is proportionate to their status. This does not mean that an event which is still future and indeterminate at one level is present and determined at a higher level: for that event, as such, exists only upon its own level and is quite incapable of playing truant. Ø It does not mean that, though I seem to be free at the human level, I am not really free, seeing that what I am going to do is for some suprahuman intelligence a foregone conclusion: for a suprahuman intelligence, as such, can only know the universe in terms of his peers. * All that is known about this human level is known at this human level, where visibility is poor and there are no long vistas. I do not deny, of course, that the events of this level are included in, and are (so to say) the raw material of, the events of higher levels: doubtless the larger outlines of what is going on here are clearly seen there, but just how the outlines are filled in with events of lower status cannot be seen. † I see a man wave his arm, and the gesture is contained as a whole in my specious present; but (it may be said), for the cells and molecules participating in this movement, some parts of it are past history and others are future possibilities. Very likely (I reply), but since molecules and cells have no notion of human gestures, and I am incapable of investigating molecular and cellular events while I am attending to the human, the temporal discrepancy is of no more than academic interest --- if, indeed, it can be said to exist at all. Certainly I cannot be accused of interfering with the freedom of a cell or a molecule to do as it likes, simply because I perceive one of the larger historical patterns to which it hiddenly contributes. Neither need I fear lest the prescience of my hierarchical superiors should curb my human liberty.

But of course the real problem presents itself when we come to the apex of the hierarchy. If experience at the highest level is above time, perfect, and all-embracing, how can the freedom of the lower levels be anything more than a local appearance, which a superior reality corrects? What, in other words, is the solution of Locke's puzzle --- "I cannot have a clearer perception of anything than that I am free, yet I cannot make freedom in man consistent with omnipotence and omniscience in

° Boethius, <u>The Consolation of Philoso-</u> <u>phy</u>, V. 6.

Ø To use the old terminology, the realm of chance is sublunary, but the sort of occurrence which is there undetermined is not the sort that is determined in more exalted spheres.

* Thus Plato was justified, yet was not justified, in regarding augury as the art of fellowship between gods and men. While the gods may be said to see further into the future than men can do, what they see is not human.

† As Ward says, the total possibilities are fixed; but, within these, contingencies are open. (<u>Realm of Ends</u>, p. 315.) He goes on to quote Martineau: "An infinite Mind, with prevision thus extended beyond all that is to all that can be, is lifted above surprise or disappointment... yet, instead of being shut up in a closed and mechanized universe, lives amid the free play of variable character and contingent history. Is this a <u>limitation</u> of God's foresight, that He cannot read all volitions that are to be? Yes, but it is a <u>self limitation</u>.... lending us a portion of his causation, He refrains from covering all with His omniscience." God, though I am as fully persuaded of both as of any truth I most firmly assent to"? $^{\circ}$

Now I am neither able nor willing to add appreciably to the immense literature on the subject of predestination. For me, the truth of the matter (as I have already said at some length) is that the level of the Whole is the level of mystery and wonder, where all lines of explanation end in the inexplicable. But I have also urged that the Whole which is above reason is nevertheless reason's goal, where the intellect is not finally thwarted, but finally satisfied. Accordingly it ought to be possible to show that there is no affront to the reasonable part of our nature, no shocking absurdity or contradiction, in the belief that, while the Whole is omniscient, man is free. Here we must expect the mysterious and the incomprehensible, but not the irrational, or mere fatuity. In the following paragraphs I try to show how the doctrine of the hierarchy confirms this expectation.

Already in Greek philosophy we find two sharply contrasting views of the nature of God --- the God of Plato, who as the "shepherd of the sheep", the "father and fashioner" of us all, and the providence which looks after the world He has made, is very much involved in the lower levels; and the God of Aristotle, whose thought is unmarred by the contemplation of anything less than His own perfection, and who seems to be sublimely unconscious of the existence of inferior levels, to say nothing of their inhabitants. × By itself, neither of these doctrines is satisfactory. The first sacrifices God's status in favour of His knowledge; the second sacrifices God's knowledge in favour of His status. The first compromises our freedom, while the second compromises the divine power. What we need, then, is a higher synthesis, in which the positive aspects (God's status and omniscience, and our freedom) of these conflicting doctrines are reconciled and preserved, and their negative aspects are overcome. + And Chapter XII showed, I think, that such a synthesis is not impossible. Everything pointed there to a divine descent to the very depths of nature --- a real descent which neither violates the local laws and limitations of the lower levels, nor violates the perfection of the highest; indeed, the down-coming from the absolute perfection of the Whole to the absolute privation of the Centre, so far from spoiling that perfection, belongs to its very essence and is its supreme illustration. Moreover this descent, and the ascent which is its counterpart, takes every hierarchical route in time and space --- some routes are doubtless more open to the vertical traffic than others (one, perhaps, is uniquely open), but no route is passed by, for its existence is inseparable from its use. The divine descent-ascent includes in its sweep the entire depth and breadth of the hierarchy, its total membership and its total duration. Thus the Whole knows, by coming down to each level, all that is to be known about that level at all times --- and knows this, not by duplicating or imitating it, but by direct participation, and subject to all the limitations which are characteristic of that level. (In what sense, then, is it the Whole which has this inferior knowledge of inferior things? \otimes Only in this sense: that the Whole remains in perfect organic unity with every inferior level, preserving, without sacrifice of distinctions, the indivisible unity of the hierarchy. For the Whole, the vertical traffic is such that contact is never lost with any part of the system, which is nevertheless a system of pro-

° It is a very remarkable and significant fact that those men who have believed most in predestination have, on the whole, been those whose actions have most clearly shown their belief in human freedom. The Greeks, who were never tired of demonstrating the futility of striving against inexorable fate (e.g., Sophocles, Antigone, 622-4, etc.), were not remarkable for an attitude of fatalistic inactivity; neither were the Essenes, whose beliefs (according to Josephus) left no room for human freedom. Islam managed, in its early days, to combine a strong tendency towards fatalism in doctrine with enormous energy in practical affairs. St Augustine, though denying that God's foreknowledge of sin makes it necessary, firmly believed in the election of some men with the consequent reprobation of the rest: yet he wore himself out to gain converts. And Calvin appears never to have been troubled by any inconsistency between his prodigious efforts to save souls and his unshakable conviction that their salvation or perdition was already known from all eternity. In short, the problem of how to reconcile the divine foreknowledge with human freedom is already solved in practice: only a satisfactory theoretical solution is lacking.

× <u>Metaphysics</u>, XI. Nevertheless the God of Aristotle has an important relation to the world --- He moves the world by being the object of its desire. And Aristotle describes the Gods as showing kindness to those men who lead the life of the intellect. (<u>Nic. Eth. 1179a</u>.) The Gods of Epicurus and his followers live a life entirely aloof from the lower world; living in perfect peace of mind, they feel no concern whatever for human beings good or bad. (See, e.g., Lucretius, <u>De Rerum Natura</u>, III.)

+ St Bonaventura has an ingenious if unconvincing method of reconciling the divine knowledge with the divine perfection. God knows things by His ideas, which are not in Him distinct from His very nature. The fact that all knowledge is an assimilation does not, in this case, mean that God is assimilated to anything inferior to Himself. (Gilson, <u>The Philosophy of St</u> <u>Bonaventure</u>, p. 155.)

© Cf. the (heretical) teaching of Erigena, who argued that foreknowledge cannot be predicated of God who is above all temporal distinctions, and that, since sin and defect are unreal or mere privations of reality, they cannot be caused by God or known to Him. Consequently there is neither election nor reprobation. I cannot see how we can avoid some such view as this if we are thinking of God at His own level, of the God who does not come down. gressive limitation. There is nothing half-hearted or unreal about this self-division, this divine forgetfulness. To put the matter crudely, God doesn't let His right hand know what His left is doing, because if He did so they would no longer be hands, but head. °)

Each hierarchical order has its charter of freedom, guaranteed by the fact that the hierarchy is vertically and not horizontally co-ordinated. The unobstructed floor-areas of the upper storeys cannot demolish the partitions which, on the lower storeys, seal off the innumerable cubicles; the proper channels of hierarchical intercommunication do not overflow. By using one vertical channel, the Head of the organization knows what is happening to men in the year 1950, and by using another what is happening to them in the year 2000; but, seeing that He has this knowledge at the human level, He does not know in 1950 what He knows in 2000 --- the two items of knowledge are separated by an impregnable wall which, by defining our limits, sets us free.

Or rather, one half of our freedom is thus secured. The other half arises from the fact that we are not imprisoned on the middle floor of the structure. A question of hierarchical symmetry, freedom involves acquaintance with the future no less than insulation from the future, increasing acceptance of a necessity which is increasingly foreseen no less than increasing refusal to allow the future to compromise the present. + Real freedom is not to be had at one level, with its too-simple distinction between present and future time: neither mere ignorance of what is to come, nor mere knowledge of it, is enough. No one is set at liberty simply by knowing less and less or simply by knowing more and more: somehow these two must be combined. We are free in so far as we progress symmetrically to our twin goals --- the Whole and the Centre.

The foregoing remarks are not an explanation of what is, after all, inexplicable, and I am well aware that they raise many questions (of which the problem of evil is the chief). Yet, inadequate as they are, they may perhaps do something to show that the divine foreknowledge and human freedom are not flagrantly incompatible.

7. <u>CORRESPONDENCE-TIME, STRUCTURE-TIME, AND THE SPE-</u> <u>CIOUS PRESENT</u>.

In Part IV of this inquiry, which here comes to an end, I have been discussing some general aspects of hierarchical time, preparatory to a more detailed historical treatment in Part V. Each of the three chapters on time has developed a particular notion -- correspondence-time, structuretime, and the specious present, respectively -- but so far they remain insufficiently co-ordinated. This final section, therefore, is an attempt at synthesis.

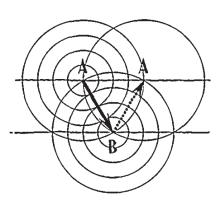
My time is not my own, but my object's. \times It is the time that my object takes to build up from nothing at its Centre (A) to its full status here in me its regional observer (B). Now there are three ways of describing this building process. The first (the 'subjective-objective' way of Chapter

° This suggestion of mine has affiliations with the theory that, while God's sustaining energy gives actuality to a human deed, man's free will settles its character. Cf. the Thomistic doctrine of the divine concurrence. Providence is the First Cause who governs through secondary causes which are either necessary and natural, or (in the case of responsible human actions) contingent and voluntary. But both kinds of secondary cause, though set in motion by God, retain their own character: in particular, man's will is free. The perfection of the universe requires creatures of every degree, some of whom have free will; and this involves the risk of evil. But while I accept St Thomas's insistence upon keeping clear hierarchical distinctions, I cannot accept his denial that there is any substantial communication of being between God and creation. At least I cannot understand what this denial really means.

+ Thus the mystic must look much farther ahead than the ordinary man, to the ultimate triumph of the good; yet he must not look ahead at all, but must learn to live in the moment. "The docile soul will not seek to learn by what road God is conducting it. When God makes Himself the guide of a soul He exacts from it an absolute confidence in Him, and a freedom from any sort of disquietude as to the way in which He conducts it The divine action is ever fresh, it never retraces its steps, but always marks out new ways. Souls that are conducted by it never know where they are going." De Caussade, Abandonment to Divine Providence, p.59. In other words, to be in touch with the highest storey where all time-barriers are gone, you must descend to the basement where they are multiplied to infinity.

× "Eternal Death to thy own hapless Self, if thou heed no other.... Thy future fate, while thou makest <u>it</u> the chief question, seems to me --- extremely questionable!" Carlyle, <u>Past and Present</u>, III. 15. XV) describes it as between A and B; the second (the 'objective' way of Chapter XVI) describes it as projected upon A; the third (the 'subjective' way of this chapter) describes it as culminating at B. In the first case the object develops in <u>our</u> time and space; in the second, it develops in <u>its</u> time and space; in the third, it develops in <u>my</u> time and space. But there is one object, one observer, and one shared spatio-temporal frame. These three chapters have been concerned with what is, in fact, a single process --- the ascent of my object from the base of the hierarchy to the level which we share. °

But this movement is continuous and (particularly around the middle grades of the hierarchy) very complex: it must be pictured as a broad river whose currents flow at many different rates and throughout its length, rather than as a ship steaming along the river at a steady and unambiguous speed. Consequently we should not expect our three versions of the time of ascent to agree at all closely. Correspondence-time is subject to delays, and communications are not always promptly replied to; structure-time varies as between individuals of the same grade, and as between the various phases and employments of the same individual; the specious present may be just sufficiently commodious to disclose an object that is solid but immobile, or one that has imperceptible but discoverable motion, or one that is visibly moving, or one engaged in such a swift behaviour-pattern that the object itself is in danger of vanishing into the pattern. And all these variations may occur at a single hierarchical level, without involving any real change of status. It follows that we cannot, without very careful definitions and qualifications, determine at all exactly our object's time-span or time of ascent; still less can we simply equate its three versions. So long as we are speaking in general terms, the most we can hope to do is to state the order of time-span proper to each level. Thus the galactic is upwards of a million years, the sidereal upwards of ten years, the terrestrial of the order of a day, and so on down to the lowest levels where (as in the case of X-rays) a million-millionth of a second is an age. We can safely say that the threefold time-span of a hierarchical unit, like its space, decreases in an orderly fashion as we descend; but both spatial and temporal dimensions are subject to wide variations within each, grade or level, particularly around the middle of the hierarchy. And we may add that the unit's spatial dimensions are less manifold, and as a rule less difficult to measure, than its temporal dimensions. Indeed I think it unlikely that, at the middle levels, any exactitude is possible: what is most characteristic here is least measurable. Once more, it is to the remoter levels that we have to go for exactness.



° An illustration (or rather a one-level instance) may help. My correspondent writes the date and his address at the head of his letter, which he knows I shall get the next day. Now this address (house, road, town, county) has three aspects --- it specifies my friend, his location or 'structure'; it lists the regions through which it must pass on the outward journey to me; it is something I experience here. But the three times involved (the time of writing, and delivering, and reading) are all different. Yet, from another point of view, they are practically the same; inasmuch as my friend, addressing and dating the letter, refers forward to the time of its arrival, and I, reading it, refer back to the time of the writing. And the time-span in both these instances is the time the letter is in transit. This is, of course, an oversimplification, even so far as letters are concerned, but it does give the general idea.

PART V

Ere I storm with the tempest of power the thrones and dominions of old, Ere the ancient enchantment allure me to roam through the star-misty skies, I would go forth as one who has reaped well what harvest the earth may unfold; May my heart be o'erbrimmed with compassion; on my brow be the crown of the wise.

A.E., 'Love', Collected Poems, p. 153.

He who has a body capable of many things, has a mind of which the greater part is eternal.

Spinoza, Ethics, V. 39.

As the body's tenant goes through childhood and manhood and old age in this body, so does it pass to other bodies; the wise man is not confounded therein..... For to the born sure is death, to the dead sure is birth.

Bhagvadgita, II. 13, 27.

Bodily Death, the monster, becomes blessed spiritual Death to self, if the spirit so wills --- or rather if it allows the Spirit of the willingly dying God so to will in it. It is a safety-device because, once Man has fallen, natural immortality would be the one utterly hopeless destiny for him.

C. S. Lewis, Miracles, p. 156.

To be allied unto wisdom is immortality.

The Wisdom of Solomon, VIII. 17.

For to be carnally minded is death; but to be spiritually minded is life and peace.

Romans, VIII. 6.

Ignorance of Him is death.

Clement of Alexandria, The Rich Man's Salvation, VIII.

Men esteem truth remote, in the outskirts of the system, behind the farthest star, before Adam and after the last man.... But all these times and places and occasions are now and here. God himself culminates in the present moment, and will never be more divine in the lapse of all the ages.

Thoreau, Walden, 'What I Lived For'.

God created the hearts seven thousand years before the bodies and kept them in the station of proximity to Himself, and He created the spirits seven thousand years before the hearts and kept them in the garden of intimate fellowship with Himself, and the consciences, the innermost part, He created seven thousand years before the spirits and kept them in the degree of union. Then He imprisoned the conscience in the spirit, and the spirit in the heart, and the heart in the body. Then He tested them... and each began to seek its own station. The body occupied itself with prayer, the heart was joined with love, the spirit arrived at proximity, and the inmost part found rest in union with Him."

Amr b. 'Uthman al-Makki, (Margaret Smith, Studies in Early Mysticism in the Near and

Middle East, p. 201).

I know not too well how I found my way home in the night. There were witnesses, cohorts about me, to left and to right, Angels, powers, the unuttered, unseen, the alive, the aware..... And the stars of night beat with emotion, and tingled and shot Out in fire the strong pain of pent knowledge: but I fainted not, For the Hand still impelled me at once and supported, suppressed.... All the tumult, and quenched it with quiet, and holy behest, Till the rapture was shut in itself, and the earth sank to rest

Browning,'Saul', XIX.

CHAPTER XVIII.

AUTOBIOGRAPHICAL --- THE HUMAN PHASE

To have been young, and then to grow older, and finally to die, is a very mediocre form of human existence; this merit belongs to every animal. But the unification of the different stages of life in simultaneity is the task set for human beings.

Kierkegaard, Unscientific Postscript, p. 311.

For if I look singularly to myself, I am right nought; but in the general Body I am, I hope, in oneness of charity with all mine even-Christians. For in this oneness standeth the life of all mankind that shall be saved.

Julian of Norwich, Revelations of Divine Love, II.

It is not to diffuse you that you were born of your mother and father, it is to identify you, It is not that you should be undecided, but that you should be decided, Something long preparing and formless is arrived and form'd in you, You are henceforth secure, whatever comes or goes. The threads that were spun are gather'd, the weft crosses the warp, the pattern is systematic. The preparations have every one been justified, The orchestra have sufficiently tuned their instruments, the baton has given the signal. The guest that was coming, he waited long, he is now housed.

Walt Whitman, 'To Think of Time', VII.

To hold fit converse with the spiritual world, And with the generations of mankind Spread over time, past, present, and to come, Age after age, till Time shall be no more.

Wordsworth, Prelude, XIV.

I am thinking of Theodore Badal, himself seventy thousand Assyrians and seventy million Assyrians, himself Assyria, and man, standing in a barber's shop, in San Francisco, in 1933, and being, still, himself, the whole race.

William Saroyan, 'Seventy Thousand Assyrians', The Daring Young Man in the Flying

Trapeze.

I have said before That the past experience revived in the meaning Is not the experience of one life only But of many generations....

T. S. Eliot, 'East Coker'.

Peace is the serene activity which springs from the knowledge that our 'souls' are illusory and their creations insane, that all beings are potentially united in eternity.

Aldous Huxley, After Many a Summer, p. 273.

The soul, like the physical embryo, resumes in its upward progress the spiritual life-history of the race.

Evelyn Underhill, Mysticism, p. 118.

1. <u>MY HUMAN HISTORY</u>

I am something that takes time to happen. Accordingly the question 'What am I?' becomes the question 'What is my history?'. I am my lifestory --- nothing less. Not a day or hour of it, past or to come, can be spared from the whole. The observer who cannot get my manhood, and childhood, and old age, into one field of view is at the same kind of disadvantage as the observer who cannot perceive the whole of my face at a glance. His amputation of my time is as fatal as his amputation of my space, for they come to the same thing. Cutting a representative slice out The time-sections we take of people are not only abstract and to that extent 'unreal'; they are also, outside their very limited province, very dangerous. It is much easier to commit deliberate crimes against human beings when they can be labelled 'the man in the street', or 'economic man', or 'enemy personnel', or can be reduced to a set of figures, 'Remember he is some mother's son' may sound trite, but something like it is a most necessary call to concreteness. of my career will not do. For (1) I am as extensive as the field of my purposes: their spatio-temporal pattern (with roots ramifying in the past and branches ramifying in the future) is my life-pattern, organic, that living whole from which the momentary spatial pattern of my body is a bloodless and effete abstraction. And, in fact, what my body includes and what it leaves out are questions that can only be settled in the light of my aim in life. What I am for (in both senses of the phrase) is the key to what I am. (2) I need explaining, and explanation involves the restoration of missing time. Body and mind remain utterly baffling till they are seen historically. I am full of time: take away all that is not present at this mathematical instant, and nothing makes sense --- or rather nothing remains to make sense of. $^{\circ}$ (3) Half a life is only half a man: we grow up, not to mere manhood, but to a whole human life with all its ages held together in one. × But for the most part we are content with fragmentary episodes which we call men. Turning up in the middle of the other man's Act II, and hearing a few lines, I am somehow under the illusion that I have sat out the whole performance. Attending to my own performance now, I fondly imagine it has nothing much to do with the scenes of my childhood and senescence; whereas in fact all three belong in a unity which is no less indivisible than the unity of this body of mine. (4) In any case there is the compelling interest for me of my own antecedents and destiny. It is an important part of what I am that I should be concerned with what I was and shall be. I desire to know how this imbroglio in Act II arose, and how it will all turn out in the end. Ceasing to care is ceasing to live; to be only vaguely interested is to be only vaguely alive.

2. THE SYMMETRICAL RESTORATION OF TIME

The problem, then, is to restore the time that common sense is always detaching from me. There must be a symmetrical growth about the Now. As the vital centre of an inert expanse of time, as the microscopic ferment destined to leaven the whole mass, the present must work back into the past and forth into the future till all is present. + Its thrust is two-directional, proceeding with time futurewards and against time pastwards. Observe that I do not propose to fix upon some starting point in the past for my history, and to work forwards from that date in 'true' chronological order. This for three reasons: (i) I can find no real birthday, no unmistakable beginning from which to reckon, and any date I choose must therefore be arbitrary; (ii) My history, as it actually comes to me, is presented <u>now</u>, and projected thence upon other times. In my experience there is no datum-line, no moment of reference, but the Now from which I think back and plan ahead. Why should I try to reckon forwards from a birth, or back from a death, that others experience rather than myself, and that is in any case not the beginning or the end of me? (iii) In many important respects my actual organization in time, and the mode of my functioning, are symmetrical about this central moment of experience. Innumerable chains of causation, radiating from the Now, hold my future and my past together in a living whole: my present is the neck that joins the halves of this whole, not the axe that severs them.

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° Cf. Royce, The World and the Individual, i. pp. 404 ff.

× As Whitehead says, "until the death of the man and the destruction of the earth, there is no determinate nexus which in an unqualified sense is either the man or the earth." Adventures of Ideas, XIII. 3. But it is necessary to add that, in so far as we anticipate the death of the man and the planet, and recollect their childhood, they come to completeness in us now.

+ "The apprehension of past and future", says Stout (Manual of Psychology, p. 515), "... presupposes a starting-point in the immediate sense experience of the moment; and an ideal construction in two directions, on the one hand, of what has preceded, on the other, of what is to follow, the actual now."

"Empirically the past always emerges out of the present rather than the present out of the past," writes E. A. Burtt. "The world as empirically revealed always begins in the present, and remains within it while expanding into the past and the future. This may sound startlingly paradoxical --- the opposing view would, however, be much more startling if it were not so fully ingrained in our thought-habits that we never dream of questioning it Real evolution, that is, evolution as empirically discovered, is not a movement from past through present to future (such a process is itself an emergent abstraction from the course of real evolution), it is evolution from the present into both past and future." 'Real and Abstract Evolution', Proceedings of the Sixth International Congress of Philosophy, p.172. The whole of this important article is relevant to my present topic.

And this is, after all, no more than common knowledge --- the child is father of the man; we reap what we sow; our chickens come home to roost. Our past is the key to our future. In the last resort, they are one.

I have perhaps said enough to show that the symmetrical treatment of my history is the right one for this inquiry, seeing that it fits the facts. But there is a serious difficulty. If I think back from the Now into the past, do I not put time into reverse, and does not this reversal do far more violence to the facts than any one-way chronology? "For instance, now, there's the King's Messenger. He's in prison now, being punished: and the trial doesn't even begin till next Wednesday: and of course the crime comes last of all." --- In Through the Looking-Glass and Sylvie and Bruno, Lewis Carroll has made the idea familiar. To live backwards is to grow younger every day, disgorge my meals, eat my words, unthink my thoughts, be born from a coffin and die into a womb. Besides committing a million other unedifying deeds, I carefully collect all the ink from this sentence on to the nib of my pen and transfer it to the inkwell. Even more disquieting are the ethical consequences. ° The cut-throat works miracles of healing, the thief is generous by stealth, Ivan the Terrible and Gilles de Retz are kindness incarnate. Saints, on the other hand, are monsters of wickedness, leaving trails of misery everywhere. × In short (common sense points out) the reversal of time results in every kind of absurdity.

But there is something to be said on the other side. Physics (apart from its study of organization and randomness) is not interested in the direction of time's arrow --- it may point in either direction. + And the theory of relativity, which makes 'before' and 'after' depend upon the observer's position and behaviour, seems to countenance the reversibility of time. The famous adventure of the young lady called Bright * is of course quite fantastic, but the significant fact is that we can imagine her experience, and imagination is not nothing. We can, after the manner of Nordmann's reversed Battle of the Marne, or Fechner's Vier Paradoxa, or parts of H. G. Wells' Time Machine, visualize events happening backwards. † After all, films are occasionally shown, and gramaphone records played, in reverse; a musical composition takes the form of a palindrome; ϕ poetry is rendered backwards (as by Mr C. K. Ogden at the Royal Institution in December 1928); more important is the fact that there are persons who sometimes speak backwards without intending to do so. Θ That we can (however rarely and briefly) thus reverse the train of events, tells us something about their nature: they are, in some sense, reversible. But this fascinating topic cannot be pursued here.

Certainly it is not such a nonsense-world, whose values are all transvalued, that I am used to looking back upon. Then precisely how do I recall the past? I do so by means of a series of backward jumps. I 'throw my mind back' rather than work steadily back, to some past event. Recalling the past is not like running down an ascending escalator so much as leaping down it, taking several steps at a bound and pausing between each bound to regain breath. Or (to change the figure) it is as if a fish progressed up a river without opposing the current: instead of swimming against the stream, it leaps clear of the water, drifts downstream for a while, then leaps again. In this fashion, by turns immersed in time Olaf Stapledon (<u>Philosophy and Living</u>, p. 411) has suggested that the 'searchlights' of individual minds may travel through the time-system in many directions, some opposite to the direction of our travel, so that our universe is experienced back to front. Cf. C. E. M. Joad, <u>Guide to Philosophy</u>, pp. 219 ff. Also F. H. Bradley, <u>Appearance and Reality</u>, pp. 214 ff.

° I mean, of course, the ethical consequences as viewed from this world, with its familiar time-direction; time-in-reverse would unmake our moral judgements while reversing their data. It will not do to make all events go backwards except 'psychical' ones. If <u>Through the Looking-Glass</u> were a philosophical treatise, the 'living-backwards' episodes in Chapter V would be quite inconsistent: the White Queen should have talked and thought backwards.

× This reversal of values is reflected in the (reputed) use of the Lord's Prayer said backwards, as a witches' incantation.

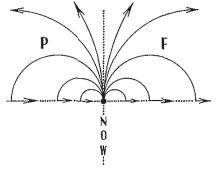
+ Cf. Eddington, <u>The Nature of the Physical World</u>, pp. 68-9.

* There was a young lady called Bright Who could travel much faster than light; She went off one day, In the relative way, And came back the previous night.

† Cf. Ezekiel's valley of dry bones. Some doctrines of the resurrection of the body virtually involve the reversal of time. Donne, for example (Sermon at St Paul's, April 9, 1626) pictures God collecting each man's dust, recompacting, and finally reanimating, his body. As a child, I was given an edifying book which forecast in great detail and with utter seriousness the results of the Second Coming; I particularly remember a skull crashing through a glass case in a museum, in its haste to join the rest of its body.

 φ E.g., Berg's Adagio (Chamber Concerto) in twelve-note music.

θ Macdonald Critchley, Mirror Writing.



and above time, it ascends towards the source, yet without breasting its flow. Thinking ahead is much the same: I live in the stream and I soar above it. In it I conform to its direction; above it I am free to move as I please. And all my excursions are made from this central Now, midway between the river's source and mouth. This is my base, and my lines of communication are never out. In a sense, I never leave it, but only send out projections.

My thesis is that these projections or excursions are not only more or less symmetrical: they are also the halves of a whole. What Berdyaev* says of the philosophy of history is true of my own history: it is "the prophetic exegesis of both the past and the future", which must be held together. "A cleavage between them precipitates us into darkness and makes the historical process unintelligible. Such a cleavage is effected by all those who feel themselves to be divorced from the great historical past and who have no knowledge of the great historical future.... Only a prophetic vision of the past can set history in motion; and only a prophetic vision of the future can bind the present and the past into a sort of interior and complete spiritual movement." + It is with such a two-way prophecy that I am concerned in this part of the book. ×

3. THE SYMMETRICAL RESTORATION OF TIME, IN PRACTICE

Certain doubts remain. Do not histories, biographies, chronologies of every sort, start with the primitive, work up to the recent, and then go on, perhaps, to forecast the future? And is not this true to life? To make all events fan out from my Now, as if that point of time were uniquely privileged, the mid-point of universal history, is surely to overrate my importance. Objectively considered, time is (according to common sense) a great smoothly flowing river, in which my salmon-like behaviour is quite incidental.

But <u>is</u> it incidental? The manner in which time unfolds in me and to me is, I cannot but suppose, typical of the way it unfolds in and to all other individuals; the differences are differences of temporal scope, not of basic procedure. There is no time outside experience of time, which must be taken as it is found. Moreover I do not find it at one level only --- I can, on certain conditions, find out how time goes at all hierarchical levels. I must never forget that this present moment of mine is the temporal focus of a galaxy and a star no less than of a mammal, and my excursions from it into past and future are suprahuman and infrahuman no less than human. Whatever chronologies I may subsequently construct, the primary datum at all levels is concentric or symmetrical time. And this primary or natural configuration of time remains as the practical basis, the form of behaviour. It works.

My present business is with the human level: let me then illustrate from this level how practical issues make free with time, working pastwards and futurewards, yet without putting time into reverse. A man is found shot dead. This is how the detective reasons --- the state of the * Berdyaev owed much to Fedorov's doctrine of universal resuscitation. "Resuscitation stands in opposition to progress, which comes to terms with the death of every generation. Resuscitation is a reversal of time, it is an activity of man in relation to the past and not to the future only. Resuscitation is also opposed to civilization and culture which flourish in cemeteries and are founded upon forgetfulness of the death of our fathers..... In Fedorov the energy of sex is turned into the energy which revivifies dead fathers.' Berdyaev, <u>The Russian Idea</u>, pp, 211, 215.

+ The <u>Meaning of History</u>, pp. 40, 41. Cf. Kierkegaard, <u>Unscientific Postscript</u>, p. 311.

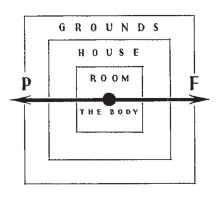
× In Denis Saurat's <u>Death and the Dreamer</u> (pp. 79 ff.) there is recorded the curious notion that time began at the Incarnation, and expands pastwards and futurewards from that centre symmetrically, so that events of the year 200 B.C. are similar to events of the year 200 A.D., and so on. Time resembles the sound from a gong, in that it moves outwards to left and right, and does not come from the left, pass through the gong, and flow on to the right. corpse and the nature of the wound being what they are, the shot must have been fired from over there at such and such a time; the room with its openings being thus and thus, the killer could only have entered by that window; the grounds outside, the footprints, the fences, are such that he must have come in from the road at that spot, and presumably at such and such a time and so on, back into the remoter past and the widening field of action, where the motive for the deed may be found. But this view into the past needs to be balanced by an equal foresight. What benefits are coming to the murderer? How will he get rid of the weapon, or dispose of his gains? What will be his next move, and when, and against whom? In short, one-way chronology is for the detective out of the question, except as the form which his final report may take, and as a theoretical frame of reference applied to his practical activity. The activity itself proceeds upon another plan altogether.^o

Detectives are not abnormal people: they only do systematically what other men do casually. How do I come to think of my childhood? Some event now --- a word, a book, an old tune, a scent --- 'takes me back' over the years. How do I come to anticipate my old age? Some present stimulus --- an insurance agent, still more grey hair, rheumatic pain --- invites me to look ahead. All my exploration in time has Now for its base-camp,× whether the field of research is my history as man, or as Humanity, or as Life, or some still more time-inclusive region. The chronology of the school history-book conceals the great and ever-renewed backward leaps whereby the historian wins back to his remote stations in past time; still less manifest is the indispensable counterpart --- the great and everrenewed forward leaps whereby the prophet and the saint, the reformer and indeed all thinking men, arrive at their equally remote stations in future time. One-way biography or autobiography is full of defects. It leads to the choice of arbitrary starting points and finishing points; it lends support to mistaken notions of mortality and immortality; it artificially severs the organism from the environment; it encourages our disastrous tendency to disown our individual and racial past; + it ignores the essential symmetry of our history and all history, and fails to bring out the true unity of past and future. * That there is a great deal to be said for the two-way biographical method which corrects these defects, will, I hope, become clear in this and the following chapters. The final test lies in the results.

4. THE SEVEN AGES OF MAN

When I restore that temporal fringe of me which common sense is always trimming, what, in the plainest terms, do I find?

Looking in one direction, I find first adult life, with its full range of experience, full acceptance of responsibility, full powers of mind and body; next comes youth, with all these narrowed down in varying degrees; then childhood and infancy with their increasingly restricted functions; finally, the oblivion of the womb. Looking in the other direction, I find what is, very roughly, the same series repeated. Adult



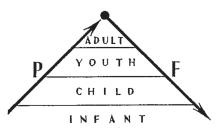
° Consequent determines antecedent just as surely as antecedent determines consequent, if not in the same manner. The victim now demands a killer in the past, and a plan to catch him in the future. As Stout points out (Manual of Psychology, pp. 515-6) the primary practical need is always intelligent anticipation of the future, which requires for its guide the study of the past but the stimulus is present. \times Cf. John Dewey: "The segregation which kills the vitality of history is divorce from present modes and concerns of social life. The past just as past is no longer our affair. If it were wholly gone and done with, there would be only one reasonable attitude toward it. Let the dead bury their dead. But knowledge of the past is the key to understanding the present. History deals with the past, but this past is the history of the present Past events cannot be separated from the living present and retain meaning. The true starting point of history is always some present situation with its problems." Democracy and Education, pp. 250-1.

+ The concept of development, says Mr T. S. Eliot in 'East Coker', is "a partial fallacy

Encouraged by superficial notions of evolution.

Which becomes, in the popular mind, a means of disowning the past"

* "By positing as a task the scientific process instead of the existential simultaneity, life is confused. Even where the succession is obvious, as in the case of the different ages in the individual's life, the task is to achieve simultaneity." Kierkegaard, <u>Unscientific Postscript</u>) p. 311. And this simultaneity, drawing the past and the future into the present, is symmetrical: it refers in both directions.



working life is followed by the active retirement of what I would call second youth, with its narrowing field of endeavour, its surrender of responsibility, its diminishing mental and physical effectiveness; next comes second childhood with all these tendencies enhanced, then second infancy, and finally oblivion.

It is hardly necessary to insist that the symmetry does not apply to details, or to every aspect of my history. The differences are all-important; in fact, if the future were simply the mirror image or repetition of the past, neither would need the other, and their organic unity would degenerate into mere duplication. In any case there is no danger of confusing the first age of man with the seventh, or the schoolboy with the "lean and slipper'd pantaloon". It is perfectly obvious, also, that the down-hill run of the second half of my life may be much shorter and steeper than the gradual ascent of the first half: mercifully, second infancy is often a matter of days or hours. The symmetry is further complicated by the fact that different functions reach their peak at different times: physical prime is generally some years ahead of intellectual, and wisdom comes still later. With these and similar qualifications in mind (they are too palpable to need further description), I can fairly use the apt and wellworn metaphor, and say that my life is a bridge. × I stand somewhere near the crown of it, and look both ways. On the one side is the relatively difficult climb, on the other the relatively easy descent. In other words, what I have laboriously acquired I am due to lose. "Naked came I out of my mother's womb, and naked. shall I return thither." This is no matter for comfortable evasions and euphemisms: if I do not take the facts to heart now, they will in the end be forced on my notice. I stand at the crown of the bridge, looking ahead; and what I see is life on the decline, the undoing of what has been done, destruction, death. "Involution is as natural as evolution. We sink gradually back into the darkness, just as we issued gradually from it. The play of faculties and organs, the grandiose apparatus of life, is put back bit by bit into the box." °

The first to emerge is the last to vanish, mere animal life is ours from the start to the finish. Superimposed upon mere vital functioning are such elementary skills as walking and talking and feeding oneself, which are acquired early and lost late in life. Sexual potency, and the emotional and intellectual intensity that go with it, are of briefer duration. In general, each function has its own term, long or relatively short, within the whole. The details are coarse and brittle, and can be forced into no neat small-scale mould; they must be taken for what they are. Nevertheless the over-all pattern is unmistakable. Man is a palindrome.

5. <u>DEATH INTO THE FUTURE</u>

Concerning the symmetry of the pattern's extremities there can be no doubt. All roads from my Now lead down to darkness and death -- death back into the past and forward into the future -- the double dark that engulfs man like a fearful and mysterious ocean. The womb and the grave are realities which it is foolish to ignore and risky to repress. * They be-

"This day I breathèd first: time is come round, And where I did begin, there shall I end; My life is run his compass." Julius Caesar, V. 3.

× "Infant and child, youth and adolescent are on the ascending curve, to where maturity culminates. Then soon begin the first hints of ageing; and life's descent continues through senescence, to death. Similarly in the animal world, but with great variety of detail, as sequent phases, the ascending especially, may notably lengthen or shorten.... What we need first of all is not the monographer's detailed description of this or that phase of life, but rather a synoptic view of the whole trajectory --- the microcosm of the germ cells, the developing embryo, the period of youth and play, the crisis of adolescence, the time of sex and reproduction, the strength of maturity, the almost imperceptible beginnings of ageing, the definite senescence and the various forms of death." Geddes and Thomson, Biology, pp. 186, 196.

° Amiel, Journal, 5th January, 1877.

Intellectual ability, in so far as it is measurable by intelligence tests, tends to decline very gradually from the age of 20-25; alertness starts its more rapid decline at a still earlier age; knowledge, on the other hand, does not vary very greatly from late youth to late middle age. (See, e.g., E. L. Thorndike and others, The Measurement of Intelligence; C. C. Miles and W. R. Miles, 'The Correlation of Intelligence Scores and Chronological Age from Early to Late Maturity', in The American Journal of Psychology, 1932, pp. 44 ff D. Wechsler, The Measurement of Adult Intelligence.) But the importance of the characters that the tests do not and cannot measure is too often forgotten. According to Plato (Republic, 539) and Wordsworth ('Intimations of Immortality') the "philosophic mind" is one of the later developments in life; and certainly it defies measurement.

* Crashaw assimilates them ---"How life and death in Thee Agree! Thou hast a virgin womb, And Tomb. And Joseph did betroth Them both." long in that curious class of things familiar yet unfamiliar, accepted yet unacceptable, believed in yet unbelievable.

When, in the full cemetery, do I envisage as appalling fact what I know in harmless theory --- the corruption underfoot? Admittedly this is not the only matter in which out-of-sight is for me out-of-mind, but there is more than ordinary superficiality or thoughtlessness here: there is resistance. Neither a spatial interval of a few feet nor a temporal interval of a few years can subtract one jot from the reality of our dissolution. The rotting of this hand is as certain as the fact that it is now recording its own decay. The truth is that already I am a dying man. Though execution may be put off sine die, I remain, no less than the condemned criminal, under sentence of death, and we shall soon be indistinguishable. It is morbid not to think of this. We are not more alive for thinking less of death. ° It is no mark of superiority that, instead of the old gravestone with its death's head and memento mori, we have the undertaker's -- the mortician's -- marble evasions; that instead of the graveyard and charnelhouse we have 'gardens of remembrance' with every device to enable us to forget the facts; + that instead of the powerful sermon reminding us of death and the worm, we have charming platitudes calculated not to offend the susceptibilities of the most refined. But the sentimentality and the superstition, the lilies and the milk-and-water angels, the flabby sculpture and the atrocious verse, are all thrown away. Unwillingness to face death is itself a kind of death; abundant life has no such qualms. Our elaborate unconcern only mask's a profound anxiety, for which the remedy is that we shall face the facts. And of course, beneath the rosetinted mists of euphemism, the long tradition of death-awareness and death-acceptance lives on. Donne and Blair have their successors. Not a few modern thinkers have taught that until man unreservedly accepts death; until he lives with the spectacle of death in full view, he hardly lives a human life at all. He can neither stand nor understand himself, to say nothing of the universe. * Death, says Berdyaev, is the profoundest fact in life, giving life its meaning; it demands that life be raised to a higher pitch. We should live as if we were on the point of dying. \times

If I knew I were going to die within the hour, it would surely come home to me that existing at all is a very remarkable thing: but, in fact, I may die within the hour, and cannot live for very long. This circumstance is by no means to be deplored: only the dying can appreciate living ---"happy men that have the power to die". Without a term set to all my activity, my life would carry as little meaning as a play whose beginning and end were never in sight. Limitation -- temporal and spatial -- is the price of value: for us, at least, an event must have boundaries before it can have determinate quality, and the event which is my human self is no exception. + My appointment as a middle-grade functionary in the hierarchy carries with it a certain term of office -- Methuselah and Melchisedec and Tithonus are ineligible. And all my work is relative to that term --- it bears the stamp of the temporary official whose motto must be 'now or never'. I would not have it otherwise. The poignancy of life is inseparable from the poignancy of death, \oplus and bowdlerized versions of the human condition are subhuman. Plato had every reason for saying that philosophy is the practice of death. ϕ



Memento Mori: French School, 18th Century

° For a contrary view, see Dr Inge's article in <u>Contemporary British Philosophy</u>, 1st Series, pp. 209 ff. Spinoza has a famous passage about the free man who thinks of life and not of death (<u>Ethics</u>, IV. 67). And of course it is true that all thought about death which does not enhance life, all preoccupation with mere death, is deplorable. But the delusion that death is unnecessary to life, that life has meaning apart from death, that death is an unfortunate accident best forgotten --- this is still more deplorable.

+ For a fascinating description, based on fact, see Aldous Huxley's novel <u>After Many</u> <u>a Summer</u>, Part I, Chapter 2, and Part II, Chapter 3. Also Evelyn Waugh's <u>The Loved</u> <u>One: an Anglo-American Tragedy</u>.

* The heroic man, says William James, "can <u>stand</u> this Universe. He can meet it and keep up his faith in it in presence of those same features which lay his weaker brethren low. He can still find a zest in it, not by 'ostrich-like forgetfulness', but by pure inward willingness to face the world with those deterrent objects there." <u>Principles of Psychology</u>, ii. p. 579.

× The Destiny of Man, pp. 317 ff. In Sein und Zeit, Heidegger distinguishes between 'authentic existence' (which is living in the light of death, in the heroic and tragic consciousness of the abyss of non-existence that lies behind and ahead) and 'unauthentic existence' (which is forgetting death and losing oneself in distractions). Man is Sein-zum-Tode, the being who exists in order to die, the death conscious animal, great in his awareness of his littleness and his absurdity. This doctrine is of course reminiscent of much in Kierkegaard. + On the connection between limitation and value, see Whitehead, Science and the Modern World, XI.

⊕ On, death as the complement of birth, as that which, by limiting life, gives value to life, see A. M. Fairbairn, <u>The Philosophy</u> <u>of the Christian Religion</u>, pp. 142 ff. Death is loss of life -- and the guarantee that there is something to lose.

φ <u>Phaedo</u>, 64.

But my present concern is with the facts, not with the consequences of refusing to face them. There is no denying that they are repellent. No metaphysical conjuring trick, no dialectical twist, no schema -- hierarchical or otherwise -- can take away from the grimness of death, or from the sordid details of the grave.

6. DEATH INTO THE PAST

"Doth not man die even in his birth?" says Donne, ° Much of what I have just written is true of that other death of mine --- my death into the past. An earlier age was more honest in this matter, if less well-informed. 'While he was yet in his father's loins' was no picturesque metaphor, and the womb was no more hushed up than the grave. Now, knowing so much more, we are alive to so much less. We find it easy enough to picture ourselves as very young or very old (these penultimate stages being well within the field of common sense), but what lies beyond we censor. We talk of embryology but do not, believe in it; or, if we do, we apply it to others and not ourselves. To become aware here is a creative task that may not be avoided. I am convinced that the 'recollection' of birth is as necessary as the anticipation of death) and that neither can be understood apart from the other.

What, it may well be asked, is the point of being born at all? "We ripe and ripe, and then from hour to hour, we rot and rot." And we protest. The temporal limitation which makes for my definiteness and individuality is terribly difficult to accept, no matter how dear to me its gifts. For, having once put in an appearance, I feel that I ought to be absent from no time: \times a large part of me finds my non-existence in the world beyond my birth and death to be somehow an outrage.

This is bad enough, but, to make matters worse, even the tiny span of life that I do enjoy is at every turn rendered ridiculous, absurd. + It is built upon and demolished by the utterly trivial, and throughout it is as subject to irrational chances as if it were the merest chattel * --- indeed many chattels are better off and less subject to accident than those who are pleased to call themselves their owners. And they come to pass in a more dignified way. When I am in danger of taking myself too seriously, I have only to consider my origins. I am not referring only to the comic aspects of sex. What settles whether one's parents shall meet at all? In all probability some petty accident -- the imprudent supper; twinges of indigestion, the transfer of an employee, the railway journey, the dropped newspaper, the gust of wind: it is on trivialities like these, the very minutiae and off-scourings of twopenny-halfpenny circumstance, that my coming-into-existence hangs. And I am liable to be bundled out of an existence just as unceremoniously. "A bubble of air in the blood, a drop of water in the brain, and a man is out of gear, his machine falls to pieces, his thought vanishes, the world disappears from him like a dream at morning. On what a spider thread is hung our individual existence:" † Either the trifles which see me into the world and out again are fantastically disproportionate to my nature, or I am indeed of small account. In Olaf Stapledon (<u>Philosophy and 'Living</u>, pp. 30 ff.) is amongst those who consider the desire for personal immortality to be a symptom of mental adolescence. The acceptance of mortality should in the long run lead to a more secure peace, and greater moral strength. For a vivid contrast see W. Macnneile Dixon, <u>The Human Situation</u>, pp. 270 ff.

° Sermon at Whitehall, 8th March, 1621.

× "To think that the sun rose in the east --that men and women were, flexible, real, alive --- that everything was alive, To think that you and I did not see, feel, think, nor bear our part, To think that we are now here and bear our part." Walt Whitman, 'To Think of Time'.

+ The insistence by Camus, Sartre, and other existentialist writers upon the absurdity of man and his life is, I think, very necessary.

* The point is brought out forcibly in several of Aldous Huxley's novels. In Point Counter Point, Illidge explains what he owes to certain bacilli: a doctor prescribes a country life for a sick boy named Wright; accordingly he is sent to the district where Illidge lives, and is specially coached by Illidge's schoolmaster; Illidge is gratuitously included in the coaching, which enables him to win a scholarship. Illidge says of Wright: 'I'm eternally grateful to him and the busy bacilli in his glands. But for them I'd be carrying on my uncle's cobbling business in a Lancashire village. And that's the sort of thing one's life hinges on some absolutely absurd, million-to-one chance."

† Amiel, Journal, 16th November, 1864.

either case they strip me of all dignity, even the dignity of cutting a tragic figure in the world. What remains is too ludicrous to be impressive, yet too sad to be funny. Man is neither high tragedy nor low comedy.

Nor can I count on another life to put right the anomalies of this one. If I make no claim to human existence before birth, what reason have I to claim it after death? That this body of mine (or anything like it) should rise, on the farther side of the grave, to some improved version of human life, seems to me no more likely than its existence, on the farther side of the womb; as an inexplicable and embarrassing stranger haunting its ancestors. Until I discover convincing evidence to the contrary, I shall take it that this present human life, and this alone, is my human existence. I can imagine no resurrection for a virus or a dandelion; for my dog or the fly on the window, and I see no reason for putting man as man in a totally different category. ° The plain truth is that I am ephemeral --- more ephemeral than many of my fellow-animals and plants. Not to acknowledge this is childish self-deception.

7. <u>DEATH INTO SOCIETY: THE INDIVIDUAL AND THE COMMU-</u> <u>NITY</u>

It is only common sense to admit the brevity, the precariousness, and even the element of absurdity, that mark human life. The fates are cruel and arbitrary, and all creatures are their victims. Nevertheless (common sense goes on) man is a victim of a unique order --- first, because he alone knows that he is a victim; second, because, in spite of that knowledge, he proclaims himself, his self-identity, his integrity. In the face of "the wrath and tears" here, and "the Horror of the shade" beyond, be dares to announce, with a defiant gesture, his unconquerable soul. × His refusal to be 'cowed by circumstances, not the circumstances themselves, are the really significant thing about him.

Henley's claim to self-mastery, though overstrained, has a certain nobility. But it will scarcely bear close inspection. What is the self apart from all other selves? Who is this that challenges the universe, as if the breath to do it were not lent by what he defies, as if he were self-supporting, another and independent universe? What is original in him, and not traceable to the group? If I seek the source and outcome of my present activities and interests, I find that they have emerged from, and are flowing back into, the community: I die into society even while I live, even today, continually. "And the independent reality of the individual, when we examine it, is in truth mere illusion. Apart from the community, what are separate men? It is the common mind within him which gives reality to the human being, and taken by himself, whatever else he is, he is not human." + The situation is not that -- if only I could feel and see and think for myself, instead of at second-hand -- I could at last achieve objectivity, a fresh, direct, genuinely personal outlook; it is that a completely personal outlook is no outlook at all. I am social through and through. My standards of taste and conduct --- what are they but the standards of this time and place, of this species and this

In <u>Those Barren Leaves</u>, Aldous Huxley makes one of his characters say, "Sooner or later every soul is stifled by the sick body; sooner or later there are no more thoughts, but only pain and vomiting and stupor You can't get over the fact that, at the end of everything, the flesh gets hold of the spirit and squeezes the life out of it, so that a man turns into something that's no better than a whining sick animal. And, as the flesh sickens, the spirit sickens, manifestly. Finally the flesh dies and putrefies; and the spirit presumably putrefies too." --- Only a part of the truth, no doubt, but a part that we must learn to face.

° There are 'human beings' who are too stupid to keep their hands out of the fire, to avoid an on-coming car, to feed themselves. (See A. F. Tredgold, <u>Mental</u> <u>Deficiency</u>, on the more extreme types of idiocy.) On the other hand there are Köhler's tool-using (and even toolmaking) apes, and chimpanzees who learn to ride a bicycle and to roller-skate with the utmost skill to say nothing of smoking cigarettes with relish. What, I ask, is it that makes the after-life of the first a certainty, of the second an impossibility?

× W. E. Henley did at least acknowledge that the gods might have given him the soul that they could not daunt; but A. E. Housman's Lancer makes no such concession to "Whatever brute and blackguard made the world": "And how am I to face the odds of man's bedevilment and God's? I, a stranger and afraid In a world I never made. They will be master, right or wrong; Though both are foolish, both are strong. And since, my soul, we cannot fly To Saturn or to Mercury, Keep we must, if keep we can, These foreign laws of God and man." Last Poems, pp. 14 ff. --- An authentic picture of the hell we all visit from time to time: but it is hell precisely because it is so unrealistic, so untrue to the facts.

+ F. H. Bradley, <u>Essays on Truth and Real-</u> <u>ity</u>, p. 435. community, which I have put on as uncritically as my clothes? When I seek to reform these standards, it is in their name that I do so; my aim is their greater self-consistency and further application. The rebel is only convention galvanized, as the conservative is convention resting. ° If any pronouncement of mine in these pages is worthy of attention, that is because it is not mine, but the voice of the age, with its preoccupations and limitations. What comes from the private person (for whom the Greek word is <u>idiotes</u>) is --- idiotic. +

But my inmost urges, my 'instincts' --- are not they, at least, truly mine? My surface ambitions, and the actual shape my endeavour takes ---- these are doubtless governed by the social environment; but my deeper impulses, the more or less inchoate psychic forces --- these, surely, I can claim for myself? The answer is that, on the contrary, it is precisely these fundamental drives which are racial and more than racial. What lies deep spreads wide; the most fundamental is the least private. The more an impulse is mine the less it is only mine. \times

Common sense has a further point to make. Clearly I should be a different kind of person now if my parents had emigrated to Australia before I was born, and still more different if my parents had died and I had been adopted by foster-parents of another nationality. But (says common sense) whatever continent and nation and race and class provide the setting for my childhood, I would not have turned out altogether unlike this person I am. At all events I am human, and possess moreover certain ineluctable traits or tendencies which mark me off from other men.

This is a matter for observation rather than argument; and unfortunately the evidence is neither plentiful nor definitive. Still, evidence does exist. Consider the story of Kamala. * This potentially normal child of Hindu parents, living in a village not very far from Calcutta, was as a baby (presumably) carried off by a she-wolf. Some eight years later, in any case, she was discovered as a member of a wolf-pack, hunting with the pack and sharing their den. She was captured, and looked after for nine years in an orphanage where there was full opportunity to study her behaviour. At first, she lapped water like a dog and ate like a dog. She slept and dozed all day and prowled about at night, howling wolf-fashion at regular intervals. Strong light troubled her. She ran on all fours. In almost every way she behaved as an animal; at first, her only 'human' characteristics were bodily ones, and even her muscular-skeletal system had been considerably modified by a quadrupedal habit of life. As late as two years after the date of her capture (in 1920) and the start of her re-education, Kamala was caught tearing out and devouring the entrails of a chicken she had tracked down and killed. Indeed Kamala was no Mowgli. † Yet, it seems, she was a potentially normal child.

There are, of course, many other stories of feral children, from the ancient and mythological to the recent and indubitable; but I know of no case so well-documented as that of Kamala. It can scarcely be doubted that, at the time of her capture, she was nearer to being a wolf than a human being. She had taken on wolf nature more or less as she would have taken on human nature. Nor does this conflict with expectation.

° And of course convention itself is organized into group-patterns of endless variety. To give only one instance, F.M. Thrasher (in his remarkable book, <u>The</u> <u>Gang</u>) says that, in his study of hundreds of American gangs, each was found to be a world with a peculiar mental climate; and individuals removed from the gang were unable to adjust themselves to the tasks of normal life. The author's conclusion is that the way of reform is through the group rather than the individual.

+ Some have taught that the Kantian categories are socially acquired, others that they are native endowment. I say they are both. The only real difference between these two doctrines is that the first refers from the individual to the community in space, and the second from the individual to the community in time. Either way, whether ontogenetically or phylogenetically, the individual must merge: the question is not whether, but when, we acquire 'socially' what makes us human. John Dewey (e.g., Reconstruction in Philosophy, p. 140) comes out strongly on the side of the social nature of our thought; but he is not so extreme as Durkheim (Formes Elémentaires de la Vie Religeuse, p. 18), who makes space and time 'collective representations' -- products of social experience rather than its prerequisite.

× Freud's Id (see <u>The Ego and the Id</u>) is at once the source of our instinctive energies, and the 'It' --- something we tend to place outside the self, as when we say "I let my feelings run any with me".

* Arnold Gesell's Wolf Child and Human Child gives a full account and photographs. It is now hardly possible to maintain (pace McDougall, The Energies of Men, p. 108) that the state of a normally endowed child, when removed from all human influence, is a matter of mere conjecture. Other instances (e.g., Dina Sanichar, the wolf-child of Sikandra, and Victor, the wild boy of Aveyron) are authentic, but there is more doubt about the potential normality of the child. I think the most recent case to be reported is that of a grass-eating Bedouin boy, found running with a herd of gazelles in the Syrian desert. The Daily Mail of August 22nd, 1946, published a photograph. How true the reports were, I do not know.

† The facts stand in violent contrast to the <u>philosophus autodidactus</u> which our vanity conjures up: e.g. the 12th century romance of Ibn Tufail, in which the hero, cast on an uninhabited island as a young child, grows in wisdom and holiness by the mere contemplation of God's works. Then at last he comes across the Koran, he finds that book only confirms what nature has already taught him. Cf. Rousseau's From Aristotle ° to Jung × observers have pointed to the resemblance between the infant's condition and the animal's. Potentially, of course, the infant is human, whereas the baby chimpanzee is not, but the difference remains unrealized outside the community which alone makes it actual. In Aristotelian terms, both the 'matter' (the 'individual' basis, particularly the specific brain-structure) and the 'form' (the social basis, particularly language and tools) are essential to human nature. I am like a seed which, planted among oaks, turns into an oak; among cabbages, into a passable replica of a cabbage --- all that is settled from the start is that, if I grow at all, it will be into some kind of plant. A man without other men is not even half a man: nothing less than the symmetrical Pair, Humanity-man, is human. *

"A man is other men", says a Bantu proverb. The statement that there is only one human mind, and only one human body, is, by itself, untrue; but equally untrue is the statement that there are many human minds and bodies. The unitary and the plural aspects of the Pair are inseparable, and neither will stand alone. But the connection between them has to be actively taken up and realized: it is not automatic or merely given. That is to say, the mind and the body of Humanity, the categories and the organs, are mine to make mine, not mine inevitably, by some benevolent necessity. I am much less than human till I grow the organs of a human being (clothes, tools, buildings, books, and so on) and arrive at human dimensions --- and by 'growing' I mean, not mere accretion, but developing along with this greater body the ability to use it finely. To call the baby 'a little man' is really nonsense: he is nothing like the gigantic creature, of global stature, that he must become. The caterpillar is immeasurably nearer the butterfly than the infant to the adult, its metamorphoses immeasurably less drastic. Our grandfathers who derided the theory of man's ascent from the level of the brute were rather more in the right than their opponents --- though right, no doubt, for the wrong reasons. For in the first place the individual man has <u>not</u> risen from the animal plane at all --- he stays there. And in the second place, it is Humanity --that aged yet youthful living thing, that giant body which Darwin probably never dreamed of, and certainly never thought of studying --- it is Humanity-man alone which achieves all that is human. And no wonder: what other creature has the physique or the length of life for such a task? Still we believe, and will doubtless go on believing for centuries to come; that man as mere man has risen to human status.

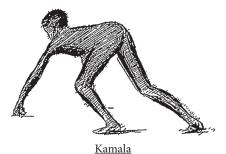
8. CONVENTION

It seems useless, then, to look for anything in me, as an individual creature, which is original or underived. Discount what I owe to my forbears in time and to my contemporaries in space, and what is left? Everything suggests that a sufficiently able observer could take any mannerism of mine, any bodily peculiarity, any prejudice or habit, and point to its double source in the social matrix. And even supposing he failed, supposing he hit upon some inexplicable character in me, without roots in the trans-individual, would such a character do the work that common doctrine (<u>Emile</u> IV, 'The Confession of a Savoyard Vicar') of the goodness of natural man; and, in general, the romantic myth of the noble savage.

° History <u>of Animals</u>, VIII.

× <u>Contributions to Analytical Psychol-ogy</u>, p. 317: "The child develops out of an originally unconscious and animal-like condition to consciousness; first to a primitive, and then slowly to a civilized consciousness."

* Professor George H. Mead (<u>Mind,Self</u> and <u>Society</u>, pp. 224 ff) distinguishes between "the partially social view of the mind" ("the social process presupposes and in a sense is the product of mind") and the "correct" view that "mind presupposes and is the product of the social process".



We span the wide gulf between the human and the animal, but the gulf is what separates the upper and lower members of the Pair: it is not a gulf between men and animals, but between society and animals. The only fundamental difference between a man and an anthropoid ape is that the man is not only a man, is always repudiating mere manhood: if he were always a mere man he would never be human. "No wonder the transition from brute to man, from sense and appetite to reason and law, seemed inconceivable apart from special divine interference, so long as it was regarded as taking place in each individual singulatim Still this long failure of individualism scientifically to bridge the gulf between man and brute is strong testimony to the living unity of the social organism. Through this objective mind, then, pervading all its members, and not through any infusion from without, each one in being social becomes human." James Ward, The Realm of Ends, pp. 123-4. Cf. Hegel's doctrine that religion is a function of the nation, or the Church, or Humanity, and of the individual in so far as he identifies himself with these. The community is truly religious and philosophical: the individual as such is nothing of the kind. In The Phenomenology of the Spirit, however, Hegel does allow some inadequate forms of religious experience to be 'private'. Doubtless his insistence is too much upon the superior member of the Pair, but we are not less prone to the opposite error.

sense requires of it, and establish in some measure my self-sufficiency and originality, or restore my captaincy over my own soul? Certainly it would not; instead, I should be seen as the habitation of unpredictable and meaningless sprites or demons, accountable to nobody, least of all to me. Even madmen are not as mad as this.

But for common sense all this is just so much unprofitable theory: the practical issues are what really matter. After all, it is not as if we had been born into some static, primitive culture at the pre-scientific level, where custom and superstition of all kinds go unchallenged. On the whole, is not society as we find her a reasonable nurse, not the least of whose merits is that she only rules us in order that, in the end, we shall rule ourselves and even her?

So speaks common sense, plausibly. But what are the facts? Just how much more reasonable, how much more practical, is my life than the savage's? He mutilates his body? But so do I, with a sharp knife, every morning, at an aggregate cost in time and discomfort incomparably greater than his. He practises curious rites, for which he can give only fantastic explanations, or none at all? No doubt; but what account can I give of my objection to the number 13, of my Christmas trees and Easter eggs and birthday candles, of my behaviour in the presence of ladders and black cats and spilt salt? How many footballers suspect that they are the latter-day representatives of Life and Death, fighting for possession of the dead king's head, and how many patriots see in their flag the royal umbilical cord conventionalized? ° To keep the rite and lose the reason is no great advance.

Common sense reminds me that the savage's life is hedged about with innumerable petty and useless restrictions: everything has to be done just so, because it always has been done just so. Our superstitions, on the other hand, are little more than picturesque survivals, which do not seriously hamper us. Again, what are the facts? I have reached the middle of a not particularly sheltered life, yet I am sure I have not learned all my table manners (from how to eat asparagus to how to pass the port), and the right shape of glass for every kind of drink, and precisely how to end a letter to a bishop, and how much braid a vice-admiral wears, and whether he takes precedence over the younger son of a baronet, and a thousand other things it is almost criminal not to know. As for explaining why these things are so, and why they are reckoned so important --- that is entirely beyond me. Why on earth is belching so much less polite than nose-blowing? Why, at a function, precisely this sequence of grimaces and jerkings and social noises (so intricate and subtle that they can never be taught), and no others? Why this elaborate pretence that our bodies are deformed --- a pretence which everybody keeps up and everybody sees through? And why are organs which are so carefully hushed up in us, in plants specially cultivated, and then amputated and used for table-decoration? × Evolutionary 'progress' at once widens and narrows the organism's range of objects. The higher animal reacts with more discrimination; and society takes this tendency several stages further by prescribing my behaviour in still greater detail.° The joke is that I should ever imagine myself to be less taboo-ridden than the savage.

"In many regions it is a terrible insult to tread upon a person's shadow, and in others it is an unpardonable sin to scrape a sealskin with an iron knife instead of a flint one. But let us be honest. Do we not think it sinful to eat fish with a steel knife, for a man to keep his hat on in a room, or to greet a lady with a cigar in his mouth?" Jung. Modern Man in Search of a Soul, p. 147. Later on, Jung points out that the Swiss gentleman "busily running about the garden, hiding coloured eggs and setting up peculiar rabbit idols" neither knows the meaning of his behaviour nor suspects that it is odd (p. 173). Cf. Edward Carpenter, Pagan and Christian Creeds, p. 195. and James Harvey Robinson, The Mind in the Making, pp. 58 ff. Logan Pearsall Smith, and of course Samuel Butler, have similar passages.

According to G. Elliot Smith, all ball games "are the modified survivals of the Osirian competitions in which representatives of the rival parties struggled for the mummy of the king-god or his head, the ball." <u>Human History</u>, p. 311. For the conjectural derivation of the flag from the King's umbilical cord, see pp. 331 ff. of the same book.

× Sir Thomas Browne (<u>The Garden</u><u>of Cyrus</u>, III. 23) comments on "the open and visible testicles of plants," and Fechner (<u>Nanna oder das Seelenleben der</u><u>Pflanzen</u>) in accordance with his view that the vegetable is the animal turned inside out, observed that the crowning glory of the plant is the shame of man. Fechner's suggestion is that the sensuous life, being the highest of which plants are capable, is pure and beautiful in them, while in us it is a threat to our higher life, and therefore under suspicion.

° Cf. W. B. Hocking, <u>Human Nature and</u> <u>its Remaking</u>, p. 177.

But (common sense persists) the savage's 'science,' his notions of causation, his cosmology, his tools and techniques, are all childish. This is partly an illusion, and partly true. But let us not overrate ourselves. Left to his own resources, how much of this boasted scientific and material culture could each of us, with all his training, reproduce? My knowledge of how even this pen and ink and paper are made is of the vaguest. The proportion of European adults who know (for example) the difference between a planet and a star, or who have any acquaintance with the facts of their own embryology, or who take any interest in their own normal functioning at any level other than the human, is very small indeed. On the other hand, it is reported that more than a third of the adult population of this country have some confidence in horoscopes× and that there were recently in the U.S. A. some 25,000 registered astrologers, not to mention palmists and the like. + But it is unnecessary to labour so obvious a point --- that as individuals we are pre-scientific, some of us most of the time, and most of us all of the time.

The savage's mind, we are told, is divided into idea-tight compartments, so that he is capable of the wildest inconsistencies. But are not those of us who talk most freely of human sacrifice, and bathing in blood, and even drinking blood, precisely those who are most shocked at the milder 'heathen' practices --- to say nothing of the taurobolium and the Bacchic orgies? Many kindly and pious souls have discovered no contradiction in a God of love who condemns unbaptized infants to eternal punishment. Are not those of us who think a man is scarcely a man till he can wear (and come to like wearing) a device for inhaling fumes, and can drink (and come to like drinking) the largest possible doses of dilute poison without actually collapsing --- are not they the very ones who are most likely to speak with contempt of 'natives,' and 'natives' whose initiation ceremonies are, in many instances, so much less arbitrary and damaging? Is the manufacture (in preference even to the necessities of life) of instruments of slaughter and agony, the training of millions in their use, and their shameless exhibition -- "the Soldier wears openly, and even parades, his butchering-tool" † -- is this entirely consistent with the official religion of the Gospels? Is there no discernible difference between the professed code of meekness, poverty, and cheekturning, and the practised code of manly self-regard and proper pride?° It is time we confessed that there is hardly a vice which, practised on a wide enough scale, does not count as a virtue; hardly a crime which, properly committed, is not reckoned social service; hardly a madness which, so long as it rages in the right quarters, is not seen to be sheer common sense.

To say the very least, common sense's claim to be severely practical, to stand for no nonsense, is itself the most egregious nonsense. Our human conduct (in so far as we can see it through the eyes of other communities and species) is grotesquely unpractical. Occasionally, in our more lucid moments, a sense of the oddity of our behaviour rushes upon us. But there is no escape from convention. To debunk and abolish every convention the moment it seems to be irrational is, as often as not, simply to exchange the better part of convention for the worse. Fortunately "for the most part we accept it as axiomatic that we cannot refuse allegiance × Cf. Daily Mail, March 27, 1946.

+ Robert Eisler, <u>The Royal Art of</u> <u>Astrology</u>, p.13.

How many Christians have thought of the reactions of an educated Chinese or Hindu, who picks up for the first time a hymnal and reads of the Blood which is drink indeed, and in which we are washed? But (it may be replied) they miss the meaning. Do we, then, never take alien beliefs and customs at their face value? Edward Carpenter, <u>Pagan and Christian</u> <u>Creeds</u>, (pp. 40, 44, 65, 108) has much of interest to say on this subject.

† Sartor Resartus, II. 3.

° Cf. L. T. Hobhouse, <u>Mind in Evolution</u>, p. 380.

"It is forbidden to kill; therefore all murderers are punished unless they kill in large numbers and to the sound of trumpets." Voltaire, <u>Philosophical Dictionary</u>, Art: "War".

"There is little doubt," writes F. C. B. Schiller, "that in the main, humanity is still Yahoomanity. Alike in mentality and moral, modern man is still substantially identical with his paleolithic ancestors. He is still the irrational, impulsive, emotional, foolish, destructive, cruel, credulous creature he always was." <u>Tantalus</u>, p. 39. The difference, Samuel Butler would say, is that we have <u>organised</u> our thieving and lust and revenge. <u>Erewhon</u> XII. to our social traditions without mutilating our lives." ϕ The soldier who sees in his regimental colours only a rag at the end of a pole is not, Dr Inge has reminded us, particularly admirable. ° Let us take care what traditions we destroy, seeing that in destroying them we destroy ourselves. There is a real and sometimes agonising dilemma here ---- on the one hand, the doom of intellectual dishonesty and wilful blindness, and, on the other hand, "the doom of those who fail in piety to their gods and their religious tradition", ϕ the doom of exile from the ancestral wisdom. This book is my own attempt to resolve the dilemma. But whatever the measure of my success or failure, the fact remains that my criticism of the world in which find myself is a function of that world, and by no means the independent opinion of a visitor.

And -- just in case the least scrap of selfhood should be left to me, some poor fragment that I could call my own -- psychology moves in to the attack, each school with its own weapons. I am described as a veritable museum of ancestral traits. + I am reduced to a bundle of conditioned reflexes, × the product of (a) hereditary equipment thrust upon me, and (b) an environment I would never have chosen. I am confronted with the consequences of mass hypnosis and suggestion --- what I am told often enough comes to have the quality of perfect obviousness. "When, therefore," says Trotter, "we find ourselves entertaining an opinion about the basis of which there is a quality of feeling which tells us that to inquire into it would be absurd, obviously unnecessary, unprofitable, undesirable, bad form, or wicked, we may know that opinion is a non-rational one, and probably, therefore, founded upon inadequate evidence." * Yet it is such beliefs, rather than enlightened self-interest, which bind society. Man does not ask for comfort, security, happiness, freedom to go his own way, so much as for participation in the groupsuggested pattern, even though this should mean loss, pain, and death. "To obey that suggestion", writes Mr. Gerald Heard, ø "to have the sense that that command has been fulfilled is sweeter than life itself, than any physical reward."

Nor are these compulsions and inhibitions merely (or even chiefly) external. Freud discovers working in me the Super-ego ø (with its instrument the Censor) whose unconscious and archaic 'morality' is even more severe than the external convention would seem to require. There is not a single achievement of the human spirit -- whether in religion, or art, or speculative thought, or (it must be added) science itself -- which is not capable, in theory, of being 'explained' as the sublimation of instinctive urges, or compensation for those renunciations of crude 'instinct' which the Super-ego demands. † Disinterested thought and feeling are a myth. I am swept along on a tide utterly beyond my control, and all my apparent striving against it is just an eddy of the current itself. Remorse, resolve, blame and praise, are all beside the point: they do not refer beyond the phenomena. For example, much of this book (and, in the last resort, the whole of it) is an exhibit in a case-history, a pre-determined sublimation of thwarted unconscious drives which found this the line of least resistance. × Any claim to objectivity, and any appeal over the head of opinion and prejudice to the facts, is therefore suspect from the start.

Man, then, is a dummy, a lay-figure, to which Walt Whitman's words

φ 'Nicodemus', <u>Renascence</u>, p..35. Cf. Burke (<u>Reflections on the Revolution in</u> <u>France</u>): "Many of our men of speculation, instead of exploding general prejudices, employ their sagicity to discover the latent wisdom which prevails in them."

° Christian Mysticism, p. 259.

+ Thus Jung: "Every civilized human being, whatever his conscious development, is still an archaic man at the deeper levels of his psyche. Just as the human body connects us with the mammals and displays numerous relics of earlier evolutionary stages going back even to the reptilian age, so the human psyche is likewise a product of evolution which, when followed up to its origins, shows countless archaic traits." <u>Modern Man in Search of a Soul</u>, p 144.

× See I. P. Pavlov, <u>Conditioned Reflexes</u>, , and <u>Lectures on Conditioned Reflexes</u>, in which it is claimed that all learned behaviour, animal and human, consists of conditioned reflexes.

* <u>The Instincts of the Herd in Peace and</u> <u>War</u>, p. 44.

ø Pain, Sex and Time, p. 292.

• The Super-ego is generally conceived as having a phylogenetic or racial basis, as well as a basis in the moral attitudes of parents and teachers, from whom the child learns to distinguish good from bad behaviour. It is firmly established at a very early age, and is less lenient than the surface 'conscience'. In a sense, (Freud points out) man "is far more moral than he has any idea of".

† See especially Freud's <u>The Future of an</u> <u>Illusion</u>, and <u>Civilisation and its Discon-</u> <u>tents</u> also <u>Beyond the Pleasure Principle</u>, p. 52, where he discounts any impulse in man towards a higher perfection: the seeming evidence for such an impulse arises out of "that repression of instinct upon which what is most valuable in human culture is built".

× "Every psychological pattern is determined; and, within the cage of flesh and memory, the total swarm of such patterns is no more free than its members. To talk of freedom in connection with acts which are in reality determined is madness." Aldous Huxley, <u>After Many a Summer</u>, p. 272. are terribly applicable ---

"Smartly attired, countenance smiling, form upright, death under the breastbones, hell under the skull-bones, Under the broadcloth and gloves, under the ribbons and artificial flowers, Keeping fair with the customs, speaking not a syllable of itself, Speaking of anything else, but never of itself." °

° 'Song of the Open Road'.

9. PHYSICAL CONTINUITY

And indeed, what self, what continuous identity, has man to speak of? Consider his body. Its material is constantly being replaced, so that I can hardly be said to have the same body as I had an hour ago or a year ago, to say nothing of forty years ago. I am perpetually resigning and being taken over. + I am a meal in which the earlier courses devour the later, and then make way for them. It is not that I am obliged to change places with the world in order to live; the life is in the change-over. Death is claiming something for my own, a traffic-jam in the thoroughfare. My failure in permanence is evidence of my success in living; my success in hanging on to things is evidence of my failure. * At this moment I am dying many cell-deaths; moreover those of my cells that live are not all necessarily the descendants of one fertilized ovum --- I may have received grafts from another man's body.

At any rate, says common sense, there has been no real break in my physical existence from the ovum onwards. There has been a continuity of change, like the continuity of a flame which is always the same because it is always different. But even this is not beyond all doubt. I have not been watched all the time, and certainly I have not kept an eye on myself. Bertrand Russell † has called the common-sense belief in permanent bodies "a piece of audacious metaphysical theorising; objects are not continually present to sensation, and it may be doubted whether they are there when they are not seen or felt." What is my continuity if not continuity for some observer, and what observer burdens himself with such a task?

10. PSYCHICAL CONTINUITY --- MEMORY AND AIM

And even if my continuity at one physical level or at all of them were never the less a fact, that fact would be insufficient to establish the kind of history, or self-existence through time, which common sense claims for me. For this (says common sense) I must turn to memory. Certain past experiences are available now, and may be revived at the bidding of present experience. This availability and revival are the framework of the self in time. My private stock of memories is perhaps the most important part of what I am.

But again, the stock is always in the process of replacement, and much of it passes through my hands so quickly that it is never taken on to the books at all. Compare the tiny fragments of the remembered "The Buddhist says: 'There is no "same I", i.e., identical I, even during one life, during even two consecutive days of one life, much less in two successive planes of being." Mrs Rhys Davids, <u>Buddhism</u>, p. 132.

+ 'Tracer atoms' of phosphorus, nitrogen, etc., have been found functioning in the protein of brain and muscles a few minutes after entering the body. "In the living body, atoms are constantly 'stepping out to lunch'.... from the molecules of which they are part, while others step in to hold the fort." Joseph Needham, in <u>This Changing</u> <u>World (Ed. Brumwell) p. 36.</u>

* The law that what is good ceases to be good if we cling on to it, is exemplified in a hundred ways. See, for example, C. S. Lewis, <u>Perelandra</u>, p. 93.

† <u>Our Knowledge of the External World,</u> p. 102. Cf. William James: "The greatest common-sense achievement, after the discovery of one Time and one Space, is probably the concept of permanently existing things. When a rattle first drops out of the hand of a baby, he does not look to see where it has gone. Non-perception he accepts as annihilation." <u>Selected Papers</u> <u>on Philosophy</u>, p.294; <u>The Meaning of</u> <u>Truth</u>, p. 63.

"When Paul and Peter wake up in the same bed, and recognise that they have been asleep, each one of them mentally reaches back and makes connection with but <u>one</u> of the two streams of thought that were broken by the sleeping hours" James, <u>Textbook of Psychology</u>, p. 158. with the vast bulk of the forgotten. I am commonly supposed to dream all the while I am asleep, but I rarely remember a dream; my earliest recollections do not go back beyond the age of three, and the little I do recall is for the most part trivial and wildly inaccurate. For every event I remember I forget a thousand. The difficulties for selfhood are further increased when forgetfulness of the ordinary sort gives way to pathological amnesia, and the patient loses all conscious touch with his past. There may be division into two or more 'personalities', each with a set of memories which is peculiar to itself. $^{\circ}$

But this is not all. If telepathy is, in some degree, normal to human beings (and the case for this belief is fairly strong), then the concept of 'separate minds' needs revision. \times It would seem that, while I am closed to much of 'my own' experience, I am open to much of 'others" experience, to direct invasion without my consent and (as a rule) without my knowledge. First, I am not all there; second, not all that <u>is</u> there is me.+

Common sense suggests that forgetfulness, and even minor intrusions, are not insuperable difficulties, provided there is some persistence of aim, some overriding purpose which will serve to integrate a man's life.

"He that hath not one and the self-same general and always as long as he liveth, cannot possibly be one and the self-same man always", says Marcus Aurelius. * But where shall such an end be found? My aims now are strikingly different from my aims as a young man, which were in turn as strikingly different from my aims as a boy'--- not to mention the baby and the foetus, the half-developed embryo and the ovum. Even at this present stage of my career, it is not easy to say what purposes are common to my professional self and my domestic self, my political self and my religious self and my artistic self; or what elements are shared by my kaleidoscopic states of mind. "Our moods do not believe in each other." † Put me in different circumstances, and I feel 'a new person'; I am 'not my usual self'. If, as Whitehead declares ϕ "the character of a mind must be something common to each occasion of its route", then my character is indeed bloodless and ghostly, attenuated to the point of extinction. For I have much more in common with my friends of the present than with 'myself' of twenty years ago. Even what are reckoned fundamental physical needs or instincts are not invariably constant --witness the soldier risking his flesh, the ascetic mortifying it, the suicide destroying it. "We are so accustomed each to consider his past self as his own, that it is worth while to reflect how very largely it may be foreign. My own past is, in the first place, incompatible with my own present, quite as much as my present can be with another man's.... And my past may not only differ so as to be almost indifferent, but I may regard it even with a feeling of hostility and hatred." • Religious or religious-political conversion in youth, and a rather less drastic reversal of habit and interest and opinion in early middle life, are by no means rare; indeed it may well be that a life which, avoiding such crises, can boast of its continuity, is deficient and in some sense abnormal.

"Complexes indeed behave like secondary or partial personalities in possession of a mental life of their own." \times We are all, in some measure,

° In a typical case, the personality splits into two alternating phases --- a primary phase, and a less permanent and less complete secondary phase marked by very different aims. In the primary phase the patient forgets what he has done in the secondary phase; in the secondary he generally remembers what he has done in the primary, but attributes it to another person. See McDougall, <u>Outline</u> <u>of Abnormal Psychology</u>, pp. 482, ff; and Morton Prince, <u>Clinical and Experimental</u> <u>Studies in Personality</u>, for an account of the famous Beauchamp case.

× According to Whately Carington's association theory of telepathy, we have a common subconscious, a common subliminal repository, so that associations formed by one man tend to be effective for another. (<u>Telepathy</u>, VI) Somewhat similar views have been stated by G. N. W. Tyrrell and H. H. Price.

+ Jung (<u>Psychology and Religion</u>, pp. 13 ff) distinguishes between complexes repressed from consciousness, and those which have never been conscious till they <u>invade</u> consciousness in the guise of an obsession. No wonder, he comments, we have a secret fear of the unknown perils of the soul: our fear is only too well founded.

* <u>Meditations</u>, XI. 19. In a similar vein, F. H. Bradley describes the soul as enduring "only so long as a particular purpose holds." Ap<u>pearance and Reality</u>, p. 304.

† Emerson, 'Circles'.

 ϕ <u>Religion in the Making</u>, p. 109. L. T. Hobhouse (<u>Mind in Evolution</u>, p. 339) suggests it is a scientific fact that the business man who has spent the day besting his rivals is not the same man as the father who plays with his children in the evening.

• F. H. Bradley, <u>Op. cit.</u>, p. 256. Gerald Heard compares such 'rebirths' to the metamorphoses of insects. (The <u>Creed of</u> <u>Christ</u>, pp. 155, 181.) On the normality of conversion (and even its necessity) see William Brown, <u>Mind and Personality</u>, p. 262. schizophrenic. In fact, the richer a man's nature the more diverse and numerous are the characters he assumes. Both in fact and in fiction, the difference between the 'round' and he 'flat' person ° is the difference between one who is a society of spirited and incongruous tendencies, and one who is a paddock-full of tame tendencies having a strong family likeness. But no human being is so flat, so one-track-minded, so consistent, that he cannot say with Amiel, + "There are ten men in me, according to time, place, surrounding, and occasion; and in their restless diversity I am forever escaping myself."

Besides our general aims there is our moment-to-moment thinking, or rather wool-gathering, which is chiefly remarkable for its aimlessness, its imbecility, its lack of unity, its miserable wastefulness. * On and on, in a crazy and endless procession, come the silly imaginings that make up my life-long daydream -- the squalid nonsense which James Joyce reported so faithfully in <u>Ulysses</u> -- interrupted now and then by wakeful intervals, but never for very long. Where, in this absurd soliloquy, this reverie in which images just take their course, coming and going unbidden, is there evidence of any presiding genius?

11. THE CONTINUITY OF THE FIELD.

The content of my mental field, common sense agrees, may provide little evidence of a continuing self. But there remains the field-itself -- the screen of consciousness, the specious present of the previous chapter -- which goes on uninterruptedly. The cinema screen (so to speak) Is always there and always lit, though the film projected upon it may have little connection with the previous film or with the film that will follow; though what is shown may, from time to time, reduce to no more than a featureless flicker; and though the screen itself may temporarily divide into two or mere sections. Though all these things happen, the performance itself (common sense suggests) is non-stop. † In other words, my continuity is the continuity of the field.

A plausible view, but full of difficulties. If the field is entirely featureless, how can it link the objects that appear in it? The case of the man who can tot a column of figures while keeping up a lively conversation, can perhaps be accounted for in terms of a temporary duality or branching of the field, ϕ but the phenomena of automatic writing are another matter. A man is engrossed in a book while his hand is writing coherent sentences of which he is unaware, and which seem to betray knowledge not his own. Here, presumably, are two distinct fields, which cannot easily be derived from a previous common field; there is little or no evidence of branching. Then consider sleep. "I perceive myself persisting through time," says McTaggart, "for a perception lasts through a specious present" θ --- but what (I inquire) happens to this perception of myself, and this specious present, when I fall asleep? Do the "little perceptions" of Leibniz ensure my soul's continuity whatever happens? For all I can tell, the Hindu teaching that dreamless sleep does occur may be correct, and at all events the gulf between the waking world and the

° This distinction has been' made famous by Mr E. H. Forster in his <u>Aspects of the</u> <u>Novel</u>, IV.

+ Journal, 23rd December, 1866.

* Aldous Huxley has drawn attention to the need for overcoming this damaging habit of wool-gathering, in <u>Grey Eminence</u> (pp. 57 ff). Cf. James Harvey Robinson, <u>The Mind in the Making</u>, II. 3: "We find it hard to believe that other people's thoughts are as silly as our own, but they probably are." For a serious study of the topic, see J. Varendonck, <u>The Psychology of Day</u> <u>Dreams.</u>

† On the question whether a thing's continuing self-identity lies primarily "in the avoidance of any absolute break in its existence", see F. H. Bradley, <u>Op. cit.</u>, pp. 73-4, For a particularly lucid discussion of the problem of the continuity of "personal consciousness", see -William James, <u>Textbook of Psychology</u>, pp. 157 ff.

 ϕ There are some entertaining speculations about "branching specious presents" in J. B. S. Haldane's <u>Possible Worlds</u> (pp. 263, ff). What happens, for instance, to the specious present of a flatworm when it is cut in half, and lives thereafter as two flatworms?

θ The Nature of Existence, 395.

dream world is wide enough. °

It is as if the gods, foreseeing my tendency to take this self of mine too seriously, invented sleep and dreams to make nonsense of it. It is as if, lest I should arrogate to myself a fictitious self-continuity, the gods saw to it that, at the end of each day, I must quietly lie down and die. On first thoughts, it is very astonishing that to keep my wits I must nightly lose them, that to remain conscious for a part of the time I must spend the rest in a deep trance, that to live in a sane world I must also live in a crazy one. (And how astonishing that this is not more astonishing! "If you were to tell a man", Al Ghazzali points out, "who was himself without experience of sleep, that there are people who at times swoon away so as to resemble dead men, and who in dreams yet perceive things that are hidden, he would deny it and give his reasons." × Yet the facts scarcely make any impression on us: at best we dream that we dream. Carlyle + is among the few who wake sufficiently to notice what they wake from ---"Upwards of five hundred thousand two-legged animals without feathers lie round us, in horizontal positions; their heads all in nightcaps, and full of the foolishest dreams.") But on second thoughts sleep and dream are most appropriate to human nature, and very conformable to the rest of what man is and is not. It is no wonder that I should have for partner a madman-magician, flying through the air in his night-clothes, and up to every kind of absurd trick, or that my life should be divided by nightly deaths into twenty thousand lives and more. For these are only additional indications of a fact that is already plain --- the fact that my continuing selfhood is an ignis fatuus.

"I could tell you my adventures --- beginning from this morning" says Alice, "but it's no use going back to yesterday, because I was a different person then." But this (common sense is quick to point out) is really self-contradictory: Alice should have said, "because there was a different person then". The significant fact is that, though it may be against all reason, we habitually speak and think as if our continuing self-identity were a perfectly obvious truth. In this chapter, for example, my language unavoidably begs the question. * "Whether (with Descartes) we speak of a 'thinking substance', or (with Berkeley) of a 'spiritual substance', or (with Lotze) of the 'unity of consciousness'; whether we speak of soul, or spirit, or the thing-in-itself, or the permanent subject, or the ego, or the 'I'; whether we prefer such expressions as the continuous specious present, or moment of experience, or field --- in every instance we are speaking the language of faith rather than of reason. Not content with defying all the evidence, we can give no clear account of what we mean. Our common-sense assertion of the continuing self is as vague as it is dogmatic. "You see no deeper into the fact that a hundred sensations get compounded or known together by thinking that a 'soul' does the compounding, than you see into a man's living eighty years by thinking of him as an octogenarian, or into our having five fingers by calling us pentadactyls. Souls have worn out both themselves and their welcome, that is the plain truth. † And it makes little difference if, instead of the discredited word 'soul', you speak of a continuous field: all the old objections remain.

But, since common sense is so persistent, let me postulate this con-

° <u>Chhandogya Upanishad</u>, VIII. 11; Max Muller, <u>Indian Philosophy</u>, p.229; S. Radhakrishnan, <u>The Philosophy of the</u> <u>Upanisads</u>, pp. 31 ff. Cf. Berkeley (Works, i. p.34): "In sleep and trances the mind <u>exists not</u> --- there is no time, no succession of ideas. To say the mind exists without thinking is a contradiction, nonsense, nothing." And Lotze (Metaphysics, E.T., ii. p. 317) asks why, dreamless sleep does occur, "we have not the courage to say that as often as this happens the soul is not". But see C. H. Richardson, <u>Spiritual Pluralism</u>, p. 166 ff, for an argument against the occurrence of such gaps in experience.

× Quoted by William James, <u>The Varieties</u> of <u>Religious Experience</u>, p. 405.

+ Sartor Resartus, I. 3. Cf. Schopenhauer. upon sleep as our eternal foe; even when we are awake it possesses us partly. After all, what is to be expected of heads even the wisest of which is every night the scene of the strangest and the most senseless dreams? The World as Will and Idea, ii. p. 333. And St Augustine: "How much difference there is between myself and myself, within that moment wherein I pass from hence to sleep, or from sleep return hither." Confessions, X. 30. On sleep as the greatest adventure, the greatest essay in surrender, yet so lightly undertaken, see E. Graham Rowe, The Triumphant Spirit, pp.204, 290.

* Strictly speaking, I should (as Bertrand Russell proposes in his <u>Outline of Phi-</u><u>losophy</u>, p. 171) avoid such expressions as 'I think' or 'I experience', and say instead 'there is a thinking' or 'there is an experience'. But it is better to be intelligible; and in any case exactness is, in these matters, a mere dream. I have no such pretensions.

† William James, <u>A Pluralistic Universe</u>, p. 209; cf. James' paper, 'Does Consciousness Exist?' in <u>Essays in Radical Empiricism</u>. tinuing selfhood, with its aspects physical and psychical, and see whither it leads. It leads back to the child, to the embryo, to the fertilized ovum, to the cells of my parents, and the cells of their ancestors --- and each of these myriads of cells has (if the earlier conclusions of this book are right) a view out upon the world. It leads back to experience distributed throughout an ever-increasing proportion of the world's human and pre-human inhabitants. It leads beyond life itself, into "the dark backward and abysm of time". If my psycho-physical continuity is a fact, I am not at liberty to admit just as much of it as happens to suit my present convenience, and disclaim all the rest. Either I am not the man I was yesterday and a year ago and ten years ago, or I am that man and all his cell-ancestors and descendants. Common sense can take its choice. Either way, the separate ego is destroyed --- by contraction in the first case, by expansion in the second. The assumption of continuity is, in the end, just as destructive of the common-sense self as is the assumption of discontinuity. And this is the now-familiar story --- once my selfinspection ceases to be entirely casual, two things always happen. I find myself shrinking to the point of extinction; and I find myself growing beyond all limits. The 'I' at once collapses and explodes.

12. SUMMARY, AND CONCLUSION SO FAR

The topic of this chapter, so far, is my death. I stand at the crown of the bridge of my life, and see in either direction loss of powers and dissolution, imbecility and death. Such pattern as I can find is blurred by all kinds of absurdities and arbitrary detail, inasmuch as the most trivial circumstances conduct me into life, settle its quality, and dismiss me from the scene. Nor do I need to wait for death to come in a few years' time. All the while I am dying into my environment. Impelled by urges that I repudiate, overwhelmed by convention even when I defy it, invaded by innumerable alien influences which I do not so much as suspect, I am without anything that I can call mine: it is not that I lose my life, but rather that I have none to lose; it is not that the continuity of my life is broken, but rather that it was never established. °

There is not much room here for self-complacence. And, if anything, the picture is blacker than I have painted it. Common sense, intent on salvaging something of my own from the wreckage, has little to show but a record of personal failure, stupidity, and downright wickedness, with death in the end. Whether such a history is more to be desired than no history is, to say the least, very doubtful: it is only death in another form. Awareness does not help. It is bad enough to be unreal; to be just real enough to discover one's unreality is worse. × It is bad enough to be the plaything of silly accident, to be under sentence of idiocy and death, and, even now to be without a soul to call one's own --- but to become aware just to become aware of this, and to resent it, is surely an excess of misfortune. "The horrible thing about looking for truth", said Rémy de Gourmont, "is that one finds it."

What I have just written is not a dialectical cock-shy, set up simply in

"Now, although we speak of an individual as being the same so long as he continues to exist in the same form, and therefore assume that a man is the same person in his dotage as in his infancy; yet, for all we call him the same, every bit of him is different, and every day he is becoming a new man, while the old man is ceasing to exist as you can see from his hair, his flesh, his bones, his blood and all the rest of his body. And not only his body: for the same thing happens to his soul; and neither his manners, nor his disposition, nor his thoughts, nor his desires, nor his pleasures, nor his sufferings, nor his fears are the same throughout his life, for some of them grow, while others disappear. And the application of this principle to human knowledge is even more remarkable; for not only do some of the things we know increase, while some of them are lost, so that even in our knowledge we are not always the same, but the principle applies as well to every single branch of knowledge We have to study so as to replace what we are losing." Plato, Symposium, 207-8.

"I gazed into the great implacable abyss in which are swallowed up all those phantoms which call themselves living beings. I saw that the living are but apparitions hovering for a moment over the earth, made out of the ashes of the dead, and swiftly re-absorbed by eternal night, as the will-o'-the-wisp sinks into the marsh. The nothingness of our joys, the emptiness of our existence, and the futility of our ambitions, filled me with a quiet disgust" Amiel, Journal,18th March, 1869.

° As Marcus Aurelius puts it, I am one of "the succession of silly mortal men who likewise shall shortly die, and even while they live know not what in very deed they themselves are." <u>Meditations</u>, III. 10.

× Here, in fact, is the ultimate despair ---"All men have matter of sorrow; but most specially he feeleth matter of sorrow that knoweth and feeleth that he <u>is</u>; All other sorrows in comparison to this be but as it were game to earnest," <u>The Cloud of</u> <u>Unknowing</u>, 44. order that it may be knocked down. Whatever additional truths must be ranged along-side it, whatever new meanings are disclosed, it stands. I have to admit, without any reservations, that I am lost, and lost in every sense of the word. ° The fact has to be acknowledged for no other reason than the reason that it is a fact. Until I have discovered my own emptiness, and been horrified at the discovery, I am worse than empty --- he who does not know the tragedy of being a man is not yet a man. Until I have been filled with anguish and despair at what I am and what I am not, + I am a fugitive from reality, living in a world of make-believe, a partner in "the universal conspiracy which exists for hiding the sadness of the world, for making men forget suffering, sickness, and death, for smothering the wails and sobs which issue from every house, for painting and beautifying the hideous face of reality." × No wonder, as Schopenhauer remarked, Dante made a very proper Hell, but had some difficulty with Heaven --- this world is so full of materials for the first, and so lacking in materials for the second. *

But most of all I am concerned here with death, my inescapable doom, and the certain destruction of all my hopes. "For to assert that death is the end of all beings," says F. C. S. Schiller † (and I cannot see how the assertion can be avoided), "is to renounce the ideal of happiness, to admit that adaptation is impossible, and that the end of effort must be failure. And it is to poison the whole of life with this bitter consciousness and further, it is finally to renounce the faith in the rationality of things, which could hardly be re-asserted against so wanton a waste of energy as would be involved in the destruction of characters it required so much patient toil and effort to acquire." ° Dostoievsky was notably alive to this necessity. For him it is our common misery and 'original sin' which enable us to realize that brotherhood whose greatest enemy is the pride of self-sufficiency. Raskolnikov is fully a man only when he confesses his crime to the prostitute Sonya.

+ "Despair is not", says Kierkegaard, "something which may happen to a man, like fortune or misfortune. Despair is a disrelationship in his inmost being --- so far down, so deep, that neither fate nor events can reach it Fortune and prosperity can conceal it; misfortune and adversity, on the other hand, do not, as a man thinks, make him desperate, but only reveal the fact that he --- was desperate." Works of Love, p. 34.

× Amiel, Journal, loc. cit.

* <u>The World as Will and Idea</u>, i. p. 419. Von Hartmann, Schopenhauer's disciple in gloom, came near to showing (in <u>The</u> <u>Philosophy of the Unconscious</u>) that this is the worst of all possible worlds, in which every pleasure quickly palls, while pain loses nothing by repetition.

† <u>Riddles of the Sphinx</u>, p. 380.

13. FROM THE SUBJECT'S HISTORY TO THE OBJECT'S

Such conclusions should be no matter for surprise. "God Himself", says William Law, "cannot make a creature to be in itself, or in its own nature, anything else but a state of emptiness." ϕ Of course I amount to nothing in myself --- so much has been plain from the start. Of course the continuing self is elusive --- how can that be grasped whose essence is to grasp, or be accommodated whose business is accommodation? Of course the self fails to bind time --- how can a durationless knife-edge, whose business is to divide time, do anything else? Of course I am conformed to the social pattern --- I am a screen upon which every kind of pattern unfolds itself, and any intrinsic peculiarity of the screen could only be a blemish. Of course I die unceasingly --- innumerable arrows of process find their mark in me, and every one is fatal; the least tremor of remaining vitality would be enough to kill the life of all who live in me. We are the death of one another, and one another's resurrection. I die, to rise again in my objects. I am brought to naught, so that others shall come to themselves in me. I have no history, in order that I may contain innumerable histories. All my hopes for myself are dashed, and realized in my fellows. In the wholehearted acceptance of this law of elsewhereness lies the remedy for our human situation as I have described it. In refusal to accept this law lies frustration, despair, and perhaps mad-Page 462

 ϕ There is a curious meeting of extremes here --- behaviourism and mysticism find themselves in surprising agreement. Dr J. B. Watson traces our belief in consciousness to a heritage of superstition --- "The extent to which most of us are shot through with a savage background is almost unbelievable." (Behaviorism, p. 2.) "Anything whatever within called soul (atta) who sees, who moves the limbs, etc., there is not," says Buddhaghosa. On the Buddhist doctrine of No-soul, see Mrs Rhys Davids, Buddhism, III. The ego is an illusion which must be destroyed, and the Buddhist novice's training is largely directed to this end. (See Marco Pallis, Peaks and Lamas, and Alexandra David-Neel, Buddhism, on the teaching of this doctrine in contemporary Tibet.) But mysticism everywhere and at all times has insisted on the unreality of the ego or self-in-itself or consciousness --- though rarely so clearly and consistently as Buddhist mysticism has done.

ness.× It is the peculiar glory of man that he should know how inglorious he is. As Pascal puts it, "The greatness of man is great in that he knows himself to be miserable. A tree does not know itself to be miserable In proportion as men possess light they discover both the greatness and the wretchedness of man." $^{\circ}$ Everything depends upon how much he claims for himself. "If any one in heaven took upon himself to call anything his own, he would straightway be thrust out into hell. If there were any person in hell who should get quit of his self-will, and call nothing his own, he would come out of hell into heaven." + He would "receive that joy, the which reaveth from a man all knowing and feeling of his being." *

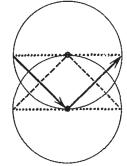
Consider the mystery of the continuing self. That which saves me from my own instantaneousness, which cements the infinitely brittle and infinitely numerous fragments of my career (smashed by the knife-edged Now), is my object. It takes its time -- at the very least its structure-time -- to be itself here and now in me, and that time may run into billions of years. Thus I possess in (and, in sense, give to) my object what I can never possess in (or give to) myself --- continuity, self-identity (or rather notself-identity) over a stretch of time. Nor is this continuity a made, dead character, passively registered here as antecedent fact. On the contrary, and as the word <u>object</u> itself implies, it has an active, creative, intentional aspect: I am the theatre of full-blooded life as it really is, compounded of aim and achievement. My object is up and doing here, not done for. Here in me it leads no stuffed-and-mounted museum existence, without strain between the 'real' and the 'ideal', without contradiction and effort, or without the continuity that is the indispensable basis of effort. When I love, what do I love --- or, more correctly, what do I find lovable? Not an empty and instantaneous 'soul', nor the world that fills it, but the loved one's true regional life in me, "for it is impossible and would be unjust to love the soul of a person in the abstract" †; and that life and love bring to me the gift of duration, a new lease of borrowed life. ϕ And there is no limit to this life-in-me: I can have as much of it, and of the unified time or duration that goes with it, as I can find room for.

That, at least, is one side of the medal. The other is that I change places with my object, reducing him to nothing so that I may build up to something in him. Thanks to the hospitality which he offers in my regions, I come to that awareness of a continuing 'self' which regulates all my conduct. Θ But thus to see myself through his eyes, as an enduring object, is no escape from my timeless nothingness, which follows me as my shadow. \otimes In other words, the price of adopting my observer's estimate of me is that I shall submit to his nothingness and make it mine. When I do this (and I am always doing it) I know 'myself' as a man, with all that manhood involves -- the absurdity and weakness and decline, the pressure of circumstance, the mortal span, the double death, and all the rest that my human region holds. The continuity is there and it is true continuity, but it still characterizes the other, the not-self. This thing that answers to my name, that so recently emerged from chaos and will so soon be a mass of corruption --- this thing I confess I am. Yet the confession is enough to show that this thing is emphatically not myself, but one of my many objects. • The story of my two-way decline and death is only one of the many histories that are transacted in me --- a privileged

× Aldous Huxley, in After many a Summer, says truly that it is a kind of madness to think "of oneself as a soul, a coherent and enduring human entity. But between the animal below and the spirit above there is nothing on the human level except a swarm of constellated impulses and sentiments and notions; a swarm brought together by the accidents of heredity and language; a swarm of incongruous and often contradictory thoughts and desires. Memory and the slowly changing body constitute a kind of spatio-temporal cage, within which the swarm is enclosed. To talk of it as though it were a coherent and enduring 'soul' is madness." (p. 271) ° <u>Pensées</u>, 397, 416.

+ Theologica Germanica, p. 193.

* The Cloud of Unknowing, 44. Cf. 'Nicodemus': "A person is a mirror of reality, real only as regards that which he reflects, not that which he is in himself." <u>Renascence</u>, p.106. In himself he is what Bradley calls "this wretched fraction and poor atom, too mean to be in danger". <u>Ap-</u> <u>pearance and Reality</u>, p. 81.



† Pascal, Pensées, 323.

 ϕ Cf. McTaggart, "What does the self include? Everything of which it is conscious. What does it exclude? Equally-Everything of which it is conscious. What can it say is not inside it? Nothing. What can it say is not outside it? A single abstraction. And any attempt to remove the paradox destroys the self." <u>Studies in Hegelian Cosmology</u>, 27. See also on this topic, Royce, <u>Lectures on Modern Idealism</u>, p. 95. Θ See L. T. Hobhouse, <u>Mind in Evolution</u>, p. 349.

⊗ Authentic Christianity, says Maritain, is "profoundly pessimistic in the sense that it knows that the creature comes from nothingness, and that all that issues from nothingness tends of itself to return to nothing", but this does not prevent its optimism being incomparably deeper than its pessimism. <u>True Humanism</u>, p. 48: "Whence comes the splendour that breaks out of things when they are at their very worst?" asks L. P. Jacks. It comes from the Centre. Lowest Hell would be highest Heaven if the Devil were only to turn round, and look out from the Centre, instead of in at himself.

• In his novel <u>Perelandra</u>, Mr C. S. Lewis has a conversation between the Un-man

and peculiarly interesting history, no doubt, but no less regional and objective, and no more Central and subjective, than the others. Indeed it is obvious that to be conscious of my decline, to gauge my imbecility, to consider my delivery and dying and corruption, is to hold them at arm's length, to externalize them, to see them as another's. It is always the other man who is mortal: this one is below mortality in himself, and above mortality in so far as he can find an object that does not die. * This doctrine is not abstruse: rather it is too simple and straightforward for common sense. For I have only to look to see that other men have bodies to die, and that I have not. The syllogism "All men are mortal; I am a man; therefore I am mortal" is wrong as to fact in the minor premise. I am a headless something, and a headless something is not a man. Or, if it is a man, then these headed ones are not men. In either case the conclusion that I am mortal does not hold. What I have in place of a skull are mortal animals and mortal men, mortal planets and stars and nebulae, and the immortal Whole. When I say that all men (including him who bears my name) are mortal, I am making a statement which rests upon a fairly adequate empirical basis; but when I say that I (who am as different from them as it is possible to be) am mortal, I am indulging in the wildest guesswork. ° Moreover my statement is almost certainly untrue, seeing that what is nothing but room for everything is (I submit) at once too mean and too great to die. Memento mori is the secret of life, and I have the perfect memento always with me --- a headless body, an executed corpse. After all, it is only common sense that no man can live without his head. The simple fact is that I really am dead --- stone dead, and much more than stone dead --- absolutely dead. And because there is no life whatever left in me, I am not only alive and full of life, but immortal. Such, at any rate, is my thesis in this part of the book. +

Moreover it is plain that all talk of invasion by alien influences proceeds from a fundamental mistake --- the mistake of supposing that something is native to me. Everything is foreign, yet for this very reason everything is at home in me: as a traveller is no foreigner in uninhabited country, so nothing is out of place in one who is nothing. I have no alternatives to offer. A void is in no condition to call any creature common or unclean. To reject the social pattern for the individual is to abolish everything, for all pattern is social, and all social pattern is potentially mine. The remedy for partial invasion is more invasion, invaders of higher rank, whose forces are better organized. But it is not an invasion at all --- it is a home-coming.

14. <u>A LA RECHERCHE DU TEMPS PERDU</u>

I put myself, then, in the position of my observer, in whom I have (as object) all that I lack here (as bare subject) of meaning and continuity. Thanks to the interval that separates us, I have regional status, and the objective characters that go with it. A human head is set on my shoulders. I am brought back to life. I am healed, not indeed of all my timewounds, but of those which are fatal to a man, for the healing of my suprahuman time-wounds I have to go to suprahuman observers, and Page 464

and the Lady on the topic of self-duplication. The Lady points out "that a fruit does not eat itself, and a man cannot be together with himself." But the Un-man or Devil asserts: "A man can love himself, and be together with himself. That is what it means to be a man or a woman --- to walk alongside oneself as if one were a second person and to delight in one's own beauty. Mirrors were made to teach this art." (p. 157) The regional schema of this inquiry shows why the Lady is right and the Devil is wrong --- wherever I place myself there is no room for two of me. One has to lose his head to save the other's. Only by being nothing can I observe D. E. Harding to be something. In this as in so many other ways, death is -- to quote Ramuz -- the "secret sister of life. One weds neither, or one weds both". (The Triumph of Death, p. 26.)

* "Wouldst thou see a dead man living, walking on the earth, like living men;yet his spirit dwells in Heaven, Because it has been translated before death and will not be translated when he dies?" Rumi (Nicholson, <u>Rumi, Poet and Mystic</u>, p. 131).

° In the 9th century AD, Sankara taught the absolute distinction between the ego and the non-ego, and the danger of transferring the attributes of the latter to the former. Thus it is false to suppose that when I say "I am tired" something is said about the "I" itself. See Max Muller, <u>Indian</u> <u>Philosophy</u>, p. 199.

+ Cf. Plato's doctrine of the Receptacle (<u>Ti-maeus</u>, 49-50). which receives the transient images of the Forms --- "that in which all of them are always coming to be, making their appearance and again vanishing out of it." See also <u>Brihadaranyaka Upanishad</u>, III. viii. 8, 11; Whitehead, <u>Adventures of Ideas</u>, XI.19.

for a complete cure to the Whole, in whom alone I am whole. The rest of this part of the book is a kind of time-pathology end time-therapeutics, an essay in the "medicine of immortality". †

"Very old are we men" --- and very unaware of our age. "Few, few only are there left, with whom the world of memory is duly present." $^{\circ}$ But the importance of making it present cannot be overstated. There are many ways, ancient and modern, of emphasising this importance. We may say, with Buddhism, that emancipation comes only to him who, starting from the present moment, works back through his past, bringing more and more of it to full consciousness. × We may adopt Plato's doctrine of anamnesis, and attribute our recognition of truth to prior experience which we have temporarily forgotten: our education, and our training in resolution, will then come to much the same thing. + We may, as historians, as anthropologists, as palaeontologists, as geologists and astronomers, warm up the cold expanses of our long history, revivifying it, claiming and reclaiming the unconscious past and future for consciousness, restoring by a sort of artificial respiration (which is not artificial at all) that vast body of ours whose extremities are always being submerged in time. We may, following the methods of psychoanalysis and its derivatives, come to the conclusion that certain past events are a threat to our present integrity, and that only by ceasing to repress them can our wholeness be restored: the danger lies not so much in the events as in our refusal to admit them. * Our task is to own to what we have been; by becoming more alive to what we are, to become more alive. We may speak the language of religion, and insist upon conviction of sin, full confession, and repentance, as the prerequisites of salvation. We may say with Berdyaev: "We live in a world of historical reality, in a false and divided time, in which the past seems remote, the future yet unborn, and we are locked in the doubtful instant of the present. But what principle or force is directing the battle against this evil and mortal character of time? The battle of the eternal spirit without which the plot and unity of history, the succession of time and the division between the past, the present and the future, would become final and irreparable, because the loss of memory is, indeed, the chief and fundamental sign of insanity. Memory is the principle which conducts a constant battle against the mortal principle of time." †

As the timeless receptacle of all time, any excluded event leaves in me an aching void. What I disown will continue to trouble me until, in both senses of the word, I <u>admit</u> it.

15. MY RESPONSIBILITY FOR HUMANITY

To remember and confess <u>my own</u> sins and limitations, to raise above the threshold of consciousness the repressed <u>personal</u> experiences which are responsible for present conflict --- this, says common sense, is enough and more than enough. If I recall my pre-individual history, it can only be for the sake of curiosity and instruction: there can be no question of accepting responsibility for anything that happened before I was born.

† Empedocles, ascribing Pythagoras' extraordinary knowledge to his power of recollecting the experience of previous lives, was right in principle; it belongs to the essence of our knowledge to value and redeem our history, and to the essence of our ignorance to join Henry Ford in pronouncing it "bunk". In the last resort, to know what is merely present is to know nothing whatever, and to lack historical sense is to lack all sense.

° Plato, Phaedrus, 250.

× The Buddha (<u>Samyutta Kikaya</u>, II.213) is reported as saying that he could recall a hundred thousand lives, the destructions and renewals of aeons. Also, in a different way, Confucianism, with its emphasis on ancestors, is largely a campaign against forgetfulness; "The man of refinement turns his thoughts back to the past, goes back to his origin, and does not forget those through whom life has come to him." <u>The Record of Rites</u>, II.

+ <u>Meno</u>, 85-6, <u>Phaedrus</u>, 250.

* If a person asks himself what he really is, he finds himself faced with the need of analysis. A good way to carry it out is to get analysed over a long period, in which one works over all one's past a sort of long death-bed repentance or metanoia (change of mind), facing one's past as something not entirely past and done with The temporal aspect as such falls away." William Brown, Mind and Personality, p. 302. The principle was, to some degree, anticipated by Spinoza, who wrote: "Every one has power of understanding himself and his emotions, if not absolutely at least in part clearly and distinctly, and consequently of bringing it about that he is less passive to them." Ethics, V. 4.

† The Meaning of History, pp. 72-3.

According to some observers, primitive man does not distinguish as sharply as we do between the Now and the Then. There seems to follow a stage in the evolution of culture when dating becomes important: Dr Frankfurt believes that the first dating of monuments by the Egyptians marks a sudden and radical change in their appreciation of time. The Now becomes quite distinct from the abyss of time, and the life of man shrinks, as it were, to the instant. See Gerald Heard, Pain, Sex and Time, p. 102. The third stage (I would add) is the realization that there is nothing in the spatio-temporal abyss that is not also here and now.

This is a view which, on the whole, is rejected both by reason and tradition. Buddhists, for instance, hold that a man can and ought to think back beyond his infancy to the life he lived in the womb ° and beyond that to previous incarnations: it is alleged that many are able to recollect in great detail their earlier lives. × (The evidence, of course, is questionable first as to facts, and second as to interpretation: my point at the moment, however, is the prevalence of the belief.) The doctrines of karma and metempsychosis are less fantastic than unfamiliar, and the circumstance that they have not been overtly accepted in the West is nothing to their discredit. + Indeed we have our own variations on the theme, associated with such names as Mendel and Weismann and Jung. And we have the Christian (or, as some would say, the Pauline and patristic) doctrine of original sin, the 'flesh', that common unregenerate nature which we all need to confess to and be saved from, just as much as we need to confess to and be saved from our own particular share in it. A number of the Fathers teach that we really did sin in Adam, and not by a legal fiction; for we were present in Adam's loins and cannot disclaim all responsibility. * Nor has the modern world rejected these beliefs: it has only rephrased them in biological language. † (As fast as man loses his basic convictions he rediscovers them in disguise, and it is not till long afterwards that he sees any likeness. What is unceremoniously bundled out by the back door is presently admitted, with all the deference and ceremony due to a distinguished stranger, by the front; and the whole household congratulates itself on its social advancement. The turn-over or metabolism of our ideas is no less necessary than the turn-over or metabolism of our bodily material; but it is the changing of the matter which gives permanence to the form.)

Whatever terminology they may temporarily take upon themselves, two ideas -- heredity and responsibility -- are our permanent possession: (i) what I am is rooted in human history and universal history; yet (ii) I am praised and blamed, and I take the praise and the blame, for what I am. Now, as they stand, these two notions (which everyone accepts in practice) make nonsense of each other, and furnish a telling instance of the happy life which contradictory beliefs can live together even in the best regulated minds. I am free, Spinoza tells me, when l act in accordance with my own nature. But my own nature was thrust upon me (I reply), therefore I am not free. My own nature is not my own. Am I responsible for my glandular balance, for the weight of my forebrain and the corrugations of my cortex, for my IQ, for my tendency to succumb to this and that disease, ϕ for the weaknesses of character which I inherit? Surely it is absurd to suppose that I can be held accountable for these things --- and equally absurd, therefore, to condemn me for the failures, or to commend me for the successes, which arise out of my native equipment. Science, then, makes nonsense of conscience; there are no criminals, no saints, no heroes, but only the fortunate and the unfortunate, the healthy and the unhealthy; self-sacrifice, self-control and self-indulgence are worse-than-meaningless words; martyrs and prophets and moralists are the victims of an immense hoax; justice is a myth, and our social life itself rests upon an illusion and a lie --- a lie which is all the worse for being a necessary one. Si necessitates est, peccatum non est, as Pelagius contends. And so arises St Augustine's dilemma: • "What ° J. B. S. Haldane has speculated as to whether (when our knowledge of their growth has advanced sufficiently) our nervous systems could be developed before birth in such a way that we should be able to carry over into infancy some memories of the antenatal state. <u>Possible Worlds</u>, p. 276.

× "Many children, the Burmese will tell you, remember their former lives. As they grow older the memories die away and they forget, but to the young children they are very clear." Fielding, <u>The Soul of a People</u>, p. 329. Osborn (<u>The Superphysical</u>, pp. 271 ff. has a number of alleged instances occuring in the West, but the evidence does little or nothing (I think) to show that past lives of one's own are remembered. Cf. <u>The Case of Patience Worth</u>, by Walter Franklin Prince, and Denis Saurat's <u>Death</u> and the Dreamer, pp. 89, 90.

+ Cf. Bertholet, <u>The Transmigration of</u> <u>Souls</u>, p. 74.

* See Williams, <u>The Ideas of the Fall and</u> <u>Original Sin</u>, pp. 123 ff., and Grensted, <u>Psychology and God</u>, p. 132. Cf. .Cardinal Newman's famous lines ---"O wisest love, that flesh and blood Which did in Adam fail ..." and the argument in <u>Hebrews</u> VII. 9 that when Abraham paid tithes, his greatgrandson Levi (though still "in the loins of his father") was involved in the deed, and "paid tithes in Abraham". Many passages could be quoted from the Old Testament to illustrate this notion of pre-existence. But see Jer, XXXI. 29, 30, and <u>Ez</u>, XVIII. 2-3.

† As the psychiatrist finds the source of the neurotic's symptoms in some repressed infantile experience, so the anthropologist may take this same research one stage further. Sir Arthur Keith, for instance, traces our fear and hate of other nations to the early history of the race, when the principal instrument of human evolution was unrelenting internecine struggle between rather small groups of men. In both cases the essential thing is that we cease to repress and disclaim our past, our 'original sin'.

φ Some of the sayings attributed to Jesus may be construed to mean that a man is responsible for his diseases, which are analogous to sins, or a kind of depravity
--- e.g., Mark II. 5 ff, but see also John IX.
2 ff. Then of course there is Samuel Butler's Erewhonian doctrine that it is wicked to be ill. For the view that the body comes to each of us from beyond ourselves, see W.
E. Hooking, Types of Philosophy, p. 294.

• <u>Confessions</u>, VII. 3; see also I. 30, on the question of his responsibility for unchaste dreams.

I did against my will, I saw that I suffered rather than did, and I judged it not to be my fault, but my punishment; whereby however, holding Thee to be just, I speedily confessed myself to be not unjustly punished. But again I said, Who made me? Who set this in me, and implanted in me this root of bitterness?"

It seems to me that there is only one way out of this dilemma. My heredity and my responsibility are irreconcilable unless I am the whole of that which, in time and space, leads up to and determines my present condition, and unless I am, moreover, a responsible agent throughout that whole. When I condemn myself for behaviour which is largely due to inherited limitations and defects, I am answering for my ancestors; when I hold myself guilty of those frailties and that general sinfulness which I share with all men, I am answering for my race. "What blame requires", writes John Wisdom, "is that, however far back we go in setting out the causes of your act, we shall never come to a time at which a set of purely external circumstances, i.e., not involving you and your will, formed a complete cause of your act." \times And Arthur W. Osborn: "If we insist that individuals should be held responsible for the consequences of their actions, then as actions are determined by the character of an individual, he can hardly be responsible unless he also has exercised some formative influence over the character with which he was born." + The mere statement that I do this or that, implies that no part of my nature lies outside the I. I take upon myself the whole burden of my past, for it is from nothing less that my present action issues. When I assert selfdetermination now, I can only mean self-determination from the beginning. I have only to discover one will-act of mine which does not spring from my previous will-act, to destroy the whole structure of freedom and morality; and to render meaningless much, if not all, of my human life. Here, then, concealed amongst the assumptions I live by, implied alike in my thinking and speaking and doing, is the belief that I am as old as, and indeed much older than, Humanity itself. *

(The best discussion of this topic, so far as I know, is T. H. Green's. He concludes thus: "When we say that the character of a man, and his consequent action, as it at any time stands, is the result of what his character has previously been we must assume, as the basis of the character throughout, a self-distinguishing and self-seeking consciousness No response to circumstances of a being which has not, or is not, this consciousness, will account for its coming to have or to be it. Such a being could not be father of the moral man affiliated to it. No true development will be possible of the moral man from the state of being from which he is said to have been developed, because no true thread of identity can be traced between the two states In its primitive, no less than in its most developed form, the self-determining consciousness as little admits of derivation from that which has or is it not."†)

Every aspect of my life, as soon as it is really examined, gives the lie to that most persistent of illusions --- that I am only this man who answers to my name. I am also Humanity. I am as capacious of his objects as of my own, for they are my own. I am more myself, and not less, for taking up his point of view. But I cannot think Man's thoughts, and enjoy his

The effort we can put forth is, according to William James, what we take credit for, what we reckon ourselves to be; and the rest is what we carry. Principles of Psychology, ii. p. 578. But this 'effort' like Schopenhauer's 'Will') is clearly more than personal; it must be referred back to ancestral sources. What is more personal -- namely the actual use to which we put our energies -- is generally reckoned to be less ourselves. Thus a king can add little to that ancestral achievement for which he is chiefly honoured, and a woman is given more credit for the natural beauty she inherits than for the artificial beauty she contrives. We admire the man who chooses the right parents but adds little to their achievement, more than we admire the man who, having chosen the wrong parents, does very creditably all the same.

× <u>Problems of Mind and Matter</u>, p.118. For criticisms of this argument see Helen Smith's article 'Pre-existence and Free Will' in <u>Analysis</u>, Jan. 1936, pp. 40 ff; and Susan Stebbing <u>Philosophy and the Physicists</u>, X.

+ <u>The Superphysical</u>, p. 297. Kierkegaard (<u>Begriff der Angst</u>) draws attention to the paradox that a man, though fated by his past to sin, is guilty: in this way the concept of fate is resolved. Cf. Niebuhr, <u>The Nature and Destiny of Man</u>, i. p. 279; man's highest assertion of freedom is the discovery of the inevitability of sin. Also John MacMurray <u>The Structure of Reli-</u> gious Experience, pp. 68-9.

* W. E. Hooking makes the point that for the self to accept being, to live, is to accept its own far- reaching origins. "The very conception of a beginning of conscious life carries with it a paradoxical reference to something prior to that beginning --- as it were a sort of Platonic reminiscence. It thus lies in the nature of the case that as we examine our own duration in time, tracing our memory backward to the utmost, we can find no wall of partition between self and prior-to-self. I never know by introspection how old I am, or that I have a finite age. If the impulse which is I is a 'racial impulse', there is no reason to ascribe age to it: it is presumably, like energy, always new as on the first day." The Self: Its Body and Freedom, pp. 118 ff.

† Prolegomena to Ethics, 11.i. 114.

degree of freedom, and expand to his dimensions in time and space, and exercise his powers, without taking upon myself also the whole weight of his moral responsibility. ° Lacking this last, the rest would be no more than an empty fancy. Power without responsibility, as Stanley Baldwin said in 1931, is the prerogative of the harlot throughout the ages; and such power is, in fact, only the semblance of power. Just as I am not a man till I am answerable for the conduct of my bodily members, so I do not transcend man till I make myself answerable for my fellow members in the body of Humanity. I love; and love, as Martin Buber says, is the "responsibility of an I for a Thou". × I cannot grow without loving, and I cannot love without adding to my responsibilities. I have to re-learn and re-learn this lesson in mental statics --- that I cannot rise to higher levels without broadening my base. If there is a level of myself at which I am Humanity, and if Humanity excludes no man, then I exclude no man. If I am to make good my claim to this hierarchical status, then I may deny nothing which the claim involves. The familiar and true saying, that all which the best and the worst men have ever done finds an echo in every human heart, does not go nearly far enough. I must assume personal responsibility for all that men do --- not because that is a meritorious or advisable attitude to take up, but because it is no more than sober realism, the recognition of a fact that is true whether I want it to be true or not. I am running away from myself when I disclaim any man's behaviour. I am suffering from the same disease (but at a higher level) as when I become the mere spectator of what my limbs are doing, or when I dissociate myself from my family history, or when I argue that the crimes committed by my country against other countries, and my race against other races, are none of my business. "A man is born into the world that he has made", says the Brahmana of a Hundred Paths; though too often, like A. E. Housman's hero, he acts the part of a bedevilled and frightened stranger. I can no more select what in Humanity I shall admit to and what disown, than I can acquit myself of all my offences while taking credit for all my good deeds. + So long as I wash my hands of anything human, so long as I fear or hate any man, I am (at the level of Humanity) a case of divided personality, one phase of which either conveniently forgets what the other does, or, if it remembers, accepts no responsibility for it. *

16. THE VICARIOUS, AND THE SENSE OF RESPONSIBILITY

Common sense suggests a distinction. That the sins of the fathers are visited upon the children is doubtless a fact: it is not therefore a fact which we are bound to commend. All decent human feeling is revolted at the appalling sufferings that heredity inflicts upon countless innocent victims.

It is right that we should be appalled. But to be dismayed at the suffering of others is to begin to share their suffering, and to bear witness to the underlying continuity. Active sympathy is eloquent of our higher common levels: it means that there is no experience so foreign and so remote that it is not, ultimately, our own. Neither sadism nor saintliness Page 468 ° The doctrines of karma and reincarnation are really doctrines of the unlimited expansion of personal responsibility. Yet, as Bishop Gore pointed out, they have for many come to mean just the opposite, namely blind and inexorable fate, calling for passive acceptance and resignation. (<u>The Philosophy of the Good Life</u>, III. 1.) As in so many other matters, the East excels in consciousness, the West in practice.

× I and Thou, p. 15.

Pelagius and his disciple Coelestius held that we are born characterless (nonpleni) and inclined by nature neither towards good nor evil. That is to say, Adam's sin does not directly involve us, though its consequences influence us ab extra; and there is no such thing as original sin, for sin is a matter of will and not of nature. This doctrine was decisively condemned both by the Western and the Eastern Church, in favour of the Augustinian doctrine of inherited guilt, which St Thomas accepts unhesitatingly. (To speak in terms of this inquiry, much of what Pelagius says is right in respect of the Centre, for the bare receptacle is characterless, sinless, and untouched by the past; and much of what Augustine says is right in respect of the regions, where no man can cut himself off from the past)

+ "I cannot ... detach myself from the wickedest soul, nor may I be denied identity with the most virtuous", declared Gandhi in 1924, at the time of his 21-day fast for the sake of Hindu-Moslem unity.

* "I believe humanity to be a single being in spite of its myriad forms, faces, and eyes, and there is only in it such seeming separation as we find in our own being when it is dramatically sundered in a dream." A. E., The Interpreters, pp. 88-9. The degree of our realization of this unity is doubtless a question of national character as well as of individual character. Thus the Russian tendency to expect unanimous voting, the offender's readiness to confess and to side with the community against himself, and many similar characteristics which mark the national literature, all point to a low threshold between the individual consciousness and the collective. See, for instance, Geoffrey Gorer and John Rickman, The People of Great Russia.

nor ordinary compassion make sense at the merely human level, where we are insulated from one another. They are evidence of that hierarchical unity which ensures that the vicarious is not only vicarious. "We expiate the sins of our fathers, and our grandchildren will be punished for ours. A double injustice! cries the individual. And he is right if the individualist principle is true. But is it true? That is the point. It seems as though the individual part of each man's destiny were but one section of that destiny." $^{\circ}$ And indeed we are all linked above and below: we have a common destiny and a common source, by virtue of which nothing that is private to each of us at this human level is <u>merely</u> private. "If we are called upon to love our neighbour," says Radhakrishnan, "it is because we are all one in reality. My neighbour and myself are one in our inmost self." \times

What is the alternative to this doctrine? Vicarious suffering is an empirical fact which can only mean one of two things --- either the world is unbelievably cruel and devilishly bad, or the selves it contains are not ultimately separate. + Some of us may profess the former belief, but so long as we find life worth living our behaviour belies our words. And in any case the whole of this inquiry so far goes to show that the second of these alternatives, the alternative of human solidarity, is not only reasonable but true. The hierarchy, in fact, is nothing else than that order of things in which private lives and personal experiences become common property, yet without losing their private and personal character: in it, the individual is not lost by being wholly saved from himself, or by being wholly left to himself. His peculiarities do not cease to be themselves on account of the higher levels, any more than his headache ceases to be a headache because a man suffers it. Nevertheless all is shared, and there is endless displacement. One organ is sick because of the excesses of another, and one part of the body is punished for the misdeeds of another part. This we consider to be a very proper arrangement. The old schoolmaster did not think it inappropriate to chastise one end of the pupil for the ineptitude of the other, and we see no injustice in the pain which the gouty foot suffers on account of the excesses of the alimentary system. "Whether one member suffer, all the members suffer with it; or one member be honoured, all the members rejoice with it." * And all attempts to evade this unity -- from Cranmer blaming and burning the hand that recanted, to the music-mistress rapping the knuckles of the hand that stumbles on the keys -- are futile. ϕ

Hierarchical unity ensures that vicarious suffering is not only vicarious; and, in practice, this is plain enough up to our human level. Thereafter it is not so evident: it is a task rather than something already accomplished, for it is manifested in love and sympathy which may be withheld, and does not obviously proceed from the nature of things. Some uncertainty as to our higher unity must remain, otherwise goodness would degenerate into prudence or even habit; nevertheless in our more lucid moments we enjoy the unity of the higher individuals, in whom all 'inequalities' and 'injustices' between men are overcome, precisely as all 'inequalities' and 'injustices' between his organs are overcome in the man. It is the fact that we are not only men, the fact that the least of us is identical with the greatest at suprahuman levels, which The infallible test of my extent is: do I feel in that part? am I sensitive there? I am as much of the universe as I truly sympathize with, and there is no limit set to this widening: its successive tide-marks are the boundaries of my regions. This outflow from the Centre is not so much my expansion as the realization of what I already am. For me as a man, a pain in my toe is my pain, because I have realized myself that far afield; but the saint, who is bigger' and more adult than I am, feels another man's pain as his own. He is more realistic than I am, more himself, more healthy, more sane.

° Amiel, Journal,15th March, 1881.

× <u>The Philosophy of the Upanisads</u>, p. 85. "And did not his death compel them to feel that they must live his life as well as their own?" Fairbairn, <u>The Philosophy of the</u> <u>Christian Religion</u>, p. 145.

+ Cf. W. R. Inge, Personal Idealism and Mysticism, p. 177. Buddhism's answer to the disciples' question, "Master, who did sin, this man, or his parents, that he was born blind?" is that the man himself had sinned in previous existences. Mrs. Rhys Davids writes: "When we say 'injustice of nature', and speak of compensation hereafter as divine justice, we are thinking of explaining everything by (1) this life, and (2) future life, only. The Buddhist is thinking of the third great factor or tertium quid --- he is thinking of the immense past, and how natural justice as to that past is working itself out here and now." Buddhism, p. 126. On this view it is no more ridiculous to hold a man responsible for what he did 500 years ago, than for what he did 5 years ago. But the doctrine of karma in its modern Western form, recognizing the fact that our previous existences are progressively merged and suprapersonal, means that the blind man suffers for our sin, and not for his own past sins in any narrow sense.

* 1 <u>Cor</u>. XII. 26.

φ I have to take responsibility not only for what my hand does, but also for what it is. I have to take to heart Schopenhauer's profound teaching that my body is the objectification of my will, and my organs the visible expression of my desires. I am responsible for my face in precisely the same way that I am responsible for its expression, if my will is traced back far enough. My body is not equipment issued to me on loan, or a house of clay which I rent while here on earth: it is what I truly am in my companions. saves us from our individual limitations and miseries. (I do not say that this transcendent unity is enough, and that we need bother no more about merely human justice. On the contrary, I say that we shall not get such justice as is possible at the merely human level unless we find its sanction and <u>raison d'être</u> in the suprahuman --- in the infinite worth of each man, because he is himself and infinitely more than himself.)

To the extent that I shirk my responsibilities and withdraw my sympathy from my fellows --- to that extent I am insane. But sanity is relative to hierarchical level. In respect of his cells and molecules the madman is sane enough, and in respect of his suprahuman levels many a sane man is raving mad. The commonness of the saying that we live in a mad world is evidence, if it were needed, that we are not right in the higher part of our mind: humanly coherent, we are cosmically cracked, literally out of our mind, beside ourselves. Lunacy is egoism in the wrong place, a partial rejection of the principle of vicariousness ° --- partial, because total rejection would amount to annihilation. I am completely coherent and lucid only when I admit my whole past and my whole future. But to hold me responsible for this history, before I hold myself responsible, would be to repeat the folly of those who tried animals in a court of law, and inflicted corporal punishment upon lunatics. The reason I do not punish or reward my dog for something he did last week is that he is incapable of establishing the necessary kind of continuity between his experience then and now. In the same way, I can only be held responsible so far as I undertake responsibility. This I do by three stages --- (i) I bear in myself unawares effects that flow from a larger self; (ii) I become aware of these effects and begin to trace them to their origins, which I conceive to be outside myself; (iii) I become aware of the larger self they imply, and assume responsibility for it. And there is, in principle, no limit to the past and the future I can make over in this way, finding in it the intention and meaning which at first it seems to lack utterly. \times My amnesia cured, my temporal continuity re-established, my sympathies no longer withdrawn, my sense of responsibility restored, I begin to find the health or wholeness that is mine in the hierarchy.

17: THE INTERVAL BETWEEN THE INTENTION AND THE ACT

For me to live is to will to live; for me to will to live is to will now all those past and future conditions which I see are necessary to my life; to will these conditions is to begin the work of making intentional my total history, at each hierarchical level. So I approach wholeness.

But for common sense this will not do. The commission of the deed may not be thus parted by an interval of time from the awareness of the deed; or, if they thus parted, then the awareness leaves the deed as purposeless as it found it, and is powerless to save it from automatism. Posthumous intention is not intention at all. No merely mechanical event can, retrospectively or prospectively, become the work of a responsible agent.

Mr Propter, in Aldous Huxley's novel After Many a Summer, regards "the strictly human level of time and craving" as incapable of good, which is to be found only on the levels above and below. Our sanity depends on our keeping open the communications with those other levels. "If we were consistently human, the percentage of mental cases (in cities) would rise from twenty to a hundred. But fortunately most of us are incapable of consistency --- the animal always resuming its rights. And to some people fairly frequently, perhaps occasionally to all, there come little flashes of illumination ---momentary glimpses into the nature of the world as it is for a consciousness liberated from appetite and time." (p. 121.)

° Dr W. R. Inge describes vicarious suffering as "for all alike a condition of perfection, not a <u>reductio ad absurdum</u> of existence." (<u>Christian Mysticism</u>, p. 314.) It is the law of the higher life that the strong shall bear the infirmities of the weak, even as the weak (though in another sense) bear the infirmities of the strong. It is no mere form of words to say that the outcasts and the failures suffer on behalf of the more fortunate, and are fulfilled in them. And, as Kahlil Gibran says,

"The murdered is not unaccountable for his own murder,

And the robbed is not blameless in being robbed.

The righteous is not innocent of the deeds of the wicked...

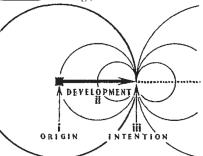
The Prophet, p. 47.

× This is substantially the same as Fichte's 'self-realization of the ego', which is the final cause and impelling ideal of existence, taking over into itself the non-ego which it has postulated and placed in opposition to itself. Nature is the raw material of the universal self, to be won over for consciousness by patient study, and subjugated to will. What attracts us in another, says W. E. Hocking, is the quality evoked by this endeavour to transform the physical --- the resourcefulness, grit, ingenuity, integrity, and patience which such a task brings out. Power over nature is what a spirit has, in proportion to its reality. This kind of reality we immediately perceive in a man, and it is the foundation of his likableness. Human Nature and Its Remaking, p. 240.

This common-sense view, so obvious on the face of it, is in fact quite mistaken. It is just one more instance of common sense's basic fallacy --- the fallacy of simple location in space and time. No event in my long career is simply now or simply then: it is invariably both now and then, and the interval between the now and the then determines the status of the event, or rather the status of the self in whose history the event lies. The result is that the event's intention is never Central to the event but always regional or off-Centre: when the act and the will are absolutely coincident there is in reality no act. In a manner of speaking, nobody is responsible for his behaviour at the time, but only in prospect or in retrospect. × The deeds for which we hold ourselves responsible are either what we are going to do or what we have done; and in the latter case they are either (like the Good Duke Alfred's victims) posthumously ennobled, or (like Cromwell and Ireton and Bradshaw) posthumously hanged. There is no action except at a point removed from the focus of action, and awareness means time-range and space-range for the very good reason that, without such a range or interval, there is nothing of which to be aware. What is, is from another time and place. It is not a question of our awareness limping along after reality, and never quite catching up with it: becoming conscious of an event, and accepting responsibility for it, are not external and incidental activities --- they are simply aspects of the developing event itself as it comes into its own. They are by far the most important ingredient of history, and the fact of their temporal displacement or eccentricity, so far from being an awkward circumstance to be explained and excused, is the very making of history.

There is, therefore, nothing odd at all in the assertion that I have to make myself responsible now for acts which I am not responsible for at the time --- all responsibility is like that. All my self-control is remote control --- and the more effectual it is the more remote it is. Whether it is a second or a million years which separates the unconscious and unintentional Centre from the regional intention, and whether that period lies on the past or the future side of my Now, makes not the slightest difference to the principle. My first task is to appreciate, as external and wholly objective data, past and future events as they are manifest here and now from their own Centres; and my second task is to appreciate them as episodes of my own history, to acquiesce in them, to confess to them, to take them over. In so far as I do this, my history (which is increasingly comprehensive chapters of universal history) ceases to be trivial, absurd, contingent, and blind, and becomes the history of a responsible agent from beginning to end. The effective range of the now, its capacity for showering upon the waste lands of time the invigorating fountains of intention, is unlimited. Moreover it is only this Central wellspring which can bring the time-desert to life: there is no other source of vitality than the present moment. There is nothing intentional which is not intentional from now. \otimes

What the Hegelians call a 'spiritual being' is not only self-conscious but self-determined. "Not what I am or find myself to be by nature, nor what I am made to be by any foreign or external power, constitutes my spiritual life, but that which, by conscious activity and will, I make my"The oldest Egyptian or Hindoo philosopher raised a corner of the veil from the statue of divinity It was I in him that was then so bold, and it is he in me that now reviews the vision." To common sense, these words of Thoreau's are poetic fantasy; in fact, they are profoundly true. (Walden, 'Reading'.)



× Let me give one or two instances from social life: A situation arises which, after a certain time of maturation, can no longer be ignored: either it must be positively intended by deliberate acceptance, or negatively intended by deliberate rejection. Thus leisure comes to demand its planned employment; incidental interference with nature makes further deliberate interference necessary; sanitation, humanitarianism, pestology, and peace, must eventually mean either planned eugenics or serious degeneration and starvation; The economic interdependence of nations, having arisen undeliberately, demands "that now we must either affirm these relationships on the intentional plane and so create a world-wide community, or we must repudiate them" --- as John Macmurray has said. (The Structure of Religious Experience, p. 76.) Walt Whitman puts it in a nutshell: "It is provided in the essence of things that from any fruition of success, no matter what, shall come forth something to make a greater struggle necessary." ('Song of the Open Road') And what is true socially is true individually: I find it necessary, sooner or later, to become aware of and responsible for my acts, because the acts build up to a completeness which includes intention, and to a situation which demands intention.

"If I can adopt them as mine," says Hocking of the consequences of others' actions, "it can be only by way of some extremely hospitable ingredient of my will which I do not find on the surface. It would have to be a trait of will which establishes some community of destiny between me and these other wills, whose consequences nature bears to me. I believe there is such a trait..." <u>The Self; Its Body and Freedom</u>, pp. 131-2.

⊗ There is much truth in the doctrine of L.T. Hobhouse that the fact precedes the consciousness of it --- "In mental evolution the principal steps consist in the awakening of consciousness to something that is already real, the end that underlies self to be. This does not imply that a spiritual nature is one which is absolutely self-created, or that the spiritual life of the individual has no limits or conditions imposed upon it from without. But it does imply that, so long as there is anything within or without --- any element of my inner life which is simply and immediately given, and not taken up, transformed, and, so to speak, re-created by the free self-assertion of the rational will, any outward conditions which constitute a limit to my nature, and which have not become the means of its self-development and self-realization --- so long and to that extent I have not attained to the true life of spirit."° But the fact which John Caird (from whom I quote) does not make sufficiently clear is that all this -- the awareness and the intention, the self-assertion and rational will and creativity -- is in me without being mine. If the embryonic event in my past is to grow up to full stature and intentionality now in me, I must make way for it, ungrowing to nothingness and unintentionality. My history is present because I am absent, and age-long because I do not last a moment. Common sense says that I am reading into the event a purposiveness which belongs not to it but to me; but it may be said with equal truth that common sense is reading into me a purposiveness which belongs not to me but to the event. The fact is that neither the event then, nor the self now, is anything in itself; but together they achieve certain characters, in particular the character of intentionality. The simplicity and vacancy of each ensures its receptiveness to what is projected upon it from the other; and their temporal remoteness ensures the hierarchical status of what is projected.

So phrased, this doctrine seems more obscure and dubious than it will prove to be in the following chapters, where it is worked out in some detail. Meantime it may be noted that there is no particular mystery about the interval between the intention and the act. It is true that common sense is always mistaking temporal interval for temporal discontinuity, always misinterpreting the temporal displacement required for intention as evidence of the very opposite thing, of automatism; nevertheless there are plenty of familiar instances in which the regional timeprocesses, linking intention and act, are not altogether lost sight of. And these instances are of two kinds --- those in which the intention comes before the act, and those in which the act comes before the intention. * (i) To begin with the former kind, suppose I am now learning to ride a bicycle, or to play tennis, or to use some difficult tool. All my movements are as deliberate as they are clumsy. But from now on, my performance will advance at the expense of my consciousness, until the first is at its maximum and the second is at its minimum. It is not that I do not need to attend to each little act once I have formed the right habits; nor is it that, once I have the skill, my attention must be given to my object (to the traffic, or the game and its tactics, or the material I am fabricating): rather it is that the act and the intention are incompatible. Each needs the other, but not now: they must be parted in time. Function does not destroy awareness of function, but holds it at a distance; and when this distance is too little, the function fails. (ii) So much for the awareness that precedes action. It is much the same when the order is reversed, and awareness follows action. I am wiping the dishes; I drop a plate; out goes my foot - 'quicker than thought' -- to intercept it; and only afterwards do

the impulse, the principle on which the inference rests and so forth. Consciousness does not invent but discovers. Undoubtedly what is discovered is modified, assumes a new importance, and makes fresh connections as the result of discovery. Such modification is the essence of development. But that which has developed, that of which we were unconscious, was already there in its fundamentals." ('The Philosophy of Development', in Contemporary British Philosophy, 1st Series, p. 181.) This is unexceptionable, provided we add that the prior situation, having now come to consciousness, is wholly reclaimed for consciousness. Awareness has retrospective effect, and positively refuses to be confined to this, the regional, end of the process.

° John Caird, <u>Introduction to the Philoso-</u> <u>phy of Religion</u>, p. 247-8.

Of every glorious thing; And that which seemeth last, The fountain and the cause; attained so fast That it was first; and mov'd The Efficient, who so lov'd All worlds and made them for the sake of this; It shews the End complete before and is A perfect token of His perfect bliss." Traherne's poem -- "The Anticipation" -from which these lines are taken, may be described as an essay on the oneness of the Beginning (or want), and the End (or the want fulfilled), and the Act (or the means)

"That so the End should be the very Spring

* "...We know our motives least In their confused beginning." Browning, <u>Paracelsus</u>, V.

which unites them.

I realize what I have done. I dodge a car in the street just in time to save my skin; but, fortunately for me, the act does not wait for the thought. Again and again in the writing of this book, I find the idea I want, the solution to the problem of the moment, coming to me unheralded and out of nowhere; but only after a considerable period of incubation and exercise and work, do I begin to see why it is the right solution, and what it really means, and what is my intention with regard to it. The lapse of time is indispensable, and redoubling one's efforts will not shorten it appreciably. This work of mine is an act which I shall not fully understand and intend till it is all over and seen in due temporal perspective. I cannot as yet say that I know what I am doing: my labours are in some degree 'unconscious' and infected with 'automatism'. Again, the intention is real, but it is remote from the act.

These are commonplace instances of a principle which, extends, as I shall try to show, throughout my entire history on all hierarchical levels.

18. INTENDING THE FUTURE

The fact that I intend <u>now</u> what 'happened' to me long ago, and what is going to 'happen' to me a long while hence, does not make my intention a mere sophistry or form of words: on the contrary, as I have shown, the interval is necessary to make the intention real. And intention means freedom, the freedom of self-determination. I am free in so far as I now discover and will my world-past and world-future. As for the former, I have argued that my will-to-live involves my will to be this self, which is not itself without its whole past; and moreover that my acceptance of responsibility involves my unconditional acceptance of an hereditary constitution of cosmic scope --- as responsible for what I do, I am responsible for all that makes me do it. But my future remains to be considered: and there are some serious difficulties to be met here. Reluctantly, common sense may be forced to admit that my behaviour only makes sense if I am understood as willing my whole past: my future, however, is another question. Is not much of my life spent in fear of it? And are not my fears, or most of them, only too likely to be realized?

Just as, previously, two commonplace considerations -- moral responsibility and heredity -- demanded a third -- my responsibility for my cosmic past -- which was far from commonplace, so now two equally harmless facts lead to an equally surprising conclusion. I foresee my 'fate' as man, species, Life, Earth, and so on, and in every case the prospect is hopeless: there seems to be no chance of conserving what has been gained, let alone of indefinite progress + "All parts of the world", Marcus Aurelius \times says truly, "must of necessity at some time or other come to corruption." That is the first fact. The second is that I live on, positively welcoming life on these terms. This doom is powerless to make me unhappy; life is not embittered, but all the sweeter. Indeed, to my great astonishment, I find that the more pessimistic I am about my future at each level, the more optimistic I feel. What is the explanation of this absurdity, ° this glaring inconsistency? One answer is that all sane men hate and defy this order of things, even if they do not at once commit suicide, and that all the rest of us -- the cheerful ones -- are either idiotic

James Ward and other pluralists have seen in the routine and uniformity of nature a mechanization of what was originally spontaneous and tentative, a system of habits that have become inveterate. (See e.g., Ward's Realm of Ends, p. 74.) But it seems to me that Earth and Sun, and their molecules and atoms, have never been more spontaneous than they are now, any less fixed in their habits. Yet there is a sense in which nature is the partial mechanization of the once spontaneous and intentional, only the process of mechanization works back into the past from the present. The awareness and the intention come now, in the science and poetry and mysticism of the nonhuman levels; and inanimate nature (after, the pattern of the Neoplatonic cosmology) comes at the beginning and the end, as the extreme dispersion from this present nucleus, as the outermost ring of its emanation. If, as C. S. Peirce maintained, "matter is effete mind", it is effete first and mind afterwards, in the ordinary one-way chronology. But, for this inquiry, it is the two-way chronology, in which time is symmetrical about the Now, that is basic. And, in terms of this 'nuclear chronology', the 'matter' then is necessarily as remote as it can be from its own 'mind' <u>now</u>.

The fallacy that we are simply located in time, and therefore in a position to disclaim the past, is well exemplified by A. E. Housman's hero ---"Men loved unkindness then, but lightless in the quarry I slept and saw not; tears fell down, I did

not mourn; Sweat ran and blood sprang out and I was never sorry:

Then it was well with me, in the days ere I was born."

<u>A Shropshire Lad,</u> XLVIII.

+ "I cannot understand how anyone with adequate knowledge of physics, biology, psychology and history can believe that mankind as a whole can reach and maintain indefinitely an earthly paradise. Such a belief is a sign of amiability in the young but of imbecility or wilful blindness in the mature." C. D. Broad, <u>Proceedings of the</u> <u>Society for Psychical Research</u>, xlv. p. 160.

× <u>Meditations</u>, X. 7

° The absurdity was not lost on Pascal, who wrote, "This same man who spends so many days and nights in rage and despair for the loss of office, or for some imaginary insult to his honour, is the very one who knows without anxiety and without emotion that he will lose all by death." The explanation of this "incomprehensible enchantment" (as Pascal calls it) is that men wish to die. (<u>Pensées</u>, 194.) On the second half of life as a preparation for or mad. The other answer (and I hardly need to excuse myself for preferring it) is that my seeming madness is really the wisdom of my lesser selves giving place to my greater selves. My deepest desire is to live this kind of life, with its widening circles of death, because it is only so that my cosmic destiny can be realized. I am not called upon to put up with my fate, to find excuses for it, to make the best of a bad thing. For it is when I am most myself, when I know that I am at my best, in those moments of insight which carry full conviction, --- it is then that I endorse my whole future, human, vital, terrestrial, cosmic, whatever it may hold. I joyfully intend it; I run out to meet it, and embrace it with both hands; amor fati × is no longer a catchphrase, but a burning reality. Such moods are all too rare, yet I have reason for thinking that they represent a norm from which I fall away rather than a peak to which I occasionally climb: they express lucidly what I mean vaguely all the time. Even when we complain of the futility of going on any longer, and existence becomes gall and wormwood, it is not our words, or even our surface thoughts, which are relevant, but our behaviour, our persistence in living. When that fails, no amount of pep-talk can save us; while that lasts, no jeremiad is quite sincere. It cannot be said that suicide is difficult -- one needs only to relax one's attention. Nor can it be argued that loss, disease, pain, disappointment, and death are secret weapons that fail to warn us of their impending action. In short, all our arguments are against this life-in-death, and all our basic instincts are for it. Deep down, we wish it; we choose it; we mean this life in all its stages, and the decline and death which divide each stage from the next. The more alive we are, the more we intend just this. For loved fate is not fate.

To common sense, of course, this smacks of self-deception. I may talk myself into intending, and accepting responsibility for, what I cannot help doing, but the intention and the responsibility are not genuine. All other alternatives, being out of my reach, are sour grapes. Indeed this may be so, and my too-easy and premature welcoming of the future may well be exposed by events as the feigned thing it is. But the deeper intention remains, and is in no danger of being proved fraudulent. There is a level of myself at which reality, for all its astringent harshness, is found to be infinitely more satisfying than the most delectable of wishfulfilments. In fact, it is because reality <u>is</u> the ultimate wish-fulfilment, that anything less than reality must contain some admixture of coercion, something which I do not wish.

And already in the commonest things this larger acceptance is prefigured. Consider, once more, sleep --- that "death of each day's life". Not only am I <u>aware</u> now of the fact that I died this miniature death last night and shall do so again tonight, but I <u>intend</u> it. The circumstance that sleep is, in any case, a 'necessity', a 'law of my nature', subtracts not at all from its intentionality. I feel in no way constrained. The law is no longer 'externally' enforced: it is freely willed. Now the principle is just the same in respect of that larger death --- the death of my human life. Once more, necessity is no bar to intentionality. If I mean one thing that is proper to my nature, why not another; and why not the whole? But I am slow to grow up to what I am. As a child, I resisted my nature, and often had to be put to bed. As a man, I find the day's grave welcome enough, but I am death, and death as the goal, see Jung, <u>Modern Man in Search of a Soul</u>, pp. 125, 128-9. But seven centuries before Jung, Rumi had said: "Your fear of death is really fear of yourself."

× Nietzeche's formula for greatness is <u>amor fati</u>: "The necessary must not only be endured; still less is it to be concealed; the essential thing is to love it." The more overtly religious version is perhaps less strange in our ears. If I will that God's will be done in earth and in heaven, then I will whatever He does there. In the hands of such an Agent, my blank cheque may be presumed safe enough. Tennyson's "Our wills are ours, to make them thine" is only one side of the transaction; the other is: Thy will is thine, to make it ours.

"The Yin and Yang are equally a man's father and mother. If they bring me to the point of death and I am unwilling, then I am being headstrong So now, the moment there comes an attack on a man's body, to insist that it must continue as a man, this would make the Creator of things see him as a damnable fellow. So now the moment we take heaven and earth as a great melting-pot and evolution as a great smelting, how can we object to going away (to somewhere else)?" <u>Chuang Tzu Book</u>, VI.

There is, of course, a great difference between the enthusiastic acceptance of mortality which I am describing here, and the death-wish of mere exhaustion --- the world-weariness which Swinburne celebrates in his 'Garden of Proserpine', where he thanks the gods

"That no life lives for ever; That dead men rise up never; That even the weariest river Winds somewhere safe to sea." Much of Schopenhauer's pessimism is of this order --- deliverance is ceasing to will to live, the end of all striving, the laying down for ever of all separate individuality: the drop ceases to insulate itself from the ocean. What such doctrines are apt to overlook is that life-denial is only justified if it is the prelude to a larger life-assertion. When I sleep and dream, I die as an adult modern, and revert to an infantile or preinfantile stage. Thus each day of my life recapitulates the whole of it: each voussoir of the arch is a little arch. (Cf. Freud, An Outline of PsychoAnalysis, p. 27; Jung, The Psychology of the Unconscious, pp. 26 ff.; McDougall, The Energies of Men, p. 248.) As Donne well says, "Every night's bed is a Type of the Grave Miserable and, (though common to all) inhuman posture, where I must practise my lying in the grave, by lying still ... " (Devotions: 'The Patient takes to his bed'.) With remarkable insight, Donne perceives that my very position while sleeping is symptomatic of what has befallen me.

not so happy about the evening and the night of my life --- I still resist my nature, but the resistance has shifted a point, from the dormitory to the cemetery. Or if, as man, I am content to die, then my anxiety is lest Humanity shall perish from the Earth and from the universe --- and I resist my nature at a higher level. $^{\circ}$

Nevertheless it is very easy to overestimate this resistance. Few of us, if any, wish to live on as men beyond the age of seventy or eighty. Emerson writes: "I was lately told of young children who feel a certain terror at the assurance of life without end. 'What! will it never stop?' the child said; 'What! never die? never, never? It makes me feel so tired.' And I have in mind the expression of an older believer, who once said to me, 'The thought that this frail being is never to end is so overwhelming that my only shelter is God's presence? " × And that presence, he might have added, is quite incompatible with the presence of a man that is immortal as mere man. "To live", as Nettleship says, "is to die into something more perfect." The reason why this day's frame of sleep is most welcome is that the day's meaning comes from what lies beyond itself --- from that larger setting which the child, with his small time-grasp, misses. Similarly, the only adequate reason for welcoming my human mortality is that, so far from destroying me, it clears the way for what is more truly myself. Growing up is pronouncing sentence of death on the lower self; it is affirming the spatial and temporal limitations proper to each successive hierarchical grade. As an adult, I cease wanting a pleasurable experience -- a game, a birthday party, a holiday by the sea, or youth, or my lifetime, or Humanity's lifetime -- to go on for ever; I begin to find appropriateness if not beauty in the brevity, and to look for permanence where it belongs. I learn to say (adapting the words of Mr. J. B. Priestley +), "There is nothing about me --- Douglas Edison Harding, born Lowestoft, 12th February, 1909 --- that deserves immortality or any vast cosmic arrangements for reward and punishment, Further Education on this planet or any other --- and nobody can persuade me that there is, because obviously the scale is all wrong. But on the other hand I feel certain there is a Somebody or a Something that lives through me, as through all persons.... and that this Somebody or Something, gathering experience for some fireside beyond the furthest galaxies, is indestructible and immortal. And when for a flash, our life is its life, the result is ecstasy."

The extraordinary thing is that we should so far mistake our real desires as to imagine that timely death is unwelcome. There have always been poets or philosophers or mystics to remind us of the true state of affairs --- from the Stoics (with their acceptance of mortality as agreeable to nature) and St Paul • and Clement of Alexandria * and many later Christian thinkers and mystics (with their doctrine of death-anticipation, of dying <u>now</u> to earthly things) to the existentialists and psycho-analysts of our own times. In his later work, Freud assumed only two basic instincts --- Eros or the self-preserving instinct, and the death instinct,+ the aim of which is to "reduce living things to an inorganic state".† Sooner or later his urge to self-destruction "succeeds in doing the individual to death". † And in one place Freud goes so far as to describe even our self-preserving tendencies as only "part-instincts designed to "It is a rebellious thing not to be content to die, it opposes the Law," says Donne; it is also incivil unwillingly "to give way by death to successors." (Sermon at Whitehall, 8th March, 1621) "St Paul could not tell which to wish, Life or Death.... and then, he comes to his <u>Cupio dissolvi</u>, To desire to be dissolved " (Sermon on the Penitential Psalms, 1627/8?)

° Anxiety for the fate of Humanity, as Berdyaev points out (<u>The Destiny of Man</u>, p. 331) is for some persons a source of more acute anguish than anxiety regarding individual destiny. - "I feel a sort of sacred terror, not only for myself, but for my race, for all that is mortal", says Amiel. (<u>Journal</u>, 22nd July, 1870.)

× 'Immortality.'

More than twenty centuries before Schelling described freedom as necessity become conscious, Chuang Chou said, "When he happened to come, it was the right time for the Master. When he happened to go, it was the inevitable course for the Master. Find your peace in the right time: make your home in the inevitable." <u>Chuang Tzu</u> Book, III.

+ <u>The New Statesman and Nation</u>, 6th August, 1949.

The British Institute of Public Opinion recently asked men and women throughout the United Kingdom: "What age do you want to reach before you die?" Only a small proportion expressed a desire to live beyond the age of eighty five.

• E.g., <u>Col</u>. II. 20; III. 1 ff.

* "From the beginning ye have been immortal and children of eternal life, and ye desired to take death upon yourselves, so that ye might drain it to the dregs, and destroy it, that Death might die in you, and through you." <u>Stromata</u>, IV. 89:

+ <u>Beyond the Pleasure Principle</u>, (pp. 50 ff) contains one of Freud's earliest statements of the death-instinct doctrine, and <u>An Outline of Psycho-Analysis</u>, (pp.5 ff.) one of the latest Cf. Barbara Low, <u>Psychoanalysis</u>, p. 73.

† An Outline of Psycho-analysis. pp. 6, 8.

secure the path to death peculiar to the organism". Jung, interpreting the same facts along different (and, I would say, less one-sided) lines, discerns, in the completer integration of personality that often occurs in middle life; a preparation for death and reabsorption in the collective psyche, from which the individual has temporarily and at the cost of much effort emerged, \times in the process of such integration, old age and death are seen to be not only 'natural', but also right and acceptable. Tennyson's Tithonous learned too late that human mortality, and not human death, is cruel ---

"Why should a man desire in any way To vary from the kindly race of men, Or pass beyond the goal of ordinance Where all should pause, as is most meet for all?"

And, if he does succeed in overstepping the bounds, the consequences are likely, to be extremely unpleasant. Marlowe's Faustus wins immortal youth --- and the play ends: "Exeunt devils with Faustus". And the elixir of life -- I should say, the elixir of <u>human</u> life -- turns out in the novel of Aldous Huxley Θ and the story of Conan Doyle ϕ to be a corrosive poison. Extended life means degeneration: one dies all the same into the infrahuman, only more slowly. "When one tries to rise above Nature one is liable to fall below it", Sherlock Holmes observes, on the subject of artificial rejuvenation. "There is a danger there --- a very real danger to humanity. Consider, Watson, that the material, the sensual, the worldly would all prolong their worthless lives. The spiritual would not avoid the call to something higher. It would be the survival of the least fit." × Jacobi, <u>The Psychology of C. G. Jung</u> p. 141.

"So far from being a yielding to despair, death, as I see it, is an active attempt to secure conditions for happiness which are to be gained in no other way." Georg Groddeck, <u>The World of Man</u>, p. 225. According to Groddeck, who had plenty of clinical experience, dying is not normally unpleasant for the patient, and appearances are here deceptive.

Θ After Many a Summer.

φ 'The Adventure of the Creeping Man' in <u>The Case-Book of Sherlock Holmes</u>,

"My death I commend unto you, free death that cometh unto me because I will... Practise the difficult art of departing at the right time." Nietzsche, <u>Thus Spake</u> <u>Zarathustra</u>, Of Free Death.

CHAPTER XIX

AUTOBIOGRAPHICAL: FROM THE HUMAN TO THE VITAL PHASE

In sleep and dream we work through the whole task of former humanity.

Nietzsche, Human, All Too Human, II.

The night-self is the very basis of the dynamic self. The blood-consciousness and the blood-passion is the very source and origin of us. Not that we can <u>stay</u> at the source.... The business of living is to travel away from the source. But you must start every single day fresh from the source. You must rise every day afresh out of the dark sea of the blood.

D. H. Lawrence, Fantasia of the Unconscious, XV.

I have forgotten whence I came, Or what my home might be, Or by what strange and savage name I called that thundering sea.

Francis Cornford, 'Pre-existence'.

For I have been ere now a boy and a girl, a bush and a bird and a dumb fish in the sea.

Empedocles (Burnet, Early Greek Philosophy, p. 223).

Man combines in his person the fish, the bird and the fleet-footed animal that walks on land. He desires to be complete --- the one great representative of multiform life.

Tagore, <u>The Religion of Man</u>, p. 41.

And, striving to be man, the worm Mounts through all the spires of form.

Emerson, Miscellanies, 'Nature'.

I do not think seventy years is the time of a man or woman, Nor that seventy millions of years is the time of a man or woman, Nor that years will ever stop the existence of me, or any one else.

Walt Whitman, 'Who Learns My Lesson complete?'.

How is it that the one great personality of life as a whole, should have split itself up into so many centres of thought and action, each of which is wholly, or at any rate nearly, unconscious of its connection with the other members, instead of having grown up into a huge polyp, or as it were coral reef or compound animal over the whole world, which should be conscious but of its own one single existence?

Samuel Butler, Life and Habit, pp. 102-3.

As the beauty of a flower is hidden in the seed cell so the beauty of humanity flows from its ancestral self, a mightier Adam or Heavenly Man.

A.E., The Interpreters, p. 92.

The Past is a dim indubitable fact: the Future too is one, only dimmer; nay properly it is the <u>same</u> fact in new dress and development. For the Present holds in it both the whole Past and the whole Future; --- as the Life-tree Igdrasil, wide-waving, many-toned, has its roots down deep in the Death-kingdoms, among the oldest dead dust of men, and with its boughs reaches always beyond the stars; and in all times and places is one and the same Life-tree!"

Carlyle, Past and Present, I. 6.

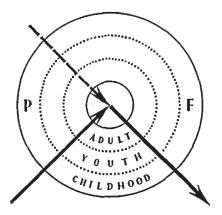
(i) THE HUMAN PHASE, CONTINUED.

1. DIFFERENTIATION OR DESCENT: THE ANCESTRAL PAST

My life is a bridge, from the crown of which I look ahead towards my death, and back over my shoulder towards my birth. And, as the last chapter showed, the two views are somewhat alike. My history as I ac-

Dante, in the <u>Convivio</u> (IV. 23), likens human life to the span of an arch, whose highest point is, "in those of perfect nature", the thirty-fifth year; for "The days of our years are three score years and ten" (Psalms, XC. 10). Cf. the opening line of the <u>Inferno</u>. tually find it is an ascent on one side of the Now, linked to a roughly equal and opposite decline on the other side. Nevertheless, just as I try to cling to the one-way, Centreless, abstract chronology, so I try to cling to the one-directional ascending evolutionary movement, and to ignore its descending counterpart. And even when I have been forced by circumstances to recognize that every gain is balanced by an equal and opposite loss, I cling to the notion that this loss begins here and now at the human level, that the turning point for me is the crown of the arch of my human life. I take it as axiomatic that, whatever misfortunes may lie ahead, my past has been a practically unbroken <u>ascent</u> from the level of the brute, from inert matter itself. The idea that my past, like my future, is in important respects a story of life on the <u>down</u>-grade -- the idea that the decline that lies ahead is only a continuation of a decline already far advanced -- this idea is for common sense almost unheard-of.

Yet language itself should give me pause: it is scarcely possible to speak of my ancestry without using such expressions as coming down or descent, and Darwin's famous account of how man has ascended is entitled The Descent of Man. Certainly almost the whole weight of tradition is on the side of man's fall from some higher station --- the contrary doctrine is, with rare exceptions, newfangled. Whether Plato is considering man as an individual or as a race, his tale is of hierarchical descent --- (a) before its union with the body, the soul lived in the realm of transcendent reality, beholding with unveiled face the eternal Ideas, which are now obscured or forgotten in the lower world of sense and all imperfection;° (b) and this individual down-coming recapitulates the process of creation: the Demiurge, having made the gods (the stars and the planets, the sun and the earth) hands over to them the seeds of mortal things, with instructions to bring them to birth, feed them, and cause them to grow. Men thus proceed from the gods; and as for the animals, they are degraded men. × For a man to regain the kingdom of God, the Fourth Gospel tells us, he must "be born from above". * St Augustine, platonizing, inquires how those who have never known the blessed life should long for it. "We have not as yet utterly forgotten that which we still remember that we have forgotten.... Where have they known it, that they so desire it? Where seen it that they so love it?" + The unborn soul, according to a Kabbalistic legend, is initiated by an angel into all the secrets of heaven and hell, but forgets them at birth, and then is for ever seeking to regain its lost knowledge. o And not only, says tradition, has man come down into the world; he has come down in the world --- "An Aristotle was but the rubbish of an Adam, and Athens but the rudiments of Paradise," says the 17th century divine, Robert South. φ Behind us lies the golden age, a history, on earth and in the heavens, so glorious that we can only guess at it: all that can be said is that somehow we are high-born, and have fallen from our exalted estate, and are now much nearer the nadir than the zenith of our cosmic path. So far from standing on the mountain top from which all roads lead downwards, man is near the bottom of the valley. He is a stranger and a pilgrim on earth, seeking his heavenly country. † More and more he forgets what his home was like, conforms to lower standards, mistakes himself for a native of this country. But now and then he recollects something of his divine ancestry: a beautiful face or phrase or scene, an inspiring idea, the experience of love, or the



"A man is a god in ruins.... Man is the dwarf of himself. Once he was permeated and dissolved by spirit. He filled nature with his overflowing currents.... But, having made for himself this huge shell, his waters retired; he no longer fills the veins and veinlets; he is shrunk to a drop. He sees that the structure still fits him, but it fits him colossally. Say, rather, once it fitted him, now it corresponds to him from far and on high." Emerson, <u>Miscellanies</u>, 'Nature', VIII.

° See, e.g., <u>Phaedrus</u>, 248-251. On the other hand, the Epicureans said that man is a superior animal, and animals are not degenerate men. Strato (unlike Aristotle -- <u>Parts of Animals</u>, IV. 10.) held similar views.

× <u>Timaeus</u>, 41 B, C; 91 D; 76. Plato (influenced, very likely, by Eastern thought, through the Pythagoreans) has the notion that animals come from light-witted and stupid men --- the greater the folly the lower it has to sink to find its own level in the scale of creatures. Moreover provision is made in the male human body of vestigial organs that will become useful when women and lower animals are derived from men. "For our framers knew that some day men would pass into women and also into beasts."

Bergson (<u>Creative Evolution</u>, p. 274) has what is, ultimately, the same idea, when he makes the animal produce its cells by dissociation, rather than the cells the animal by association. Cf. also Aristotle's doctrine that the community is prior to the individuals. <u>Politics</u>, I. 2.

* <u>John</u> III. 3.

+ Confessions, X. 19, 20.

θ Angelo S. Rappoport, <u>The Folklore of the</u> Jews, p. 92.

φ <u>Sermons</u>, i, II.

† <u>Heb</u>. XI, 13-16; also, of course, Wordsworth's 'Intimations of Immortality'. spectacle of moral excellence, may jog his memory. At such moments the description of man as a sort of temporarily animated slime seems as irrelevant as it is inadequate: he has the experience rather of knowing himself in terms of the most exalted aspects of the universe, which have temporarily taken on human limitations. Instead of linking himself with the inferior and infrahuman series from which, according to the scientist, he has arisen, he links himself with the superior and suprahuman series from which, according to the perennial philosophy, he has come down. "The reason of the human spirit seeking to return to that upper world", says Al Ghazzali, "is that its origin was from thence, and that it is of angelic nature." $^{\circ}$

And even common sense is ready to admit that our earthly progress is in many respects a regress. We lose the self-forgetful delight and trustfulness of childhood, our ability to live in the present, our power to experience freshly and vividly, our abandon, our guilelessness, our lack of well-marked boundaries. Nor does modern psychology (with its tale of infantile and childish sexuality, passing through oral, sadistic-anal, phallic, and Oedipus phases) altogether dispose of this Wordsworthian picture. We come trailing clouds of glory as well as of shame. According to one authority, × the story of my infancy is one of narrowing sympathy: in the first year I respond positively to everybody, in the second only to certain persons, and eventually (in the main) to one person. Growing up is largely a question of narrowing down. And at puberty there is another great withdrawal, and I come to separate myself very sharply from all other creatures: my fall to this encysted, atomic selfhood is painfully actual. The child is as far above the man as below him.

Religion, concerned with the superior hierarchical series, naturally deals with man's descent and the conditions of his reascent. And science, concerned with the inferior hierarchical series, is only equipped to perceive clearly man's ascent from below and his return there. * Nevertheless, as I have shown, any adequate account of evolution implies the doctrine of genetic Pairs, and my ascent from the dust is, even for science, a descent from the stars.

To be more precise, whether I am judged to have risen in the world, or to have come down in the world, is a question of how I am observed --- of whether my observer, starting from now, keeps track of me in time by approaching or by receding in space; for, in his study of my history, he may do either. If he chooses the former method, he finds me to be in due succession a man; a youth, a child, a foetus, an embryo, a single cell, an ovum and a spermatozoon, and their cell-ancestors. If he chooses the latter method, and is more interested in the broad picture than the details, he sees me merge with my two parents, my four grandparents, my eight great-grandparents, and so on. My historian-observer, pursuing into the past the clue of physical continuity, and determined to let no part of me out of sight, sees me melt into and become my people or tribe, then my race, then perhaps some still more comprehensive group (such as Caucasian Man), then Homo Sapiens, then the genus Homo.... The further back in time he takes his research, the more exalted the hierarchical plane on which he finds himself.

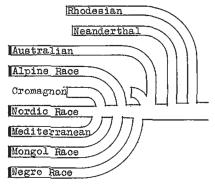
Modern man is like the spider in the Dutch fable, who let himself down by a thread from the roof. After he had caught many flies and grown fat, he happened one day to notice the original thread by which he had come down. "What is this for?" he asked himself, and, snapping the thread, brought down the whole web.

° <u>The Alchemy of Happiness</u>, IV.

× Charlotte Bühler, <u>From Birth to Matu-</u> <u>rity</u>, pp. 61 ff.

The myth of the Fall from Paradise is among the archetypal contents which Jung attributes to the collective unconscious. It is a part of the latent potentialities of the psyche which are awakened in the process of the integration of the personality, as the individual becomes consciously incorporated in the cosmic order.

* "Looking at evolution from below, we see emergence -- from above, creation. Everywhere the phenomenal truth visible to science is the reverse, the obverse the noumenal truth visible to philosophy and religion. Therefore the scientist who, as such, views the evolutionary process phenomenally and from below will see God's creative action nowhere." E. I. Watkin, <u>The</u> <u>Bow in the Clouds</u>, p. 81.



A possible family tree of Man, after Sir G. Elliot Smith. All such reconstructions are, of course, highly conjectural. It has even been suggested that the White, Yellow, and Black 'races' are descended from the ancestors of the chimpanzee, the orangoutang, and the gorilla respectively --- see Crookshank, <u>The Mongol in Our Midst</u>. Even so, human unity would only be pushed back a stage, not abolished.

In the pre-scientific language of the Kabbala, man, in his original and unfallen state, is united with all men in one Man --- Adam-Kadmon. "A man," says Bergson, speaking the language of science, "is merely a bud that has sprouted on the combined body of both its parents. Where, then, does the vital principle of the individual begin or end? Gradually we shall be carried further and further back, up to the individual's remotest ancestors: we shall find him solidary with each of them", and solidary with Life itself. ° (Nor is it, I think, a valid objection to say that physical continuity with the race does not mean psychological continuity. The basic mind-body theory of this book allows no real dissociation of the physical and the psychical, and there is in any case much empirical evidence pointing to psychical continuity. Leaving aside the question of inherited instincts and tendencies, and ancestral archetypes, there is the peculiar relationship of mother and child. \times J. A. Hadfield regards the infant's consciousness as identical, rather than linked, with the mother's, and as gradually becoming differentiated. And Frances Wickes cites the case of a child who dreamed of his mother's adult and feminine sexual problem. *)

Given time and space, then, I become Humanity. + His gradual birth, many hundreds-of-thousands of years ago, out of tailless anthropoid stock, the gradual birth of my race out of Humanity, and of my tribe or nation out of my race --- these are successive births of mine, in which the offspring's hierarchical status is in each instance lower than the parent's. In other words, my history within Humanity is a narrowing down or descent from the species, through a series of ever more restricted (and frequently ill-defined) mesoforms, to the individual. I do not mean to suggest that this modern version of our descent comes to the same thing as the traditional version; for, in important respects, it clearly comes to the opposite thing. The only point I wish to make at the moment is that, even for science, my past history is not unitary but twofold --- a Paired descent-ascent, converging upon the middle of the hierarchy here and now.

2. REDINTEGRATION OR RE-ASCENT: THE FUTURE

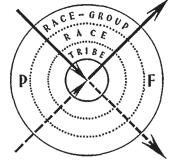
So much for my racial past. My racial future is its mirror-image, distorted and blurred, but still recognizable. If my ancestry is the ladder by which I climb down from Humanity to man, then my progeny is the ladder by which I climb up again --- Samuel Butler goes so far as to say that "the life of the parent, from the date of the branching off of such personalities (i.e., the children), is more truly contained in these than in the residuum of its own life." \dagger However this may be, in a few hundred years I shall, presumably, through my children and my children's children, become tribal again, ϕ and eventually racial: future time, no less than past time, wages an implacable and victorious war against every vestige of separate individuality. And supposing I die childless, the case is not much different: all those positive and negative contributions which, by the mere fact of living in society, I make to the common life continually, are worked in and worked up ever more thoroughly till they become completely in"It is the whole that exists primarily, and the elements can exist and come into being only within the system as a whole. The world cannot be explained as the result of adding A to B, then to C, and so on: plurality cannot give rise to wholeness, but is, on the contrary, generated by it. In other words, the whole is prior to its parts." Lossky, <u>The World as an Organic</u> <u>Whole</u>, p.2.

° <u>Creative Evolution</u>, p. 45. Bertrand Russell (<u>An Outline of Philoso-</u><u>phy</u>, p. 30) has well said that many things about man can only be understood by ignoring the distinction between self and posterity. Cf. Plato, <u>Symposium</u>, 208. × Cf. Laurence J. Bendit, <u>Paranormal</u> <u>Cognition</u>, p. 62, and Ehrenwald's article 'Psycho-pathological Aspects of Telepathy', in <u>Proceedings of the Society for Psychical</u> <u>Research</u>, 1940.

* The Inner World of Childhood.

Cf. Jung's doctrine of the far-reaching effects of the "parental image": these effects are normal and important, and if they are lacking "the parents are not born again in the children", who "will suffer from all those ills that beset unhistorical parvenus." "Through the influence of the parental image continuity is established, a reasonable prolongation of the past into the present." <u>Contributions to Analytical. Psychology</u>, pp. 127-8.

+ Cf. Schopenhauer's teaching that space and time are the Veil of Maya, hiding the unity of the species and of life: they are the principle of individuation which divides life into distinct creatures. <u>The World as</u> <u>Will and Idea</u>, i. pp. 145-6, 357-8.



† <u>Life and Habit</u>, p. 95. And indeed we all know parents who live so much in their children and so little in themselves, that they are already practically defunct. φ There are many biblical passages which take account of this development. Thus God promises Jacob that He will go down with him into Egypt and will also surely bring him up again. (Gen. XLVI. 4.) The writer evidently considers the exodus of Jacob's descendants from Egypt (with Jacob's body for burial in Palestine) to be Jacob's own exodus. This is only a particular instance of the primitive 'failure' to distinguish clearly between the individual and the tribe.

corporated in Humanity as a whole. Thus my least action has a kind of everlastingness, but its original form and self-sufficiency are doomed from the start. Nation, race, the species itself, are mortal, but I merge with each in time to change it, and to make its total contribution to the higher unit different because of me --- or rather, in some sense, to make it my contribution. † "Cast forth thy Act, thy Word, into the ever-living, ever-working Universe: it is a seed-grain that cannot die; unnoticed to-day (says one), it will be found flourishing as a Bunyan-grove (perhaps, alas, as a Hemlock-forest!) after a thousand years." ° What is certain is that the seed will grow up through the hierarchy. Ø

The common-sense criticism that these remote developments are of no more than academic interest, is quite unjustified. "The fact", says Dr Inge, "that human love or sympathy is the guide who conducts us to the heart of life.... is proof that part of our life is bound up with the life of the world, and that if we live in these our true relations we shall not entirely die so long as human beings remain alive upon this earth. The progress of the race, the diminution of sin and misery ... --- these are matters in which we have a <u>personal</u> interest". × Nothing could be more practical and urgent than the need for realizing now our past and future identity with what is beyond the individual, for anticipating and rendering deliberate our eventual merging. + Indeed the present benefits of this suprahuman development are no less remarkable than those of the infrahuman development which it prolongs. How do I happen to be a man? I began this phase of my life as a solitary cell. And when I came to divide into two cells, instead of withdrawing my sympathy from one of them, I identified myself with both; again, when these two divided, I became all four cells; and so on, until at the end of nine months I was no less than 15,000,000,000 times my original bulk. * There was certainly nothing common-sensible about this behaviour, which makes my further task of growth from man to Humanity look almost trivial: at least I may claim to have had some practice in expanding sympathy and hierarchical growth, and to have experienced in my own person its remarkable results. If anything works, if anything at all is practical, it is this refusal to dissociate myself from my fellows of this hierarchical level --- whatever that level happens to be. But the refusal is not automatic, a foregone conclusion. I might have kept myself to myself and minded my own cellular business: and, in fact, that is exactly what I did do with a part of myself, for a cell in me is only a cell because it is myself unwilling to take responsibility for, or to feel for, my companions. Because of this persistent streak of narrow-mindedness, I remain cellular; and because I am also capable of somewhat more generous and less careful moods, I am also, not indeed multicellular, but supracellular. And my expanding sympathy need not stop at this point: I may go on to become, not multihuman but suprahuman, by the same method. \oplus

How can I attain to Humanity? In other words, how can I give effect now to my ancestral and future unity with all mankind, in a single individual? In recollection of the past and anticipation of the future, the barriers between myself and my fellows must fall in their due order, till we are one. This means taking up into myself the warring elements I find outside --- the diverse philosophies, clashing political doctrines, con† There is a long tradition of 'multiple dying'. For example, among some primitives a second funeral is celebrated a year or more after death, in order that a man may join his clan. And indeed we should all imitate T. S. Eliot's Simeon, who dies in anticipation, besides his own death, the death of those after him. The dying of this individual man is only a first and elementary exercise in mortality.

° Sartor Resartus, I. 5.

Ø Our life lasts while our will is done. As Samuel Butler pointed out in <u>Erewhon</u> <u>Revisited</u>, the true life of man lies in his will and work, not in his body. What life this book of mine has is the continuing vitality of those dead men whose labours it prolongs; for the love and desire of the dead drive us, as Yeats has said, with little regard for our private interest. See Yeats' <u>Essays</u>, p. 526.

× <u>Christian Mysticism</u>, p. 327. Cf. p. 31: "Separate individuality...is the bar which prevents us from realizing our true privileges as persons."

+ For Edward Carpenter (Pagan and Christian Creeds, Civilisation, its Cause and Cure, etc.) there are three conditions of man --- (i) his primitive unseparateness from the group or "mass-Man", (ii) his present exacerbated individuality in apparent separation from the "mass-Man", (iii.) his goal of reunion with his fellows, so that Man rules in each man. Cf. the doctrine of Meister Eckhart that Christ is the_representative of collective humanity, the Man in whom we are all one. "All creatures that have flowed out from God must become united into one Man, who comes again into the unity Adam was in before he fell." (See Rufus M. Jones, Studies in Mystical Religion, p. 236.) What I am doing in this chapter is to translate into contemporary terms the old doctrine of the unitary first and last Adam, with multiple man midway between.

* Sir Charles Sherrington, <u>Man on His</u> <u>Nature</u>, III.

⊕ Joseph Needham, in his article in <u>The</u> <u>Philosophy of A N. Whitehead</u>, p. 265, speculates as to whether ascending levels of social organization are an aspect of ascending levels of mental development. "Perhaps it is not erroneous to regard the sociological and the psychological series as different aspects of one and the same set of high organizational levels." It is my endeavour in this book to outline a universal psychology which recognizes the levels of our mind (the mind which is in us) as levels of the hierarchy, which is 'sociological' throughout. tradictory religious and artistic tendencies, class struggles, international tensions, racial differences, seemingly incompatible temperaments, and all the ferment of love and hate, of fear and exaltation, which make our world so lively and terrible a place. I must learn to say with Walt Whitman: "I have the idea of all, and am all and believe in all." × For these interwoven processes of thought and feeling and action are mine, and until I claim them I am a prisoner who has forgotten that he is also the prison. But obviously I cannot elicit and adopt every man's experience seriatim: my growth must be organic, increasing in scope and momentum as it proceeds, and so ordered that my power to assimilate never seriously outstrips my power to absorb and unify. The inclusiveness of the hierarchical unit or mesoform, in whose aims I discover my own aims, advances in geometrical rather than arithmetic progression. +

Notwithstanding all this necessary lumping together of individuals, and of experience, my growth beyond man can no more exclude anything human than my growth to man can exclude anything cellular in me. I have to grow up through every man's thought and feeling (not excepting the criminal's and the idiot's and the lunatic's) incorporating it as I go: the unique experience of each is indispensable to the whole, and accordingly to my attainment of the whole. * To every man I say: You are an organ through which I gain experience that can be gained no other way; you are a limb of me; cut off from you I am maimed. Moreover this acknowledgement that you think my thoughts is not a piece of gratuitous broad-mindedness (or meddlesomeness), but a matter of necessity --- in no other way can I come to my senses at the higher levels. † You stand between me and myself. You are perhaps my bitterest enemy, the man with whom I have nothing in common, the man who I am certain is wrong --- and of you I have most need of all. You are my complement. For Humanity is not other than man's rounding off: as man is only a sympathetic cell, so Humanity is only a sympathetic man. Not only my evolution but all evolution is growing magnanimity: charity is the engine of hierarchical ascent. A molecule as a solitary unit can grow just so far --- after that, it can only grow by linking itself with other molecules; a cell soon reaches its limit of size and organization and performance --- further advance is multicellular; a man may grow big in several senses, but he can only really flourish by becoming other men. --- not men in general or symbolically, but those actual humans with whom be has to live. Impossible? But I have already achieved the impossible. Why should I not repeat at the human level the technique which has brought me here?

It is a technique of taking over differences, not abolishing them. I grow neither by destroying my opponents, nor by persuading them to agree with me, nor by settling all their mutual disagreements, but by incorporating them with their disagreements, by deliberately adding them, as a going concern, to my own organization. ° Thus the struggle goes on between my cells: up to a point the disunity of the lower level serves the unity of the higher. And, in the same way, the human struggle goes on in me, as internal process: the human life I engulf is not bowdlerized or pacified or made uniform, but retains its dynamism. When, for instance, I grow up by taking over my own control from my parents, the same

× 'With Antecedents'. Cf. <u>The Tao Te Ch-ing</u>, XLIX:

"The sage has no unalterable mind: He makes the mind of the people his mind.....

The sage in the midst of society is constantly absorbing:

For the sake of society he muddles his mind.

Thus the people all hang on his lips, And he can treat them all as babes."

+ It must not be forgotten that the shift to a new hierarchical level (as distinct from the level of a mere mesoform) involves a 'dying' and 'rebirth', a 'spindle effect': accordingly development is by no means simply the extension of what already exists. Bergson (<u>Morality and Religion</u>, pp. 21 ff.) rightly makes loyalty to Humanity more than an extension of loyalty to family and country. To hold all mankind dear is for him a radically new step, 'religious' in nature, as distinct from the 'biological' or 'instinctive' love of the lesser units.

* Cf. F. H. Bradley, <u>Appearance and Real-</u> <u>ity</u>, p. 405, on the whole's need of the part.

† But the means to such growth are manifold. There is the art of the novelist and the dramatist and biographer, the actor and the poet, in so far as their aim is to realize and express the inner life of others, by imaginative sympathy; there are the researches of the psychologist, the anthropologist, the sociologist, the alienist, in so far as their aim is to illuminate experience of every variety; there is our religious duty to feel concern for all men whatsoever; there is the ordinary practical necessity of grasping 'how people's minds work', if one is to get on with them and do one's job. All this multifarious endeavour is involved in the effort of hierarchical ascent from the level of the individual to the level of the species.

"Therefore we ought to regard none who differ from us as enemies, but to contemplate them rather with yearning as those who possess some power or vision from which we are shut out but which we ought to share." A.E., <u>The Interpreters</u>, p. 152.

[°] The deliberateness is essential; lacking it, I am a parasite. "By just as much as the organism borrows <u>mechanically</u> from an external source, by so much exactly does it lose in its own organization", says Drummond truly (<u>Natural Law in a Spiritual</u> <u>World</u>, p. 335).

cycle of unsocial behaviour, blame, and restitution, goes on, but it is no longer external.° I have grown by ingesting, not dead and harmless material, but some of the life that is in the world. The debate continues, but its scene has shifted from the self's environment to the self. And there is not a single argument being conducted outside me that is not really my own indecision projected --- my business is not to settle it for ever at its own level (where, indeed, it is insoluble) but to absorb it, and unite it in me to that higher level where the contradictions are surmounted. Surveyed from the lower level and therefore from outside, the disorder of the human scene is as appalling as the state of my tissues might seem to an observant cell; but gathered up into the unity of the self, the strife begins to appear as organic and functional, the separate selves of the contestants merge in a common self, and Humanity approaches wholeness. Good works are not enough: we have consciously to attain the level which gives them meaning and is their sanction. Uniting men as men is impossible. What we can do is help one another to discover the plane upon which we are already one.

That my hand's experience is mine, not by some cast-iron necessity, but rather because I elect to make it mine, is indicated by the well-known fact that my hand (or any other part of the body controlled by striped muscles) is liable at any time to pass beyond my conscious control, so that I cease to be responsible for what it does, and perhaps become insensitive to its injury. If this does not in fact happen to me, that is only because, by some miracle of persistence, I am able to maintain without flagging the sympathy which I feel towards more living creatures than there are men on earth. How much more fleeting is the sympathy of the next stage, which I extend towards men instead of cells. So long as I am insensitive to any human pleasures and pains, and indifferent to any human thought and striving, so long am I in my larger body partially paralysed and numb. Getting back my feeling in these my outer limbs is not easy, and the accompanying 'pins and needles' are often exceedingly painful. Moreover I do not recover once and for all: my life is a troubled rhythm of relapses and recoveries. Hence all manner of contradictions. Humanity is accomplished, yet my task; myself, yet all other men. Humanity is that future being in whom all men are one, yet a being that must be realized now. × There is more than anticipation here: the unity of mankind is real now, from the past and from the future. It has double, or rather treble, location in time.

"The biological aim for the race", says Du Prel, "coincides with the transcendental aim for the individual." * Certainly the great individuals of the race are those who are least individual or peculiar: they are great in spite of, and not because of, their singularities. The great thinker is no prodigy, and has the gift of <u>not</u> being original, clever, unique. With Fontanelle he says, "Everybody is right": + it is his intellectual hospitality which distinguishes him, the generosity, the universality of his thinking. Similarly the great actor is a nobody with a miraculous capacity for becoming anybody. "Men of Genius", Keats tells us, "have not any individuality, any determined Character", but only "Negative Capability", which is the ability to become everybody else --- that quality of poetic genius which, says Keats, Shakespeare "possessed so enormously".

° Of a later stage in the same process Rousseau says: "Man acquires in the civil state moral liberty, which alone makes him master of himself. For the mere impulse of appetite is slavery; while obedience to a law which we prescribe to ourselves is liberty." <u>Social Contract</u>, I. 8.

As Inge has said, "We can only achieve inner unity by transcending mere individuality"; and this (I add) means achieving outer unity --- unifying others. For, "the individual cannot reach his real personality as an isolated unit". (Christian Mysticism, pp. 33, 68.) Kipling tells us that "Down to Gehenna, or up to the throne, He travels the fastest who travels alone." But the fact is that aloneness belongs only at the terminuses --- the aloneness that has taken in all company, and the aloneness that has rejected it. The way up to the first is the progressive denial of aloneness; the way down to the second is its progressive affirmation. What may be called hierarchical isostacy is a matter of varying degrees of aloneness.

"For a man, rightly viewed, comprehendeth the particular natures of all men. Each philosopher, each bard, each actor, has only done for me, as by a delegate, what one day I can do for myself." Emerson, 'The American Scholar'.

× "The unity of man is authenticated by the capability of men to become each like to the other. And if we seek a name for the common essence or character which constitutes this unity, what better one need we desire than Humanity?.... For the term expresses a process as well as a fact, since wherever unity is believed, unification begins." A. M. Fairbairn, <u>The Philosophy</u> of the Christian Religion, p. 176.

* Cf. Marcus Aurelius: "Go on straight, whither both thine own particular and the common nature do lead thee; and the way of both these, is but one." <u>Meditations</u>, V.3.

+ Conversely, Goethe's Mephistopheles says of himself, "I am the Spirit that Denies!" (Faust, I. 3)

 \otimes See Keats' letter to George and Thomas Keats, December 22, 1817.

Shakespeare is Shakespeare because he is so little himself and so much the world. He is, in Victor Hugo's phrase, one of the <u>âmes solaires</u>, and indeed one of the <u>âmes stellaires</u>, because he is the unity of so much and so many: he is great with others, and this is the only way to be great. ° He is capacious now of past and future hierarchical unities.

Whatever, I sometimes ask myself, can a grown man find in dogracing, British Israelism, stamp-collecting, football pools, burglary, car-worship.....? The longer the list of what seem to me to be pointless activities, or worse, the less human I am. Every aversion is an aversion from myself. Everything despised leaves me more despicable. I keep my brains in other heads, without which I am less than half-witted. Consequently I am far more shocking, inconsistent, versatile, lively, and outrageous, than I had dreamed. The philosopher for whom philosophy is never on a level with shove-ha'penny, who can never see the funny side of his pursuits, who has become incapable of occasionally feeling about them as the ordinary schoolboy or business man feels, does not know his own mind. Of course this receptivity, this universality, is both difficult and rare. But that is only to be expected. Why are there so few broad men, so many narrow ones? Why is the genius lonely? Why is saintliness so uncommon? Or, to re-word these questions, why do the numbers fall off as we rise from the level of a man to the level of Humanity? So to put the question is already to have answered it. Humanity, despite all appearances, is organized as a whole, and organization involves the delegation of power and of responsibility and of awareness, so that a decreasing number of higher units stands for an increasing number of lower units. In other words, Humanity is a hierarchy or pyramid which, however imperfectly, recapitulates the universal hierarchy of heaven and earth. The truly great man takes up into himself, thinks for, feels for, suffers for, is, his fellows; least representative of men in one sense, he is most representative of them in another. As the man is the solitary saint and genius of his cells, that cell who from the start loved his neighbour as himself, so Humanity is the saint and genius of all men, that man who from the beginning of human history identified himself with every newcomer, and therefore lives on to this day. And just as, between the cell and the man, there is a miniature hierarchy of tissues and organs, so, between the man and Humanity, there is a hierarchy of generous, large-hearted souls. Like members of Parliament and banknotes of high value, they are few because they stand for many, or rather are so many. * Thus what is (numerically) a little genius goes a long way; but, without that little, Humanity does not exist. The present realization of great and unselfish men, Humanity is to me, the ordinary selfish human, vastly distant in time. He is my source and my goal, my higher, time-removed self, and between him and me there is a kind of intercession of saints who realize on my behalf more and more of what I really am. Hence the practically universal doctrine (found, for instance, in Mahayana Buddhism and some of the Sufis, in Philo and many Christian teachers) that the mystic secretly sustains and inspires the multitude; he is the salt of the earth; the prophet without whose vision the people perish. Hence, too, the many historical instances of the One Man, the Saviour of men, the divine King whose personality embraces all his subjects, the Representative Man. •

° Cf. Royce, <u>Lectures on Modern Idealism</u>, p. 242.

Maeterlinck suggested that love is a recollection of "the great primitive unity" (<u>The</u> <u>Treasure of the Humble</u>, 'The Invisible Goodness'); I would add that it is also a present actualization of the great eventual unity.

The astounding confusion of human desires, and ways of thought and behaviour, together with our endless disapproval of all but our own ways, are nowhere better described than by William James, <u>Talks</u> <u>to Teachers</u>, pp. 228 ff and W. Macneile Dixon, <u>The Human Situation</u>, pp. 179 ff. "Charity believeth all things", but they contradict one another, unless Charity reconciles them by hierarchical ascent. The philosopher doubts all things, but this is only possible in so far as, by using the methods of analysis, he descends the hierarchy.

Eugenists frequently deplore the fact that our progress has from early times been a matter of growing social heritage (and of its availability to greater numbers) and not of any improvement in native individual endowment. Doubtless the dysgenic effects of the differential birthrate are a grave danger; but the real problem is, not how to improve the individual as such (as if he really existed) but rather how to render him capable of full union with his own supra-individual levels. For this great powers are needed, but it may well be that too great success at the lower level hides his need of the higher. There is at every level a tendency to overdevelopment, an attempt to reproduce the characters which belong to the next level. Eugenists would do well to consider this point more seriously.

* But in them the many become one. "Their name is Legion", says Aldous Huxley "of exceptionally complex personalities, who identify themselves with a wide diversity of moods, cravings and opinions. Saints, on the contrary, are neither doubleminded nor half-hearted, but single and, however great their intellectual gifts, profoundly simple. The multiplicity of Legion has given place to one-pointedness." <u>The</u> <u>Perennial Philosophy</u>, p. 55.

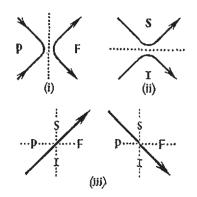
• For example, Julius Caesar was called "the common Saviour of human life", and Augustus "the Saviour of the whole human race". The early Pharaohs, in their coronation rites of 'death' and 'rebirth', and in rejoining the divine ancestors after actual death, personified the community and obtained its salvation. In brief, while my future reunion with the race is inevitable, it is open to me either to realize the fact and the benefits of that reunion <u>now</u>, 'as from the future', or to reject them. It was written of Pharoah: "He alone is millions, other men are small." (Erman, <u>Literatur der Aegypter</u>)

3. <u>THE FOUR ARMS OF MY HISTORY, AND ITS SYMMETRY ABOUT</u> <u>THE HORIZONTAL AXIS --- THE PAST</u>.

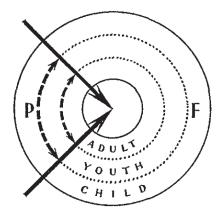
My human history, then, is fourfold, and it may be variously described as (1) a past ascent-descent and a future descent-ascent, (2) a superior descent-ascent and an inferior ascent-descent, and (3) an ascent which is past and future and a descent which is past and future. What is bound to lead to all kinds of error is the emphasis of any one of the four arms at the expense of the other three. * My 'pessimistic' preoccupation with the downward movement must be balanced against my 'optimistic' preoccupation with the upward; my 'scientific' preoccupation with the inferior series against my 'religious' and 'philosophical' preoccupation with the superior series; my passive realization and acceptance of the past pair against my active realization and intention of the future pair. Always symmetry. Anything less than the quadripartite whole of my history is at best a useful but dangerous abstraction, at worst sheer nonsense. If I am to be likened to a bridge, the only appropriate design is one in which an arch and a catenary are combined --- one that is suspended from above as well as supported from below: one that, like a span of the Forth Bridge, is more or less symmetrical about a horizontal axis as well as a vertical axis. But it is not along this axis that I travel; instead, whether I look pastwards or futurewards, I am divided into an ascending and a descending part. Only here and now at mid-span am I undivided and on the level.

Of these two orders of symmetry, that which turns about the horizontal axis remains to be considered. It is, of course, nothing else than the symmetry of the Pairs, or rather of the mesoform-Pairs, as manifest in time. If the superior-inferior connection can be traced, not only between Paired units of integral status but also between the higher and the lower mesoforms -- not only level by level in the hierarchy, but also in some detail from one level to the next -- then the original schema of Chapter XIII will receive powerful support, and may in turn be counted upon to help this part of the inquiry. It is worth taking some trouble, then, to examine the evidence.

First, consider the past half of the fourfold whole. Its two movements are evidently similar; in the broad lines of his development the growing child reflects the racial history. It need hardly be emphasized that there are gaps, distortions, obscurities, and room for endless disagreement as to the precise interpretation of the facts; and in fact any close resemblance between my two careers -- the ancestral and the personal -- is unthinkable, seeing that physical constitution and environment and tempo are so unlike in the two cases. Thus exactly how far the infant's earliest attempts at speech correspond to the earliest human language; how far the child's skills, in the order of their appearance and their relative



* All I am doing in this part of the inquiry is to translate into modern terms the Confucian doctrine of the harmony of the kuei (or material soul) and the shen (or spiritual soul). "All living creatures inevitably come to die. Dying they inevitably go back to the earth. This is what is meant by kuei. The bones and flesh moulder below, and, hidden there, make the soil of the land. But the breath soars aloft to become light Here then is the refined essence of the hundred kinds of creatures: here is the manifestation of the shen in man." "To be able to make a harmony of kuei and shen, is the height of philosophy." The Record of Rites, II. (Chinese Philosophy in Classical Times, trans. and ed. E.R.Hughes, p. 278.) Or, in terms of Chapter XIII, the business of philosophy is to rejoin the sundered Pairs.



rates of development, keep pace with the ancestral development; how far his growing range of concepts reflects the history of human thought; how accurately the distressful crises of childhood and adolescence recapitulate successive racial 'high-water marks', or limits which were only surpassed after long delay and with great difficulty --- these are some of the fascinating details which are not likely to be settled in a hurry. But the general pattern, the main lines of 'psychological embryology', are plain enough. The child of eighteen months or two years, delighted at the nameless thing he has made, the somewhat older child who names the thing, the child of five who sets out to reproduce a definite object, the child of six intent upon group life, earnestly taking part in games played according to traditional and inflexible rules, the child of eight or nine beginning to see that his lie is still a lie when undetected, to compare his work objectively with others', to assume responsibility for tasks, to think abstractly, --- it would be absurd to see in such an ontogenetic time-picture × a perfect miniature of the phylogenetic time-picture, and it would be equally absurd to pretend that there were no resemblance, or that the resemblances were accidental. In the same way we must neither, on the one hand, equate our children and our early ancestors with contemporary primitives, nor, on the other, deny any connection. The Hottentot who defines good and evil by saying that it is good if he steals someone else's wife, and bad if his own wife is stolen, belongs with our young children and gangsters in the racial nursery.

That health is worth preserving deliberately, that the cruder forms of selfishness do not pay, that self-control and even self-sacrifice open out a larger and a freer life, are lessons which every generation has to learn for itself the hard way. * It is in the nature of things that, when young, we should find ourselves in a society whose standards we neither understand nor accept: inevitably we disbelieve our elders, disregard the proverbial and accumulated wisdom, and disown or neglect the higher teachings of religion. The fact is that we live in a juvenile world of our own, in which these adult things do not figure. Pious children, like libidinous old men, are freaks and anachronisms. There are no short cuts (beyond a certain degree of shortness) to full contemporaneity: I have to graduate, through individual experience which briefly recapitulates the racial (and in the primitive society of my equals -- for example, nursery, school, and college -- which grows up as I grow up) if I am not to remain a case of arrested development. All human history is mine, but until I have actually lived it, painfully re-enacting its major struggles, I am immature: I remain a larva among imagines, a savage in a society many of whose institutions cannot mean anything to me because I am so far behind the times. Yet the fossil men among us, those who are old-fashioned by many thousands and even millions of years, are often supposed to be ahead of their time. "The reformer for whom the world is not good enough finds himself shoulder to shoulder with him that is not good enough for the world." ° The tradition that a youth had better (like St Augustine and St Francis, and Wordsworth) sow his wild oats and be done with them, and not be wise too soon, and Shaw's dictum that the young man who is not a revolutionist is an inferior, • owe what truth is in them to the great law of recapitulation; but the common mistake lies in supposing that youthful rejection of established codes means an

"The hypothesis that in psychology, too, ontogenesis corresponds to phylogenesis is.... justified", says Jung, and his books contain many illustrations of the principle. For example: "Just as the childish fairy-tale is a phylogenetic repetition, springing from the ancient night-religion, so the childish terror is a re-enacting of primitive psychology, a phylogenetic relic." There is a connection, rooted in our past, between the make-believe of the child, the mythologies of earlier men, and dream imagery. "Man in his phantastic thinking has kept a condensation of the psychic history of his development." "The soul possesses in some degree historical strata, the oldest stratum of which would correspond to the unconscious." Psychology of the Unconscious, pp. 14, 20 ff; Contributions to Analytical Psychology, p. 121.

× The literature is vast, but see especially J. Piaget, <u>The Language and Thought of</u> <u>the Child</u>, <u>Judgment and Reasoning in the</u> <u>Child</u>, <u>The Moral Judgment of the Child</u>, etc.

The onset of sexual life in man is diphasic --- the first wave of sexuality culminating around the fifth year, after which there is a pause before the development of the second wave; and this peculiarity of man has prompted the hypothesis that he is descended from a mammal which reached sexual maturity around the age of five, until some drastic evolutionary change overtook the species and maturity was delayed. See, e.g., Freud, <u>An Outline of</u> <u>Psycho-Analysis</u>, p. 11.

* W. E. Hocking, <u>Human Nature and Its</u> <u>Remaking</u>, pp. 248 ff, discusses this topic. See also his <u>Types of Philosophy</u>, p. 300.

Much the same story could be told of the social insects, whose communities contain members that are out of date by millions of years. The ant-larva, playful and irresponsible, is not yet a social type. It must undergo drastic metamorphosis as a pupa, before emerging as the adult whose entire life is devoted to the community. Though the metamorphoses of the child and the youth are in fact still more drastic, they are less evident to the casual observer, who sees little change in the outward form. (But Thoreau writes: "The gross feeder is a man in the larva state; and there are whole nations in that condition, nations without fancy or imagination, whose vast abdomens betray them." Walden, 'Higher Laws'.)

[°] Shaw, <u>The Revolutionist's Handbook</u>, 'Stray Sayings'.

[•] Op. cit., Foreword.

<u>advance</u> upon them. Much more often than not, it means the opposite.× Normally, growing older is growing less old. It is of the essence of the child and the youth that he lives in the past, and has still to catch up with the present. He and his world are quite outdated, and need to be thoroughly converted, baptized, initiated, reborn. *

As for detailed survivals of ancestral experience in the life of the child, many interesting suggestions have been made. Thus the cubbyholes that children love are plausibly linked with the cave-life of our ancestors in the last Ice Age. Thus the child's attitude to animals is perhaps a reminiscence of primitive totemism. (Freud writes: "The relation of the child to animals has much in common with that of primitive man. The child does not yet show any trace of the pride which afterwards moves the adult civilized man to set a sharp dividing line between his own nature and that of all other animals. The child unhesitatingly attributes full equality to animals; he probably feels himself more closely related to the animal than to the undoubtedly mysterious adult...." And Freud goes on to elaborate his theory of "the infantile recurrence of totemism". +) Thus a host of children's games and customs, their excited interest in dark forests, ogres, witches, fairies, goblins, their admiration of the buccaneer and the outlaw in preference to the pillars of society † --- these are not merely analogous to, but actually continuous with, a culture that was in its time adult, and which, while becoming increasingly juvenile and foreshortened, has never ceased to fill its propaedeutic function.

As society incorporates all its developmental stages, modifying but not abolishing them, so does the individual. He no more outgrows the child and the primitive in himself than he outgrows his cells. His dreams are a nightly reversion. Nietzsche observed that "in our sleep and in our dreams we pass through the whole thought of earlier humanity; I mean, in the same way that man reasons in his dreams, he reasoned when in the waking state many thousands of years ago." ϕ As Freud has it, "dreams are a piece of the conquered life of the childish soul." --- "That which once ruled in the waking state, when the psychical life was still young and impotent, appears to be banished to the dream life." Again, a man who is not normally afraid of the dark may, alone in a wood at night, feel an unfamiliar terror. In this situation, John R. Baker found himself impelled to move silently, and to 'freeze,' as animals do on hearing the slightest sound; significantly, his fear went as soon as he climbed into a tree. Θ What is this (taken together with the fact that most of us are happier sleeping upstairs than on the ground floor) but a recollection of the time when our only safe retreat from nocturnal beasts of prey was a tree-branch? By itself such evidence may well be questioned, but there is more that points in the same direction. After a sudden accident, not only are the hands sometimes found to be tightly clenched, but the toes are contracted as if in the effort to grasp an object. The tendency to hold on with all fours in an emergency, so necessary in a tree-dweller, has seemingly survived his descent to earth. Again, at birth, a baby can cling with his hands so firmly to a suitable object as to support his own weight unaided \times --- an ability which once had great survival value. It is not wholly nonsensical to say that the very young infant is still arboreal: conceivably the rocking cradle does duty for the swaying branch, and such nursery

× As Hocking points out (<u>Human Nature</u> <u>and Its Remaking</u>, pp. 177 ff), custom often, and perhaps generally, continues the development of the individual beyond the realm of his own private experience, and furthers the whole process of organic evolution. The social order, so far from curtailing the individual's growth, maps it out. This doctrine that institutions interpret my deeper will, is of course chiefly associated with Hegel, who was apt to think much too well of them: constant criticism is necessary if they are not to become obstructions to this deeper will.

* Cf. Dr William Brown, <u>Mind and Per-</u> sonality, p. 262.

+ Totem and Taboo, IV. 3.

† Thoreau says truly: "There is a period in the history of the individual, as of the race, when the hunters are the 'best men', as the Algonquins called them.... Thus, even in civilized communities, the embryo man passes through the hunter stage of development." <u>Walden</u>, 'Higher Laws'. A fairly reliable guide to a person's developmental age is the type of man he admires.

In his <u>Child Psychology</u>, Sir Cyril Burt points out that each of the major steps which the growing child has to mount represents what was at one time an upper ancestral limit.

¢ <u>Human, All Too Human</u>, II. 27. Cf. C.G. Jung, <u>Psychology and Religion</u>, p. 122; also <u>The Integration of the Personality</u>, p. 123, where he goes so far as to say (with certain reservations) that "it is possible to write history from... unconscious contents just as well as from the texts...". Jung's racial unconscious may be pictured as a series of strata representing the animal kingdom, the vertebrates, the higher mammals, our primate ancestors, our enthnological group, our clan and family, respectively. And all this trans-individual mentality is continuous with (and potentially accessible to) the individual consciousness.

θ 'The Evolution of Mind', in <u>Science and</u> <u>the Changing World</u>, ed. Mary Adams..

 $[\]times$ According to Dr J. B. Watson, some 96 babies in a 100 can do this

rhymes as 'Rock-a-bye baby in the tree-top' are less wildly fanciful than we had imagined. That the arboreal stage may linger on into later life is suggested by the tree-climbing habits of boys, as well as by the choice (on the face of it, an improbable choice) of trees for the theme of at least one popular song. *

4. <u>SYMMETRY ABOUT THE HORIZONTAL AXIS, CONTINUED ---</u> <u>EDUCATION</u>.

As in his mother's womb the individual grows a backbone and eyes and hands, so in more capacious wombs, ranging from the cradle to the university, he grows clothes, appendages for eating and writing and a hundred other functions, books, and so on, till in the end he is a truly human organism. His evolution has to be so swift that it is necessarily rendered as easy as such an enormous metamorphosis will allow. Just as he has to come down through every stage of the descending racial series, so he has to make the whole upward grade as an individual --- but at how different a tempo. Experience which in his superior capacity he can afford to spread over millenniums, may in his inferior capacity have to be compressed into days or even hours of clock-time, and much experience is telescoped, inverted, or seemingly left out altogether. Nevertheless in certain fundamental ways his progress will not be hurried --- or, if it is hurried, it will prove either unstable or illusory. The 'genetic philosophy of education' of G. Stanley Hall ° and others, recognizing this situation, points to the need for linking the upbringing of the individual with the history of the race. Once it has been clearly formulated, the law of recapitulation must, in fact, come to mean a practical technique as well as a report of observations. † (Here is one more instance of 'unintentional natural law' passing over into 'intentional or man-made law'.) We can no longer ignore the fact that there is a single rationale of development which is ancestral-individual, or phylogenetic-ontogenetic, and to bisect it is unrealistic and possibly disastrous. The Pairs must be kept intact. Apart, the higher and the lower hierarchical series will not make sense, and, if we find the world meaningless today, that is because we see what should be an axis as a gulf. The effort to relate education with anthropology (though by no means universally approved) is, I suggest, an urgent part of the great task of closing the breach between the macrocosmic and the microcosmic series.

In any case, the law of recapitulation is already widely affirmed in educational circles, if only by implication. Though supplemented by other teaching methods, the historical approach to science and philosophy ϕ is recognized as useful; indeed, the expanding capacity and interests of the student make something of the kind inevitable. The extreme complexity of modern thought can only be gradually led up to, and the historical paths are generally still the best, since they link the present multiplicity with its own past unity: the branches are reached by way of the stem. In the arts the same tendency may be found. My own rather detailed experience suggests that the restrained architectural styles of sophisticated periods, whether classical or modern, cannot be genuinely enjoyed Page 488

* Sheldon's three main types of temperament -- (1) endomorphic Viscerotonics, centred on the digestive tract; (2) mesomorphic Somatotonics, centred on the skeletal and muscular systems; (3) ectomorphic Cerebrotonics, centred on the nervous system -- represent at once the phylogenetic and the ontogenetic series, and well illustrate the law of recapitulation. Thus (1) represents the earliest ancestral stage (the invertebrate) and the earliest individual stage (the infant); (2) represents the intermediate stages of the vertebrate and the youth; (3) represents the concluding stages of the higher mammals and the man. Yet both contemporary society and the contemporary individual must incorporate all three types, seeing that the later cannot dispense with the earlier.

° See, e.g., his <u>Adolescence</u>, and <u>Educa-</u> <u>tional Problems</u>, also Suttie, <u>Some Prob-</u> <u>lems of Love and Hatred</u>, on psychological weanings --- crises in the expansion of the child's consciousness.

† For example, consider religious education. There is a certain amount of evidence that the three main 'proofs' of God's existence (cosmological, teleological, and ontological) tend to occur in that order in the experience of mankind and of the individual. God is first Creator or First Cause, then the Guide or Controller of the world, and finally He who works in us. The pedagogical implications are plain.

There is a very appropriate tradition that a ruling caste, and individuals who intend to go into politics, or are already there, should study history. And indeed, until a man has lived through history up to his own time, and in a sense become history, he is in no position to make history.

φCf. W. A. Sinclair, Introduction to Philosophy, p. 22. Max Müller pointed out (Lectures on the Origin and Growth of Religion, pp. 349 ff) that the three main historical stages of religious thought in India -- represented by the Vedas, the Brahmanas, and the Upanishads -- "were made to do permanent service in the three stages of the life of every individual." The son learns the sacred Vedic hymns, the father performs the sacrifices as prescribed by the Brahmanas, and the grandfather, having advanced beyond both, seeks only the highest knowledge of the Upanishads. This tradition is not yet altogether dead in India.

without a prior enjoyment of such romantic, strenuous, and relatively crude styles as the romanesque and the gothic. The road to the refined and disciplined taste of the adult individual and the adult society lies through the uncritical and vigorous preferences of the child and the savage. × Easy and obvious beauty is for the most part juvenile. Children's drawings are naturally like those of prehistoric man and of present-day savages, and the old method of imposing adult standards of representation from the start is now deservedly discredited. "The spontaneous drawings of young children are genuinely primitive. The younger the child, the more primitive the drawings." *

The child is a necessary anachronism, a thing of the past living in the past. He is not with us. His interests, outlook, behaviour, belong to remote periods of human history, along with his developmental (as distinct from his merely chronological) contemporaries: and that is one reason why the period of teaching and of teachability, the vestibule to manhood, gets longer as the social heritage accumulates --- the child has so much further to go to reach the present. ° No wonder the current events which distress his parents are so often just good fun -- if they mean anything at all -- to him: they have no place in his world. The nursery, the lower and higher classes at school, and the college, are the Palaeolithic and the Neolithic, the ages of Bronze and Iron, and the civilizations that followed --- cleared of obstructions and bottlenecks, paved and straightened out, for fast transit.

Common sense would have it that this is only a figurative way of speaking; and would point, for example, to the home and the meal which all the members of the family, no matter what their ages, share alike, or to the common air they breathe, or to the clocks and the calendars used by all but the very youngest. But this is the outsider's impression, and it misses the main point. To the child, neither the home nor its members nor its meals, nor any other thing, is remotely like the adult version: the whole world is different --- too easily we forget how different. ϕ The law of equality is here, as everywhere, inescapable. Development can never be a one-sided affair. A child growing up is also a world growing down. His progressive interpretation of the world is his alteration of the world. + He corresponds with, projects, reacts to, none but his peers (to recognize a superior or inferior is to be capable of registering what makes them so, and to that extent to pass to their level); he reduces his elders, and raises the household pets, to his own status. We all perceive the environment that our desires and interests reveal; and the disparity between the child's interests and the man's, measures the disparity between their respective universes. The infant is probably concerned, not so much with things or colours or sounds as such, but rather with patterns which favour or thwart his biological needs: his world is thus from the beginning correlative to his own activities. For the child as for the primitive man the world is never neutral or indifferent, but full of intention. Of course neither has a philosophy of animism, or holds a theory that the universe is conscious in all its parts: it is simply that there is not as yet any distinction between what is done by someone and what merely happens. \otimes We do lip-homage to this subject-object interdependence, or Paired relativity. But common sense persists in seeing a constant world on the one side,

× On the stages of development in the drawings of children (which may be summarized as (1) scribbling, (2) symbolism, (3) partial realism, (4) developed realism) see Cyril Burt, <u>Mental and Scholastic</u> <u>Tests</u>, pp. 319-22; G. Stanley Hall, <u>Educational Problems</u> (Chapter on the Pedagogy of drawing); P. B. Ballard, <u>Journal of</u> <u>Experimental Pedagogy</u>, vol. i, no. 3, and vol. ii, no. 2; Ruth Griffiths, <u>Imagination in</u> <u>Early Childhood</u>, pp. 190 ff; R. R. Tomlinson, <u>Picture Making by Children</u>; Herbert Read, <u>Education Through Art</u>.

* L. Adam, <u>Primitive Art</u>, p. 50. On the psychology of the Aurignacian artist see R. R. Marett, <u>Faith, Hope and Charity in</u> <u>Primitive Religion</u>, p. 155.

° Cf. Gerald Heard, <u>Man the Master</u>, p. 107. Heard connects the lengthening of the vestibule with the emergence of a new and wider mode of consciousness. Dalton's atoms were not abolished by Bohr's, or Bohr's by Heisenburg's: in textbook and lecture room the earlier is the indispensable approach to the later: there is no other way of getting abreast of our time.

The doctrine of rebirth implies that the converted or initiated person's previous life was elsewhere or elsewhen, remote. It is exceedingly appropriate that, in certain tribes (see Jane Harrison; <u>Ancient Art and Ritual</u>) the mother whose son is being initiated into the tribe should pretend to go through her labour pains again, and that the boy himself should cry like a baby and be washed.

φ For example, whereas the ten-year-old makes useful things, and copies articles in general use around him, the six-year-old tends to make symbolic or fanciful objects: he lives, as we truly say, in a world of his own, in a world of make-believe which is not our world of make-believe. Our practical affairs are none of his business. See, e.g., Charlotte Bühler, <u>From Birth to</u> <u>Maturity</u>, pp. 104 ff.

+ The famous dictum of Marx (in Eleven Theses on Feuerbach) that "Philosophers have only interpreted the world ... the real task is to alter it", does not do justice to the fact that the most drastic change the world can undergo is a reinterpretation. \otimes To many primitive peoples the notion of mere accidents scarcely occurs. Every mishap, whether due to a man's own carelessness, or the weather, or some concatenation of physical factors, is attributed to an enemy. The primitive asks why? not how? And in this he resembles the small child, who attributes human motives to natural events and inanimate objects. A child of 3 says: "The fly is still trying to break the window", or "The auto sleeps in the garage", or "Are the bells awake yet?" Piaget finds that this anthropomorphism begins to disappear at about the sixth year. See Susan Isaacs, Intellectual Growth in

and a variable organism on the other, instead of strict correlation. The theory of recapitulation, when taken seriously, corrects this illusion ---- the illusion that each inferior hierarchical stage has, instead of its own superior counterpart, the standard counterpart that I have chosen for it. The animal and the infant and the child are not deceived: the world really is what they make it out to be. The small boy is no more mistaken about the nature of things than the professor is or the dog is: he finds those features which his stage of hierarchical development qualifies him to detect. And his education is not the complication of his relationship with this present universe of mine, but a piece of universal history, the symmetrical development of that two-in-one --- the self-with-its-world.

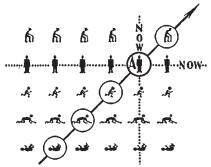
Accordingly it is not surprising that our early years should be longdrawn-out, and that calendars and clocks should have no meaning for the young child. That useful convention which reckons his age at a few months or years bears no simple relation to the situation as it exists for him, and it would be more faithful to the facts, if less convenient, if we were to date the child as so many millenniums or centuries B.C. (Admittedly certain adults registered my birth on February 12th, 1909, but it is only when I too become more or less adult (and therefore disqualified to judge) that I come to share their view of the matter. It is not the child, but the man, who thinks of his birth as a recent event. The truth is that while to the outside observer I have been growing older every day, I have to myself been growing younger, till now I am persuaded I came into the world practically overnight.) Not one, but two time-reckonings are necessary --- the chronological and the developmental. I must attribute to every stage of my career two dates --- one that can be read from the calendar, and another which is the date of that original society to which my behaviour evidently belongs. + By itself, 'developmental time' fails to make the necessary temporal distinctions at any one level; and, by itself, 'calendar time' fails to make the necessary hierarchical distinctions at any one moment. Combined, they tell a more adequate story. In other words, just as you cannot settle the true spatial order of a range of mountain peaks by looking at them from one side only, so you cannot settle the true temporal order of a number of organisms by applying to them only one 'dimension' of time. The principle is familiar in the measurement of intelligence, with its ratio of mental age to chronological age. °

5. <u>SYMMETRY ABOUT THE HORIZONTAL AXIS, CONTINUED ---</u> VALUES AND THE LAW OF RE-CAPITULATION

One error I find fatally easy --- the belief that my earlier and lower phases are done with. * They are nothing of the kind. So far from merely lingering on in me as vestiges, they are engaged upon essential work, and I could not exist for a moment without them. This is obvious enough in respect of the main levels of my organization -- atomic, molecular, and cellular -- but not so obvious in respect of the more detailed stages of my recent history.

Consider what is involved in goodness, truth, and beauty. These val-

<u>Young Children</u>, p. 97; Jean Piaget, <u>La</u> <u>Representation du Monde chez l'Enfant;</u> Charlotte Bühler, <u>From Birth to Maturity</u>, pp. 134 ff



At A, I am the <u>chronological</u> contemporary of humans at every stage of their development, and the <u>developmental</u> contemporary of humans at my own stage, whatever their chronological date.

+ Jung points out that the really modern man is rarely met with, superlatively conscious (both extensively and intensively), and solitary. For "every step forward means an act of tearing himself loose from that all-embracing, pristine unconsciousness which claims the bulk of mankind almost entirely. Even in our civilizations the people who form, psychologically speaking, the lowest stratum, live almost as unconsciously as primitive races. Those of the succeeding stratum manifest a level of consciousness which corresponds to the beginnings of human culture, while those of the highest stratum have a consciousness capable of keeping step with the life of the last few centuries. Only the man who is modern...really lives in the present." Modern Man in Search of a Soul, p. 227.

° The formula is: $IQ = \frac{MA}{CA}$

where IQ is Intelligence Quotient, MA is Mental Age, and CA is Chronological Age. A child's MA is 10 if his score in tests equals the norm for 10-year-olds.

* The relatively untrained state of one side of the brain is a striking reminder of the fact that earlier phases are not outgrown. In right-handed people, the right side of the brain, which controls the left side of the body, remains in a more or less 'unorganized' state. Accordingly the left half of the face, and the left hand, are by some supposed to show the inherited equipment of the man, while the right half, and the right hand, show what he has made of himself. It is almost literally true that in me a child and a man walk side by side, like a pair of Siamese twins, and that only half of me is civilized, See M. N. Laffan, The Hand and the Mind, II.

ues are not picked up ready-made, complete. On the contrary, they are the outcome of long and elaborate processes. A moral action is the culmination of a debate which is at once racial and individual. Goodness (or at any rate the goodness which I am capable of recognizing as such) is not goodness unless it has been built up 'dialectically' out of less good or relatively evil elements, stage by stage. † If I am never tempted, if the selfish course never occurs to me, if I do not entertain the idea of evil or envisage myself breaking every good rule that I observe, if I have no difficulty in choosing the better and rejecting the worse, then my virtuous behaviour is not virtuous at all. Courage that does not have to overcome fear is only stolidity. Temperance that never finds excess attractive is only lack of spirit. Nothing blooms in my garden but what I have grown painstakingly from the seed: the rest is withered and barren. Always I must pose to myself the alternative of lower status; I must try out, at least tentatively or symbolically, the lower or mere primitive inclination, before choosing the higher --- and I must do this on every occasion, as if for the first time. Every individual moral action recapitulates the racial development of morality, or it is not moral at all. Indeed, every moral action is evolved <u>ad hoc</u>, and <u>de novo</u>. It is never a foregone conclusion: there is always the possibility of my evolution stopping short, and it is this possibility which makes the development a genuine one, and not formal or a matter of routine. "I mean that I really did see myself, and my real self, committing the murders", says Chesterton's Father Brown. "I realized that I really was like that, in everything except actual final consent to the action." ° The evolutionary argument is inevitably telescoped, and not fully conscious, but everything depends upon it. "A gentle and reasonable being can be transformed into a maniac or savage beast", Jung warns us. \times --- but without the maniac and the beast I am neither gentle nor reasonable. The question is: who comes out on top? I do not kill the savage in me, but set him to work --- his own work. + For without his active and perfectly genuine savagery, duly restricted and kept under, the civilized man in me is not civilized. My higher conduct is, in effect, the joint effort of the beast and the primitive and the adult man, working in partial opposition to one another, and the last cannot claim all the credit. I am divided against myself, like man and wife who will neither agree nor part, and out of this division arises all that is of worth in me. "It is of the very essence of a self-conscious nature to be divided against itself and to win its perfection, its ideal freedom and harmony, as a result of a fierce and protracted internal strife.... Yet these conflicting elements are both included within the circle of one and the same conscious being --- enemies who cannot be at peace and yet can never part. The appetites and impulses of the animal are mine, part and parcel of my nature, elements of it which I can neither annihilate nor abjure." So writes John Caird; and later in the same book * --- "Every step by which the consciousness of mankind has emerged from the life of nature.... lives in the present consciousness of the race, transmuted but not annihilated. The form of time has dropped from those intellectual and moral struggles...." Or, as I would prefer to say, the ontogenetic tempo has replaced the phylogenetic.

So much for goodness. With truth the case is no different, though it is less often observed. To take the example that is ready to hand, I have

† Thus Eckhart, In Collationibus, 9. ('How sinful inclinations are always salutary') --- "Inclination to sin is not sin, but consenting to sin; to give way to anger (for instance) is sin, Surely no wise man, had he the power to choose, would elect to be rid of sinful inclination ... " The writer of Hebrews (IV. 15) was careful to point out that Jesus "was in all points tempted like as we are, yet without sin". In some instances the argument between the lower and the higher self involves temporary dissociation into two distinct personalities, or, alternatively, the projection of the lower self in the form of an evil spirit or devil. Some of Walt Disney's characters have a charmingly convincing habit of splitting into a good and a wicked self at moments of great temptation. Cf. G. N. M. Tyrrell, The Personality of Man, pp. 159-60, 195-6.

° The Secret of Father Brown.

× <u>Psychology and Religion</u>, p. 16. Jung is writing of the power of the crowd to uncover in us the inferior levels that are always there.

+ The thing to do, as William James says, is not to kill the devil in us, but to plant our foot firmly on his neck. Al Ghazzali well says that God loves those who swallow down their anger, not those who have no anger. Paradise, in fact, is for persons who intend to commit sin, and then, remembering that Allah's eye is on them, forbear. <u>The Alchemy of Happiness</u>, II, IV.

* The Philosophy of Religion, pp. 251, 295. The British Constitution, matching that of the citizen, is a museum of its history. New layers (as in our nervous systems) are superimposed upon the old, but do not abolish them: thus the primeval chieftain still rules, but through those later instruments his ministers, who are responsible to the still more recent Parliament, which in turn acts through the thoroughly modern civil service. And of much governmental procedure it may be said that ontogeny respects phylogeny. many times during the past five or six years been impressed with the importance of this doctrine of which I am now writing, yet it never comes to me complete and ready made and obviously true the moment it is presented: instead, it always takes time to gather its full force, to build up out of its elements. Its truth needs to be demonstrated all over again, to be recapitulated, however briefly. In practice, propositions do not stay true: like our bodies and our houses, they need constant renovation. + To be true for me, a proposition must strike me as true, and this means revealing (if only in a glimpse) the dialectical process by which it is generated. Truth, like the other values, is the fruit of hierarchical growth, and this takes time. That is why a period of recollection and preparation, of working up to the mood, is so necessary a preliminary for the lecturer, the writer, the worshipper, the artist. Attitudes and ideas cannot be switched on and off like electrical appliances. Or, if you like, truth is a quick-setting cement which has to be mixed specially for each occasion: the right ingredients rightly combined are useless if the mixture is stale. The corpse of truth has everything the living body has --- except the newness which is newness of life. Insight that is not new is not insight. The past chapters of this book do not remain valid and alive for me, unless I give them frequent blood transfusions. Viable thought is fresh from those partial considerations out of whose dialectical clash it has emerged. Thus there is a sense in which it takes an atheist to believe in God, and the habitual believer is the real atheist. Belief is re-belief, and new every morning. Yet it begins where I begin and grows up within my long twofold history: to look upon my thought as something which has just occurred to me is absurd. The 'errors' of the lower levels are organic to the truth of the higher levels. In the wise soul, Carlyle wisely says, "lies a whole world of internal Madness, an authentic Demon-Empire; out of which, indeed, his world of Wisdom has been creatively built together, and now rests there, as on its dark foundations does a habitable flowery Earth-rind." * Wisdom is nothing without its shadow: it is the detection and correction of un-wisdom. Our mistakes are the framework of our edifice of truth. To be more precise, truth falls into three categories --- the lower through which we have advanced, that which we realize adequately now, and the higher that we have still to realize; and of these we generally admit only the second, dismissing the first as vulgar error, and the third as mythology or poetry $^{\circ}$ or mysticism (in the bad sense of that word). Whereas in fact all three are interdependent parts of the hierarchical whole.

Does the law of recapitulation apply to experience of the beautiful, no less than of the good and the true? Surely it does. Easy beauty, painless, immediate, obvious, has a way of dissolving into the merest prettiness. Genuine aesthetic experience is always creative --- that much is trite enough; what is not trite is the proposition that such experience is always creative <u>evolution</u>, or re-evolution. Is it not for this reason that the real artist, in spite of increasing virtuosity, finds his work become, if anything, more exacting and perhaps more agonizing as time goes on? Practice makes imperfect. In the deepest sense, he only learns who never learns anything, who is always having to go back (though not necessarily with full consciousness) to the primeval sources. The merely contemporary is altogether trivial. The truly contemporary is the topmost bud on + Man must periodically overhaul his basic assumptions, as Berkeley with respect to matter, Hume with respect to the self and causation, Einstein with respect to the axioms of Euclidean geometry. It was the unquestioning acceptance of fundamentals which led to the eventual sterility of scholasticism. And the need for these overhauls is not so much to correct error which has been there all the time, as to correct the error of cumulative staleness, to keep going the basic metabolism (or hierarchical ascent-descent) of truth. For there is a sense in which the living error is truer than the dead truth.

"Continuer à être étonné; continuer à être neuf et jusqu'au bout devant ce qui est neuf: car tout est neuf pour qui est neuf. Ne pas céder à l'habitude, qui est usure et usure progressive." C. F. Ramuz. I would add that there are two sorts of people who are particularly deficient in astonishment --- those who know too little and those who know too much. Not that one can know either too little or too much: the danger lies in making either of these a habit, and the safeguard lies in combining them. Ignorance has at least the promise of awareness, and to that extent is preferable to that fixed and unsurprised knowledge which is the death and corruption of wisdom. Wisdom I take to be the living interplay of ignorance and knowledge, the art of active ignoring joined to the art of active knowing. Science at its wisest is as much training in conscious ignorance as in conscious knowledge. It would not be a bad idea for every school to hold ignorance classes, to (a), correct the child's illusion that what he doesn't know the teacher does know, and (b) to show that even what the child does know needs to be Unknown, so that he can say with Traherne: "My non-intelligence of human words Ten thousand pleasures unto me affords." But -- poor teacher -- "How can he remember well his ignorance -- which his growth requires -- who has so often to use his knowledge?' (Thoreau, Walden, 'Economy'.)

* <u>Sartor Resartus</u>, III. 8. Cf. Royce, <u>Lec-</u> <u>tures on Modern Idealism</u>, pp. 79 ff.

° F. H. Bradley in his mature years found himself taking more and more as literal fact what earlier he had loved and admired as poetry. the living tree of tradition: it is genuinely new and alive because all its roots are in the past, because it is the present flower of the whole past, which is alive and growing in it. Doubtless the degree to which the artist, through whom this growth occurs, is aware of it, may be small, but as a rule there are indications of what is happening. His alternating doubt and certainty, hope and despair, frustration and fulfilment, pain and delight, are not just symptoms of an occupational disease, but rather his re-enactment or recapitulation of the history of his art. They are beauty's growing pains. And what is true of artistic creation is true, in a smaller degree, of appreciation. "One can even watch the process, in oneself," writes Mr Eric Newton, "of a work of art <u>becoming</u> beautiful." °

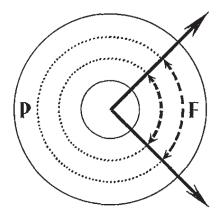
6. <u>SYMMETRY ABOUT THE HORIZONTAL AXIS --- RECAPITULAT-</u> <u>ING THE FUTURE</u>

Ontogeny recapitulates phylogeny -- my individual history is a foreshortened version of my racial history -- so runs the well-known 'biogenetic law'. I climb, as Milnes-Marshall has said, my own ancestral tree, up to this point I call <u>now</u>. But to stop here is to stop half way, to break off in the middle of the action, and to make the whole enterprise pointless. What of my future --- the future which, like my past, forks into two roads, an individual or inferior, and a racial or superior? Does the law of recapitulation hold on this side also? If it should appear that the old man is a citizen of future cities just as the child is a citizen of past ones, and that individual prospects and racial prospects are so closely interconnected that each throws light upon the other, * then new vistas futurewards are opened up, and conceivably something like a predictive sociology becomes a possibility. In actual fact, my thesis is not merely that old age can offer clues to large-scale human destiny, but that to separate them at all is a mistake. My prospects as man and as Humanity are the two halves of one outlook. ×

The first and most obvious similarity between the two series is that both end in failure. The nation declines as others rise from obscurity, and is eventually re-absorbed, like so many before, into the larger human groupings. These also are mortal, and in the end Humanity itself will surely die, from some unforeseen cosmic catastrophe, from the attacks of other organisms, from internecine strife, from failure of the will-to-live or tiredness, or (in the event of its escaping all these) from diminishing or else excessive solar heat. The joint evidence of the history of other species, of human history so far, of the present political situation, and of the likely future of the solar system, holds out practically no hope for Humanity as such. My death 'upwards' as species appears to be as near to certain as my death 'downwards' as individual.

The parallelism of the superior and the inferior series is always complicated and partially hidden by the phenomena of arrested development and of precocity. Chronological age is often very much at variance with developmental age, and as to the latter there is always the problem of what constitutes the norm; everyone has his own notion of what old age It is true that, as R. G. Collingwood points out, the artist at work is not thinking of the traditions of his art. But these "have actually conditioned his work; they are the stepping-stones by which he has reached this point of view; and they survive in the work of art, transmuted into the form of aesthetic experience... By knowing his own relation to his materials and tradition, by being the historian or critic of his own art, he becomes a competent artist." Outlines of a Philosophy of Art, p. 73. On the contemporary work of art as involving the whole of the tradition which it extends, see T. S. Eliot's 'Tradition and the Individual Talent', in Points of View, 1941, pp. 25 ff. The poet does not inherit tradition automatically, says Mr Eliot, but acquires it with great labour. Yet his work, as a part of the "living whole of all the poetry that has ever been written", at once springs from and modifies that whole. Considered by itself alone, it is the merest abstraction.

° European Painting and Sculpture, II.



* "We may speculate, though there is no proof, that man's adult growth anticipates to some extent the future development of the race." Bishop Barnes, <u>Hibbert Journal</u>, July, 1946, p. 292.

"It is a favourite doctrine of the mystics that man, in his individual life, recapitulates the spiritual history of the race." W. R. Inge, <u>Christian Mysticism</u>, p. 35.

× The duality of the individual's cosmic future was expressed thus by D. H. Lawrence: "When the individual life dies, it flings itself on the right hand to the sun, on the left hand to the moon, in the dual polarity, and sinks to earth. When any man dies, his soul divides in death; as in life, in the first germ, it was united from two germs. It divides into two dark germs, flung asunder: the sun-germ and the moon-germ. Then the material body sinks to earth. And so we have the cosmic universe such as we know it." <u>Fantasia of the Unconscious</u>, XIV. is like on the one hand, and ought to be like on the other. Nevertheless there is a tradition so widespread and so persistent that it must, I think, supply the standard I am seeking. One version of it is the ancient (but by no means dead) ideal of the Hindus --- the man who, having learned and carried on his bread-winning vocation, having reared a family and seen to its future, leaves it all behind and spends the rest of his days in the forests or the mountains, where he can devote himself without distractions to the contemplative life: such a man is still judged to have chosen the proper path. In a somewhat different form, the same ideal appears in the Platonic picture of the old man, freed at last from the bondage of bodily passions, pursuing intellectual good and the beauty of the inward man. × Philosophy (by which the Greeks meant so much more than we do) was not the exclusive province of age, any more than the various kinds of philosophical mysticism are in India confined to the elderly; yet it belonged to age in the same sense that strength belonged to youth --- it was the crown and ornament of maturity. Plato's hero is a poor, henpecked, ugly old man; India's a naked and half-starved sadhu. The Chinese sage is their fit companion. And nearer home in time and space, where even the existence of the higher levels of contemplation is scarcely suspected, there is at least the recognition of some of their more obvious fruits: there is a feeling that the qualities most suitable to old age are wisdom, magnanimity, freedom from material interests and sectarian enthusiasms. *

If this, the perennial ideal of the sage, ° may be taken seriously, if in falling short of this ideal we fall short of our proper nature, then old age is not only (as in the previous chapter) a decline: true to itself, it is also an ascent. My future in its lower aspect is the progressive shedding of responsibility, the shrinking of my field of action, the loss of one faculty after another. But this hierarchical descent from the more inclusive to the less inclusive is, or it should be, only the counterpart and inferior aspect of an equal and opposite ascent to increasingly comprehensive wholes. This second and ascending movement is, in fact, simply the extrapolation of that ascending evolutionary movement which has seen me thus far, through the molecular, the cellular, and the animal, to the human. A man is the foetus of Humanity. + I go on from man (that is, if I know how to grow old) by outgrowing my merely tribal and my merely racial loyalties. My understanding, my sympathy, my concern, become worldwide. A flood in China, a famine in India, a war in Latin America, approach the reality of events in my own country, and the word 'enemy' tends to drop out of my vocabulary. Precisely as my career up to now has, in its inferior aspect, meant the integration stage by stage of infrahuman units, so my future career, extending this process to the superior series, means the integration stage by stage of suprahuman units. The child belongs to the primitive race out of which the nation has still to emerge, and the old man belongs to the same race in its final phases, after it has re-absorbed the nation. Thus the genuine internationalist lives as far in the future as the child lives in the past, and the genuine philosopher or contemplative further still. His way of life does not square with present circumstances, and for this reason it has the appearance of being unpractical and unrealistic. His behaviour is adapted to an environment which for the more or less contemporary man does not yet exist. When

There is a good deal of evidence suggesting that there are, 'normally', two critical ages --- (i) the 'teens, when restricted family life is transcended, (ii) middle age, when the ordinary social environment is transcended. Certainly a metamorphosis, a dying into new life, a raising of the power of consciousness, or even a radical transformation of the whole being, is not rare amongst the middle-aged. An outstanding example is Fechner, who recognized the period of intense suffering through which he passed at about 40, as a chrysalis-state, followed by rebirth into a new world. In Man the Master, Gerald Heard writes at length on the subject of the spiritual crisis of middle age.

× Cf. Republic, 498: "When the years advance in which the soul begins to reach maturity, their (Socrates is speaking of would-be philosophers) mental exercise must be keener. But when their physical strength begins to wane, and is past political and military duties, then, and not till then, should they range the sacred fields at will and do nothing else unless casually..." See also 329.

* Cf. Ethel M. Rowell, 'On Growing Old', <u>Hibbert Journal</u>, Oct., 1947.

° If the Jungians are right, and the Wise Old Man is one of the most fundamental archetypes of the racial unconscious, that is one further reason for taking seriously the view I am presenting here. (See, e.g., Jung, <u>The Integration of the Personality</u>, p. 127.)

+ "This life is a preliminary thing. All this life man must be learning to diet himself for another way of living. It is not easy to learn that --- it must demand a drive of energy easily distracted. As he grew the mouth and throat in the womb -- useless there -- for the life of earthly feeding he should follow here, so now in this close world he must exactingly grow those spiritual organs so that he may live hereafter." Gerald Heard, A Dialogue in the Desert, p. 11. In the same author's <u>Training for</u> the Life of the Spirit (i. p. 14), the saint is described "as earnest and guaranty that evolution does go on and as an indication of its direction: towards increased consciousness. This increased consciousness is therefore won by a constantly enlarged awareness of one's kinship and union with Life."

"If a man does not keep pace with his companions, perhaps it is because he hears a different drummer. Let him step to the music which he hears, however measured or far away." <u>Walden</u>, Conclusion. we say that he is ahead of his time we are nearer the literal truth than we suspect. Jesus belonged to a generation of men still to be born * --- men who are nevertheless his spiritual progeny. The saint, it is truly said, is not of this world: he acts not according to the laws of the earthly city, but of the city whose pattern is laid up in heaven. ° It might be added that he is born far too soon and makes nonsense of history, if it were not for the fact that the anachronism of the saint is as necessary as the anachronism of the baby × :- society is society only because it is a nest of such anachronisms. History exists by reminiscence on the one hand, and by self-anticipation on the other; and its present moment is a compound of many other times or it is nothing. It is of the essence of life here and now that it should be temporally as well as spatially distributed. + The remarkable thing is that a good half of this temporal distribution should escape us: I mean that, whereas we are properly impressed with the importance and speed and scope of the infant's growth to manhood, we are nearly always blind to the still more abundant growth which follows, or should follow. But perhaps it is not so remarkable after all --- the law of equality ensures that we shall drag all things down to our own level; consequently we are as a rule incapable of seeing that there is at least as great a difference (in organization and in function, in extent and in date) between the adult and the sage as between the foetus and the adult. Browning had good reason to exclaim:

> "Grow old along with me! The best is yet to be, The last of life, for which the first was made: Our times are in His hand Who saith 'A whole I planned, Youth shows but half; trust God: see all, nor be afraid!"" †

Of course it is only too evident how often chronological old age is one-sided: its proper and unavoidable decline into the infrahuman seems altogether to lack its saving counterpart of ascent to the suprahuman. Only the downward movement of the Pair is clearly in evidence. "We find it hurts to feel too much, to sympathize too widely, to be too aware, to see too many sides of an issue. We begin to find that it is comfortable to let our minds grow back and our hearts harden. To grow after the first few years.... is an intense effort. We pass the apex of our curve and sink." ϕ Thus advancing years commonly make for an exacerbated patriotism, increased political rancour, an incapacity for comprehensive ideas, lack of love, growing care for material comforts. The ideal of venerable old age, of "years that bring the philosophic mind" and vast expansions of the spirit, of a man's whole life (and not merely the first half) as an increasingly arduous ascent of the mountain of reality --- this standard is, particularly in the West, largely outmoded. And in its place we have set the pseudo-ideal of the young-old grandfather, of the hale and hearty old boy, the good sport who is as young as he feels, and refuses up to the last terrifying moment to be his age. The cult of youth• is the more insidious for being partly unconscious: we do not often admit in so many words that old age is ugly and a disgrace and somehow unnatural. \otimes Actually it is all of these -- an unpleasant and freakish thing, like a senile child -- so long as it refuses to make that ascent which alone renders it worthy of veneration. There is no point whatever in locking up to our elders if they are not also our betters, instead of superannuated youths on the downgrade. \oplus

* Cf. Gerald Heard, <u>The Creed of Christ</u>, p. 12; William James, <u>The Varieties of</u> <u>Religious Experience</u>, pp. 356-7.

° Cf. <u>Heb</u>, XI. 10

× This double 'displacement' -- into the future as well as the past -- means that such writers as Jacques Maritain and Nicolai Berdyaev and Reinhold Niebuhr find themselves in limited agreement with the merely secular left, in their criticism of contemporary society. As the first of these says: "The idea we form of humanism will have wholly different implications according to whether we hold or do not hold that there is in the nature of man something which breathes an air outside of time!' (True Humanism, p. xii); nevertheless secular humanism owes its force to the fact that it is a partial overcoming of merely present time.

+ Cf. E.G. Lee, <u>Mass Man and Religion</u>, p. 125: "The dividing line between religion and morality lies in this: morality in its essence serves the present; it maintains what already exists: Religion serves the future, for it calls into being through the eye of faith something that does not exist yet; it creates the future through the flame of intuitional certainty."

† 'Rabbi Ben Ezra'. Walt Whitman has a great deal to say about what may be called the higher old age: "I see in you the estuary that enlarges and spreads itself grandly as it pours in the great sea." ('To Old Age'). He speaks of "old age's lambent peaks", of the greater beauty of the old than of the young, and of the ascending voyage of the soul through many deaths.

φ Gerald Heard, <u>Op. cit</u>., p. 177.

Cf. D. H. Lawrence, <u>Pansies</u>, p. 93: 'The Grudge of the Old' ("The old ones want to be young, and they aren't young, and it rankles...") and 'Beautiful Old Age' ("It ought to be lovely to be old..."). Every seventh year of a man's life used to be known as a <u>climacteric</u> or ladder-rung; for us, who have sawn off the top half of the ladder, the word naturally has a very different connotation.

• On this topic see Wyndham Lewis, <u>The</u> <u>Doom of Youth</u>, for much interesting evidence.

© Compare our attitude to the aged with Plato's (almost Chinese) description of a parent or grandparent as a treasure in the house, precious and consecrated and worshipful. <u>Laws</u>, 931.

⊕ "For age is opportunity no less Than youth itself, though in another dress, And as the evening twilight fades away The sky is filled with stars, invisible by day."

Longfellow, 'Morituri Salutamus'.

Whether the upward movement of reunion is ignored, or resisted, or accepted as inevitable, or welcomed and made fully intentional, it remains a fact. A man cannot help merging at the last. * And, to tell the truth, he has no other plans. This is his long-term policy, the undertow beneath all his surface vacillations, the thing he is really after. Dr Watson is right --- instead of asking a man what he thinks, watch what he does, and go by that. And Dr Adler is right --- however bitterly the neurotic complains of his symptoms, they serve his hidden purpose well enough: remove them, and he will only contrive worse ones to the same end; and the neurotic is in this the type of us all. We deplore death, but as soon as one way of killing ourselves is prevented we cannot rest till we have devised two new ways. Individually, nationally, racially, we are bent on dying. Common sense says that death is a matter of necessity and not choice, but I beg leave to doubt whether a man, or any other creature, would die, if through and through he were against dying. There is an Eastern tale of a craftsman who set out to carve a perfect staff, an object so exquisitely perfect that time was no object: he outlived dynasties. We get all the time we need for our self-imposed tasks, at their own level. ϕ Our expectation of life matches our purpose in life, which is hierarchically graduated.

Half glimpsed, as an unpleasant sight best avoided, the upward movement is no more hopeful than the downward; steadily contemplated, till I see it as my own intention after all, it takes on a very different complexion. I understand how failing bodily vigour may be coupled with growing spiritual strength, how narrowing activity is the opportunity for widening sympathy, how wisdom can sharpen itself by taking the edge off cleverness, how the valley of humiliation and the delectable mountains of old age imply each other, how the bifurcation of my future, as of my past, insures against spiritual pride on the one hand, and mere grovelling on the other. As I look ahead, heaven and earth are increasingly separated, and increasingly conjoined. Θ The only way to make the best of both worlds is to explore them simultaneously, discerning first their separate existence, second their increasing contrast, third their indissoluble unity. There is no middle path, no room for compromise.

And so the second half of life tends to be the mirror-image of the first. "Nan Po Tzu Kuei asked Nü Chü how it was that he, an old man, yet had the face of a child. The reply was that he had heard of the Tao..." † Concerning Lao Tzu himself, the great prophet of the Tao, there is a story that he was born, after a gestation of seventy or eighty years, with an old man's white hair, and promptly announced his name to his mother. ° But the Christian version of childlikeness, with its hierarchical symmetry, its ambivalence, strikes us less strangely --- "Except ye be converted, and become as little children, ye shall not enter into the kingdom of heaven. Whosoever therefore shall humble himself as this little child, the same is greatest in the kingdom of heaven." × This real or bifurcated second childhood is earnestly to be sought after. Till the saint acquires it, getting back some of his child's joyful spontaneity and loving trust, he is only a man of principle; till the poet acquires it, getting back some of his child's wonder, he is likely to remain a versifier; till the thinker acquires it, getting back some of his child's simplicity and freedom from convention,

* As Gerald Heard forcibly puts it, "If we do not do something with time, something by which we reach outside of time, it will do something with us and it will not be a pretty thing." <u>Op. cit.</u>, p. 178. We have the choice, I would say, of becoming either childish or childlike as we grow older: there is no <u>tertium quid</u>. The diffused 'egoconsciousness' of the child concentrates in the sharply defined 'ego-consciousness' of the adult: old age should (and will in the end, by one means or another) blur the edges again.

 ϕ It is perhaps significant that in the more advanced races the individual man is, by and large, more long-lived, and reaches maturity later; also that longevity decreases as we pass down the scale of the monkeys. (Cf. P. Chalmers Mitchell, The Childhood of Animals, III.) Generally speaking, the tasks of the more advanced individual take longer to accomplish. Of course there are many instances of tooearly death (Marlowe, Chatterton, Keats, Shelley, Rupert Brooke) as well as of men who do not know when they have finished (Wordsworth is perhaps the best example amongst poets). Yet even here I suspect there are reasons underlying the seemingly arbitrary, and that death is more timely than appears. Modern medical science is coming round to the view that a patient's physical condition reflects his psychical condition far more accurately than is popularly supposed. Among psychologists, Adlerians particularly stress the psychological factor in disease, which serves the patient's 'defensive purpose'. And it is well known that there are certain types who invite accidents. In brief, we have more say in our diseases and death than we admit to.

e Of the "earthy-celestial wisdom" of Rabelais, John Cowper Powys wrote: "The best therapeutic wisdom, though it may cross the threshold of the Heavenly Signs, lodge at the Golden Eagle or the Silver Lion --- must always return at fall of night to the kitchen and the privy." <u>Rabelais</u>, pp. 314, 409.

† Chuang Tzu Book, VI.

° Cf. B. S. Bonsall, <u>Confucianism and Tao-ism</u>, p. 77.

× <u>Mat</u>. XVIII. 3, 4.

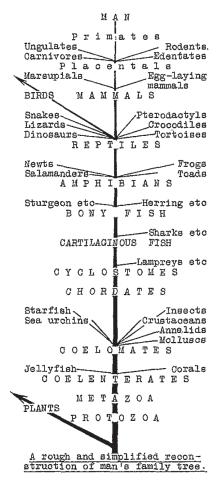
he is no more than a professor; till the painter acquires it, getting back some of his child's capacity for original sight, he is a mere academician.

(ii) THE VITAL PHASE

7. FROM HUMANITY TO LIFE --- PAST

Looking back upon my past, I observe that the time-region between Humanity and Life is very elaborately zoned. The species Homo Sapiens leads to the primitive genus Homo, and thence to the original primates, the original placentals, and eventually the primitive mammalian stock. There follow, as my view pastwards widens and deepens, the reptiles and amphibians, the bony and the cartilaginous fish, the cyclostomes (which lack jaws and paired limbs), the primitive coelomates (possessing a cavity between the body-wall and the digestive tube), the primitive coelenterates (which lack this body-cavity), the original metazoa and cell-colonies, the single-celled protozoa, and finally the hypothetical ancestor of us all --- Life, of which all life is a subdivision, and the primordial 'Cells', of which all cells are the descendants. The evidence of comparative anatomy and embryology and palaeontology points to a Life that is genetically one. It points, in effect, to a single organism which has grown to inconceivable complexity and worldwide dimensions, an organism whose physique is more, and not less, advanced for having incorporated a great deal of room --- room for unlimited interior improvement, and for the elaboration of subtle interchanges of every kind. Each step back in my racial history closes the biological gaps of this Lifebody, progressively uniting disparate elements. A little way back I reach the spot where I am identical with my race and my species; further on, I rejoin all mammals, then all vertebrates; in the end, I am one with all the living. Samuel Butler is basically right: we "prove each one of us to be actually the primordial cell which never died". * The hand which now records the fact is itself put forth by that same primordial body, is flesh of its flesh. + Proof is out of the question, but the indications are that no creature lives on earth whose body is not, given time, physically continuous with mine, and as truly my organ as this hand is. We have something in common, namely ourself. Tracing our history is a matter of retracing our steps to the turning where we parted company, and going back on our decision to separate.

It is essential to distinguish the trunk of the evolutionary tree from its branches. Time shows that there is an all-important difference between the central or main-stem organism, however humble, and the peripheral or branch organism, however advanced. For when a type is seen as including all that issue from it, then our animal ancestors -- fishy, amphibian, reptilian, and mammalian -- though apparently similar to their present-day animal descendants and representatives, are to the discerning eye quite unlike them. The indications are that practically all the contemporary lines of evolutionary development are dead ends. But



A rough and simplified reconstruction of man's family tree.

* <u>Life and Habit</u>, p. 86. Actually the primordial living thing was almost certainly infracellular: the cell probably marks the culmination of a long process of organic evolution.

+ "The fish of fifty million years back and the man of today are one single living being, in the same sense, or very nearly so, as the octogenarian is one single living being with the infant.... The fish has lived himself into manhood..." Samuel Butler, <u>Op. cit.</u>, p. 127. the original mammalian type had it in itself to become all the carnivores and ungulates, the rodents and the edentates, and man himself: and so, hierarchically, this type is Humanity's superior, seeing that Humanity is only a part of it. Similarly the original reptile, outwardly perhaps not unlike some of our present species, is to the far-sighted observer both mammalian and human. In other words, it signifies little how high you have climbed in the ancestral tree if you have been rash enough to leave the trunk. To speak paradoxically, the foot of the tree is higher than the tip of the topmost branch: as the lumberman well knows, it commands the whole.

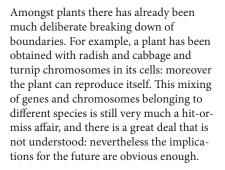
Notice the essential bifurcation of our past in Life. Taken abstractly, without their 'time-filling', our ancestors are increasingly our inferiors; taken concretely, with their 'time-filling', they are always our superiors, and the remoter they are the higher they rank in the hierarchy. Thus the ancient custom of worshipping ancestors, and the modern custom of degrading them, are equally appropriate. In fact, we must do both.



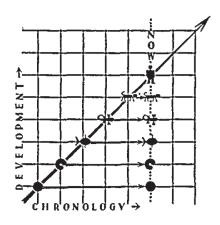
Such is our past in Life. As for the future, there seem to be three possibilities: first, that man, like so many species and genera before him, will become extinct; second, that he will survive as long as Life survives; third, that he will neither die in nor live in Life, but live and die <u>into</u> Life, breaking down stage by stage those barriers which he has erected between himself and the other creatures.

(This third alternative is not quite so far-fetched as it may seem. Already the web of symbiotic exchanges which binds Humanity to plants and animals is complex past all computation. It is true that most physical boundaries are obscured rather than abolished, but I see no reason why man should not become (after the manner of the fungus and the alga that together comprise lichen) more and more involved anatomically with his symbiotic partners. At the reproductive level, of course, species remain distinct; nevertheless germ cells are no longer inviolable. Cell-operations by Spemann, De Fonbrune, and others, are becoming a matter of course, and the many hundreds of genes of the fruit-fly <u>Drosophila</u> have been mapped and systematically bombarded with X-rays. Who can say where this interference will stop? It is not impossible that, by exercising ingenuity, many species will regain the unity that they have absent-mindedly allowed to lapse.)

But whether humanity dies an early death; or becomes so reintegrated with Life that Humanity itself vanishes, or contrives somehow to live on almost to the end without either dying or merging, is really immaterial from the point of view of this inquiry. All three alternatives come to much the same thing. Man's life is not in himself, a piece of private property, but the common possession of himself and the creatures he controls and remodels and is remodeled by. As his vitality is derived from Life, so it returns to Life: an inexorable law ensures that his work shall progres-







sively lose itself in Life's structure, that his contribution shall by degrees become indistinguishable from the whole. In any event, then, my future leads, through Humanity and ever-widening biological circles, to the perimeter of Life <u>in toto</u>, and there is established a rough equivalence between my vital past and my vital future.

My present concern is not this future as merely future, but as a condition to be realized <u>now</u> --- now-from-then. Reunion with Life is my task. I have to make amends for having disowned my poor relations one by one. Like the worst kind of social climber, having made a ladder of my friends, I have tried to kick it and them away in the end. Methodically and ruthlessly I have parted company with all my fellow invertebrates, with all my fellow fish, and fellow reptiles, and fellow mammals, and fellow men --- casting off at each of these stages the greater part of myself. In cutting them I have cut myself, till what was once the whole of Life is now whittled down to this fragment. My urgent business is redintegration, the restoration of that unity which I have temporarily destroyed. Until this is accomplished I am a mass of wounds and stumps of severed limbs, unhealthy, unholy, unwhole. The remedy is that I begin again to care for my fellow creatures. "Sub-human lives and even things are to be treated with respect and understanding, not brutally oppressed to serve our human needs." ° No longer indifferent to their inner life, my study of them must be tempered with sympathy and respect. Where I can I must alleviate their ferocity and pain. Above all I may no longer deny responsibility. (Outward circumstances and inner needs combine to force this destiny upon us --- we are obliged increasingly to take over, to shoulder more and more of the burden of Life. It is significant that, on the whole, practical kindness towards other creatures, * and some acquaintance with their psychology, and the knowledge needed for their control, and the necessity for that control, should all have advanced together in recent times. The distinction between the wild animal and the tame, between the undomesticated organism and the domesticated, is becoming obscured. Humanity is domesticating Life, and Life is domesticating Humanity.)

The question arises: is the <u>order</u> of redintegration anything like the order of differentiation? Do I rejoin Life by repeating, in reverse, the stages by which I left Life, so that my future is like a film of my past shown backwards?

Obviously there can be no question of any exact or detailed correspondence. It may however be said that, in general, man is more solidary with those creatures which lie nearest to him in the genealogical tree: he tends to know them best and to exercise a firm control over them. The genetically remote bacilli and viruses are more baffling. In general, the widening circles of human sympathy are not difficult to trace. Beginning at home, our charity embraces our own countrymen before foreigners, our own race before other races, humans before mammals of other types, mammals before reptiles, and so on. By and large (there are, it is true, many displacements) the earlier we parted from a group the later we are likely to rejoin it. We stare across a gulf of ages into a mirror every time we lift a stone •. Recoiling, we fail to recognize ourselves: so long have we ignored these other faces and limbs that the very sight of them shocks

Mr C. S. Lewis, in The Problem of Pain (pp. 66, 123 ff.), suggests that man has the function of redeeming and pacifying the animal world. The significance of our domestication of animals and the keeping of pets is thus much profounder than we recognize: it is our business to 'save' -- almost to humanize -- the animals. The 'real' or 'natural' animal is not (as a naive science supposes) the wild one, but the tamed. To this I would add the suggestion that the scientist's investigation of wild nature is a very important part of its 'humanization' or 'artificialization', at once fulfilling a deep need of man's (that he should find himself as species in other species) and bringing out the true meaning of the lower creatures. St Anthony's relation to his fishes, and St Francis' to his little sisters the birds, is not au fond different from Köhler's to his apes and Pavlov's to his dogs. In such cases it is a mistake to separate the human mind on the one side from the animal body on the other: the mind is, in a real sense, the animal's.

° Aldous Huxley, <u>The Perennial Philoso-</u> <u>phy</u>, p. 90.

* Friar Juniper of the Fioretti was not only quite happy to cut off the foot of a living pig with a kitchen knife (to provide a sick friar with tasty meal), but "told the story of the assults he had made on the pig with great glee, to rejoice the heart of the sick man.", and declared to St Francis that he was prepared to do the same to a hundred pigs. And St Francis rebuked Juniper, not (so far as we are told) for his cruelty, but for his indifference to other people's property. It is easily forgotten how recent, in the West, is our consideration for animals. Unlike Hinduism and Buddhism, Christianity has generally looked on the brute creation as mere means to human ends.

Edward Carpenter taught that man's proper business is to regain his cosmic source, and that to do so he must retrace the road by which he left that source. It is not surprising therefore to find that the order of deepening consciousness is the evolutionary order in reverse --- more or less. See, e.g., Edward Lewis, Edward Carpenter, p. 63.

• "Lift the stone and you will find me," says the Jesus of the Oxyrhinchus Logia. And T. E. Brown, in the poem 'Disguises' ---"I have an arbour wherein came a toad Most hideous to see --

Immediate, seizing staff or goad,

I smote it cruelly.

Then all the place with subtle radiance glowed --

I looked, and it was He!"

Cf. the fairy tale of the hideous beast who turns into a beautiful prince as soon as he wins the love of a human being.

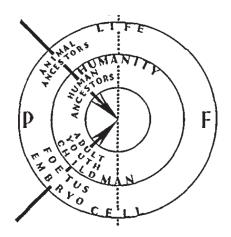
us. Only the recollection of a Fabre goes back far enough. Yet, whether we know it or not, our consciousness of these repulsive creatures is at once our own self-consciousness and theirs.

9. FROM CELL TO MAN --- PAST: EVENTS BEFORE BIRTH

In the last two sections I have discussed the upper arms -- past and future -- of my fourfold history's vital phase; in this and the following section I discuss their counterparts, the lower arms, beginning with the past.

Just as my postnatal development has been a quick-motion picture of my history in Humanity, so my prenatal development was a quickmotion picture of my history in Life. In other words, as pedagogy is to anthropology, so is embryology to palaeontology. (This is, of course, an over-simplification. The famous law of recapitulation -- at its briefest, 'ontogeny repeats phylogeny', or, more fully, 'the development of the embryo reflects the adult stages of its ancestors' evolution' -- has now to be restated in some such form as "Ontogeny repeats fundamental steps in the ontogenies of ancestral forms, especially when these steps are of structural or functional importance to the individual." * Nevertheless the main principle has only been established more firmly by the development of biological science since Haeckel's day --- "For one fact which does not seem to fit in with the modern theory of recapitulation, a thousand can be cited which are meaningless without it." ×) But my 'inferior' history as embryo does not repeat at all accurately my 'superior' history in my animal ancestors. This is certainly not surprising. Considering first the immense disparity between the confined and constant environment of the embryo on the one hand, and the vast and fluctuating environment of the ancestral organisms on the other; and second the immense disparity between the 'programme' of the embryo (namely, successful growth) and the ancestral 'programme' (namely, successful competition and co-operation); and third the immense disparity in tempo between the two 'programmes' --- considering all this, the wonder is that the correspondence should be as close as it is. Though the embryo has, in its own fashion, straightened and shortened the main track of evolution, it still has to cover what is manifestly the same country.

Like practically all other animals, I begin my individual career as a single fertilized cell, in a form that is presumably not altogether unlike my very early unicellular ancestors. Dividing into two cells, and then four, and so on, the young embryo presently becomes a cell-cluster, reflecting no doubt some ancestral cell-colony whose members were as yet undifferentiated. By further cell-division and folding, the cell-cluster turns into a hollow sphere or blastula, representing an early stage of the evolution of the metazoa. The coelenterate phase of ancestral development (represented nowadays by corals and jellyfish) and the coelomate (represented by the earthworm) are well marked. Later on, the fish stage is briefly recapitulated: there, in the tiny salt sea in which I am immersed, I develop 'gill-slits,' only to lose them again as I go on to recall my ancestral conquest of the dry land. My limbs grow, my tail diminishes (relative



*G. R. de Beer, Embryos and Ancestors.

× Hamilton, Boyd, and Mossman, <u>Human</u> <u>Embryology</u>, p. 326. The passage quoted goes on: "No matter how inadequate the investigator may regard even the modern theory as an explanation of the reason for the developmental course taken by a species, he will still profit during his study of embryology by keeping constantly in mind the general principle that, with few exceptions, the younger stage of development of an embryo of a particular species, the lower is the animal group which it resembles both morphologically and physiologically." to the rest of me) and is eventually tucked out of sight, and my features begin to take on human shape.

And this parallelism is by no means confined to externals, or the embryo as a whole. For instance, my heart, at first a mere tube like the heart of the lowest vertebrates, then two-chambered like a fish's, then threechambered like a reptile's, becomes in the second month mammalian and four-chambered. My inner ear is originally a mere bladder of skin as in a fish, my lung a mere bag as in a frog, my liver a mere pipe as in a lamprey. Even more noteworthy are the ancestral organs which I imitate only to discard almost at once --- ribs in my neck (cervical ribs), a notocord, and two preliminary attempts at kidneys, the first pair seemingly reminiscent of my earliest vertebrate ancestors and the second like those of a frog; the third pair I keep.

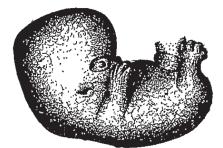
In the biological department of science therefore, if in no other, the principle of symmetrical Pairs is fully recognized. ° It is reasonably clear, as regards the vital phase of my past existence, that I have lived a double but not a divided life. The duality of my history is contained within a greater unity.

10. FROM MAN TO CELL --- FUTURE: EVENTS AFTER DEATH

The symmetry of my past is established, but what of my future? Are my individual and racial destinies linked in the future as they have been in the past, thus completing my fourfold symmetry at the vital stage as well as the human? And if so, is it true as a result that, as Leibniz supposed, the process of dying reverses that of generation? \times In other words, shall I die as a man before dying as a mere vertebrate, and as a vertebrate before dying as a mere metazoon, and as a metazoon before dying as a mere collection of cells? I propose to show that this is, more or less, what does in fact happen. My way down reverses my way up to man. Not only is man able, in some sense, to turn into animals: he is fated to do so. The so-called superstition of lycanthropy is as true in principle as it is universal. *

But first it is necessary to say something about the nervous system and its 'layers'. These are sometimes, for convenience of description, taken as four, of which the first or lowest -- the spinal cord, with its upper end where it joins the brain -- is phylogenetically the oldest, and the simplest in structure and function. The second layer, comprising the mid-brain,+ with the cerebellum and basal ganglia, is a later evolutionary development; the third -- the sensori-motor regions of the cerebral hemispheres -- and the fourth -- the rest of the cerebral hemispheres -- are later still. The most primitive vertebrates possess the first two layers, with only rudiments of the rest. The higher fishes and amphibians have somewhat more developed cerebral hemispheres. In the lower mammals they are still more prominent, but the fourth layer is not yet distinguishable. It is in the higher mammals, and particularly the apes, that this final layer is well marked, while in man it comprises the bulk of the brain. Concerning





Human embryos of about 43 days, and 47 days. Note the evolutionary ground covered in the interval.

° This is not to say that recapitulation 'explains' the development of the embryo. The scientist cannot recognize in this law any effective agency connecting the embryo with certain adult fish and reptiles living millions of years ago. He can only seek explanation in terms of actually present 'organizers' and 'organ-forming substances', 'activation centres' and 'differentiation centres.' Scientific 'explanation' must always refer downwards; but it is the business of the philosopher to point to the other half, which refers upwards. Cf. J.S. Huxley and G. R. de Beer, <u>Elements of</u> <u>Experimental Embryology</u>.

× <u>Monadology</u>, 73, 76; <u>Principes de la Nature et de la Grâce</u>, VI. Though few go so far as Leibniz here, tradition on the whole declares (1) that, as Chuang Chou puts it, "Birth is not a beginning; and death is not an end"; and (2) that our prenatal and postmortem histories are linked.

* See, e.g., A. de Gubernatis, <u>Zoologi-</u> <u>cal Mythology</u> (1872), i; Tylor, <u>Primitive</u> <u>Culture</u>, i, <u>Anthropology</u>, XIV, XV; Robert Eisler, <u>Hibbert Journal</u>, Jan., 1946.

+ Parts of this second layer have been particularly linked with sex and the emotions. Cf. Dr P. Bard's article in <u>Foundations of</u> <u>Experimental Psychology</u>, and Dr W. B. Cannon's article 'Neural Organization for Emotional Expression', in <u>Feelings and</u> <u>Emotions</u>. the respective functions of these four layers in man, the experts are far from agreed, and any statement must be provisional. But observations of the effects of brain injuries and diseases, the combined evidence of comparative anatomy and animal psychology, and the results of experimental operations upon living animals, leave no doubt about the main pattern. The lower layers are relatively stereotyped in their functioning and are in the main determined by heredity; but the third, and particularly the fourth, are very plastic. The last owes its eventual organization and functioning very largely to postnatal experience, the shaping influence of the environment. Further, it may be said that the human nervous system is a hierarchy whose highest and latest members co-ordinate and control, but do not supersede, the lower and earlier. $^{\circ}$

Sir Thomas Browne was not far from the literal truth when he wrote: "We are all monsters, that is, a composition of Man and Beast, wherein we must endeavour to be as the poets fancy that wise man Chiron, that is, to have the Region of Man above that of the Beast, and Sense to sit but at the feet of Reason." × I am still a fish and an amphibian, a reptile and a primitive mammal, and (almost literally, on top of all these) a man. In fact my manhood is not something other than my fish-hood or reptile-hood, but rather their working out, their being put to higher use, their completion or fulfilment. * The very structure of our nervous system witnesses to the correctness of Bergson's dictum that "it is with our entire past that we desire, will, and act". There is no achievement of mine which is not in this sense the achievement of the fish and the reptile and the mammal in me: I am their way of doing the higher tasks. To know what the reptile really stands for, study him here at his best in man, where at last he comes into his own by transcending himself, instead of where, as in the snake and the crocodile, he has failed. Is it not the merest prejudice to say that the real reptile is the one outside man? Are not the lower creatures more themselves in me than in themselves? In me they wake, in themselves they dream. In me they are joint authors of these comments upon themselves. And for me to deny them is for the bough to deny the trunk and the roots. Indeed my humanity is a hollow abstraction in a way that my infrahumanity is not: precisely as a building may survive the destruction of the attic but not of the basement, so my lower and earlier levels can dispense with the higher and later levels, but not vice versa. Fundamentally, I am more mammal than human, more reptile than mammal, more fish than reptile. The later is no doubt an improvement upon the earlier, but it is the first to vanish in an emergency. A fire in a packed theatre, or any disaster that is sudden enough to put men off their guard, and there is no longer any doubt about the beast beneath the skin. The beast kills the man before dying himself. Our humanity is delicate, and always liable to become the first casualty.

Caliban's words are prophetic of us all ---

"We shall lose our time, And all be turned to barnacles, or to apes With foreheads villanous low". •

But just how we lose our heads and our foreheads depends upon a variety of circumstances. The procedure of frontal lobotomy, that now notorious 'remedy' for certain types of extreme mental depression, is to make a cut across the back of the anterior lobes, in order that they

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° Nevertheless the subordination of the earlier involves its modification. Some lower centres of control lose their autonomy to higher centres; and there occurs what is termed 'corticalization of brain function'.

It seems that the frontal lobes, for which man is remarkable, endow him with no new psychic functions, but rather with the power to coordinate those that already exist, to plan ahead, to initiate and organize. According to F. Tilney and H. A. Riley, <u>The Form and Functions of the Central Nervous System</u>, p. 68, lesions in this area tend to dissociate the patient's knowing and feeling, so that he "no longer attaches the proper feeling-tone to his recognitions."

× <u>Religio Medici</u>, I. 55.

* Sex is a particularly striking instance of the elevation of the animal in the human: the full meaning of sexuality only appears with the finest love poetry. It becomes many-layered, a joint activity of reptile, mammal, man, and supraman. "The quite special domain of the 'erotic", says Archbishop Otto, "is only brought into existence as the reproductive instinct passes up out of the merely instinctive life, penetrates the higher humane life of mind and feeling, and infuses wishes, cravings, and longings in personal liking, friendship, and love, in song and poetry and imaginative creation in general." The Idea of the Holy, p. 47. But all specifically human activity is the flower whose stem and root are animal: only in the human is the infrahuman mature and undistorted.

Dr S. Jellinek (<u>Dying, Apparent-Death</u> <u>and Resuscitation</u>, pp. 131-8) points out that, "in agonal death, the last breath is followed, after 1 - 2 minutes of 'deathstillness', by a swallowing movement"; and he connects this movement with the swallowing of air by primitive lung-breathers -- amphibians -- which have as yet no thoracic breathing. Whether the swallowing phenomenon is, in fact, a piece of reversed recapitulation of our amphibian ancestry, I cannot say; but at least the possibility is there.

• <u>Tempest</u>, IV. 1.

shall not affect the functioning of the rest of the brain; the patient, on recovery, is found to lack the ability to synthesize, to plan his actions effectively, to restrain the expression of his emotions, and his moral sense may be seriously affected. × When I get drunk or am drugged, much the same sort of thing is likely to happen for a time. It seems that the layers of my nervous system are put out of commission in the order of their evolutionary juniority. The highest and latest layer is the first to be affected --- I lose the capacity to foresee, to reason, to judge, to regard a situation as a whole; my emotional reactions are less firmly under control. In short, I behave much as if large parts of my cerebral hemispheres had been removed, and in some respects I seem to be living at the level of one of the higher mammals. As the dose of the drug is increased, earlier layers are attacked: my movements become increasingly unco-ordinated, my affective responses more violent. I approach the level of the lower vertebrates (though of course there can be no detailed comparison between their behaviour and mine). At a later stage I become quite unconscious as a unitary organism, though my breathing and heart-beats are still under the control of the lowest layers of my nervous system. Finally, when the dose is again increased, I die altogether. Or rather, I revert to the state of a mere colony of organisms, and then a mere crowd bound by no common aim. And before long the members of the crowd die in their turn. On the one hand, the biologist has to abandon the naive, common-sense notion of one death, of structures which are at one moment alive and at the next wholly dead, and to substitute the notion of a graduated series of deaths, descending the hierarchy. * (It is not only that -- as observers from Democritus to the 19th-century Society for the Prevention of Premature Burial have noted -- the death of the manas-a-whole is by no means the certain and clear-cut event we generally take it to be. The parts have a disconcerting way of surviving the whole. The jaws of guillotined heads sometimes move, for some minutes after decapitation, as if in the effort to speak; the heart of a hanged man, who is otherwise seemingly quite dead, may go on beating for ten minutes and more; under the microscope, remarkable activity of the cells and tissues of heart and brain has been observed, some time after their owner's death, and neuroglia cells are found to have left their stations and travelled considerable distances along a vein. +) On the other hand, the psychologist cannot reasonably ignore the confirmatory evidence furnished by men who have (as we are now entitled to say) died partially, and then climbed back to full life --- I have in an earlier chapter quoted the case of the patient who, half dead with gastro-enteritis, experienced as he grew worse a division of the unitary consciousness into elements, associated with the head, the heart, and the viscera. ϕ Our dying may be described as a proletarian revolution which, not content with liquidating the old regime in due hierarchical order from Czar to petty kulak, goes on to liquidate the proletariat itself. Or, in an older idiom, " 'Tis that unruly regiment within me, that will destroy me; 'tis I that do infect myself; the man without a Navel yet lives in me; I feel that original canker corrode and devour me." o

Of course there are many ways of dying, and some of them are so swift that they appear to be, instead of social disintegration beginning at the top and working down, catastrophies which destroy all grades of so× R. M. Brickner, in <u>The Intellectual Func-</u> <u>tions of the Frontal Lobes</u>, describes the case of a successful business man whose frontal lobes were both removed, as far back as the premotor area, on account of a tumour. On recovery from this operation, he was found to be incapable of sustained effort, restless, a braggart, lacking in restraint and in the co-ordination of mental processes generally. But his capacity for remembering, observing, and reasoning, remained, though somewhat impaired.

Surgically, an anaesthetic has three functions --- (1) to save the patient pain of body and mind, (2) to prevent him moving, (3) to relax his muscles: thus deep anaesthesia is needed for abdominal operations (unless, indeed, tubocurarine is used) so that the muscles shall be sufficiently slack. In terms of this book, the patient cannot be treated so long as he is a man: he must be reduced to the level of organs, dying as a sick man that he may be raised whole.

There is, after all, quite a lot of sense in the music-hall gag about the centenarian whose liver -- invigorated by its daily dose of patent liver-salts -- survived him, and had to be beaten to death with clubs.

* "There is one death when the metazoan body ceases to perform its normal functions, there is another death when the tissue-slice isolated from it ceases to glycolyse or to respire in the manometer, there is a third death when the cell-free enzyme preparation isolated from the tissue-slice ceases to catalyse its appropriate reaction." Joseph Needham, <u>Order and Life</u>, p. 33.

+ S. Jellinek, Dying, Apparent-Death and Resuscitation, pp. 20-1, 48.

 ϕ The case was described by Sir Auckland Geddes in an address delivered to the Royal Medical Society, Feb, 26, 1927.

After all, the doctrine of metempsychosis, which sees in animals degraded man, is in principle only confirmed by science. The primitive's comradely attitude to the lower creatures, the child's insistence upon treating them as human, the folklore which abounds in humanized brutes and brutalized humans --- all these come very near to the truth.

 Θ <u>Religio Medici</u>, II. 10. The "man without a Navel" is of course Adam, whom we may perhaps call our pre-placental mammalian ancestor.

ciety at once. But in fact even the suddenest of sudden deaths takes time --- time enough for hierarchical descent. And, however slow or swift my descent, it is essentially the narrowing of that sympathy by whose broadening I ascended. The rationale of my dying is unmistakable ---no longer caring for other species, I concern myself with man alone; no longer identifying myself with my fellow men, I feel only my own private pains and pleasures; no longer sympathizing with all my organs and cells, I confine myself to this cell or that cell. And when I am no longer sufficiently generous to maintain even this lowly status, I descend to the molecule.

But this is only half the story. "The way to ascend to God", says Hugh of St Victor, "is to descend into oneself." Further growth always means ungrowth. ° Indeed my future life is in the plainest fashion dependent upon my down-going. This adult that I am, with its accumulated memories and skills, is not built to last: to get a new lease of life I have to surrender all my recent gains and live primitively once more in my children. I must retreat still further, detaching myself from the whole of my agelong and toilsome metazoan career and its many fine accomplishments, and revert to a single cell -- sperm or ovum -- if I am to continue into Life. The rule is that to go on I must remodel myself, and the further I want to go the more drastic the remodelling has to be; in other terms, there is no escaping hierarchical symmetry, no clinging to the superior member of the Pair and avoiding the inferior. × In this highly practical sense at least, the admonition to become as a little child is followed by every parent: the child is its parents, rejuvenated by their joint down-going --- not something they have made, but the development of a primitive and hitherto neglected part of themselves. The formula myself when young (associated rather with the picture by Degas than the line of Fitzgerald's) covers, in fact, the entire history of Life, and is of universal application. Our dying is the recollection of what we were as infrahuman, so that we may recollect also what we were as suprahuman.

11. AWARENESS OF THE 'FACTS OF LIFE'

I have contented myself, so far, with a bald statement of the salient events of my Life-history. Before going on to draw certain general conclusions, I want to pause briefly to ask myself just how much this history means to me.

I notice, first, that I am fairly used to the idea that I have arisen from some jelly-like ancestor, with whom I am physically linked through an incomparable procession of monstrous forbears. And the reason I do not find the idea either embarrassing or odd seems to be that this past of mine is so well insulated from me by time that it might as well be pure fiction. I keep myself well padded and wrapped round with time as with a thick blanket, to protect me against the cold reality I cannot bear, to shield me from the self I dare not own. "Innumerable", as Carlyle observed so clearly, "are the deceptions, and wonder-hiding stupefactions, which Space practices on us. Still worse is it with regard to Time. ° Cf. John XII, 24-5; also I <u>Cor</u>. XV. 35 ff, for St Paul's resurrection doctrine --- "that which thou sowest is not quickened, except it die"; <u>i.e. reculer pour mieux sauter</u>. Or Eckhart: "As long as I am this or that, or have this or that, I am not all things and I have not all things."

× There is a curious (and dangerous) Hindu variation on this theme known as Laya Yoga. The Shakti adept links the descending consciousness (so to say) during sexual orgasm to an ascending consciousness: it is said that, by an effort of detachment, awareness is thus raised far above its normal level. The principle appears again in Hatha Yoga, which seeks, by controlling even the involuntary muscles of the body, to further mystical states of mind.

Inge notes that "We count it bad taste to think or speak of the genesis of human lives", but he does not disapprove of this convention. On the contrary, he suggests that the unpleasantness of our beginning and ending as bodies on earth is the device of a God who wishes us to look, at such times, upon the higher things. Contemporary British philosophy 1st Series, pp. 209 f.) I would readily agree, if it were true that unconsciousness of the depths meant consciousness of the heights; but in fact it is more likely to do the opposite. The sooner I realize the abyss from which I have lately emerged, and into which I shall presently sink, the sooner I am likely to realize my need of the compensating sublimity. If I do my level best never to fall below the human plane, I do not thereby help myself to rise above it.

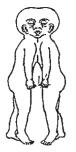
Your grand anti-magician, and universal wonder-hider, is this same lying Time." * Millions of years, like millions of miles, may be counted on to render what lies at the far end of them harmlessly theoretical. That is why I can afford to be relatively honest about my ancestral past. My individual past, on the other hand, is furnished with no such cordon sanitaire, and accordingly I repress it altogether. Or, if it is forced upon my notice, I retaliate by applying it to men in general, instead of to myself in particular: by such means I contrive to make it as academic, as coldly impersonal, as safely remote, as antiseptic, as the tenth dimension. How often does it really come home to me that, in this my own lifetime (a mere 14 or 15 thousand days, or as many million minutes ago), and in this my own body, I was immeasurably inferior to every animal I see around me? How often when I am eating, say, a fish, do I recollect how recent is my own fish-hood, and that I sit down to every meal a cannibal? Indeed it is time I asked myself who is the real savage --- the African negro who is perplexed by birth and death, or I who am not? My selfunconsciousness, nearly always profound, here approaches completeness. Who is not intrigued by some tale about his nursery escapades, some entertaining baby-remark, some early indication of character? And the earlier the biographical titbit the more fascinating --- right up to birth, and then all the interest suddenly and mysteriously evaporates. That mere milestone amongst so many is promoted to a closely guarded frontier. An iron curtain, or even a guillotine, comes down, cutting my life into two unequal parts: the first or antenatal, which in achievement and in everything but clock-time is practically the whole, is amputated and cast aside, while the second or postnatal, which is eleventh-hour work and almost an afterthought, is reckoned my entire history. \otimes I live in a madhouse whose nonagenarian inmates are incurably convinced they were born last night, though they are willing, if it pleases the authorities, to do lip-service to the theory of a previous existence in some limbo. To come to my senses, I must realize (as vividly as I realize what I was yesterday) that I am not merely a mountebank reptile, a fish that has risen in the world, a promoted creeping thing, an over-ambitious lump of jelly, but all these still, and it is no use whatever pretending I can live them down. And along with my false pride will go my false modesty, which reckons as nothing my breath-taking achievements in this body, and my false pessimism, which can see no future for me because it can see no past.

Ordinarily I am content to label my antenatal history 'technical' and therefore none of my business, hand it over to the specialist, and concern myself with the things that 'really matter'. But when at last, by some accident of circumstance or temperament, I rouse myself from that dream called common sense into waking life, I perceive that what is wonderful about me is not the extraordinary but the ordinary, that the significant in me is not what is private to me, but that in which I am just like every other man. What man is as a man, as any and every man --- <u>that</u> is the tremendous, the awe-inspiring, the all-important thing: the rest is not unimportant, of course, but infinitesimal by comparison, though we puff it up till it seems to be the whole. We make the differentia do duty for the entire organism. Our task then is to transmute a vulgar wonder, which is proportional to the rarity of its object, into an enlightened wonder * Sartor Resartus, III. 8.



The developing face of the human embryo.

 \otimes "The history of a man for the nine months preceding his birth would probably be far more interesting, and contain events of far greater moment, than all the threescore and ten years that follow it." If Coleridge, who had (relatively) so little information to go by, could grasp this important truth, what excuse have we for letting go of it?. Our contemporary poets have, it is true, done something to bring home the facts --- notably Aldous Huxley in his 'Fifth Philosopher's Song' ---"A million million spermatozoa, All of them alive: Out of their cataclysm but one poor Noah Dare hope to survive. And among that billion minus one Might have chanced to be Shakespeare, another Newton, a new Donne ---But the One was Me....."

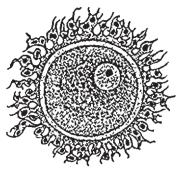


<u>Equal conjoined twins</u> (cephalothoracopagus or janiceps). If we are surprised at all, it is at such monsters; that is, when something goes wrong: but the really surprising thing is that so much should go right so often. which is proportional to the object's commonness. Only the ordinary is truly marvellous. When we feel dispirited, when we seem to have done nothing with our lives, when we all seem so very dull and unlovely, then is the time to remember what we counted for a little while ago. Take all the present citizens of this country as they were recently (at the most, a few score years back), put them in a pond, and a drop of its water would to the amateur microscopist look much as usual --- indeed, most of the regular microscopic pond-dwellers would have reason to look down upon their 'human' invaders. Yet see what these tadpole-like sperms and these quiescent ova have now become! With so much to their credit, they may perhaps be excused perfection just at present. With such a past, their wildest hopes for the future are surely sober enough.

"We must not talk about death," says Chesterton, "for that is depressing; we must not talk about birth, for that is indelicate. It cannot last. Something must break this strange indifference, this strange dreamy egoism..." † It is not only in Erewhon that childbirth is an offence, an impropriety which is, however, condoned in accordance with "this crowning glory of human invention whereby we can be blind and see at one and the same moment, this blessed inconsistency," this habit "of passing over such events in silence, and of assuming their non-existence except in such flagrant cases as force themselves on the public notice." * I enter and leave this human life as something that is not polite to mention, as a skeleton in the cupboard --- or, what comes to the same thing, an embryo in the womb and a corpse in the coffin. We have, of course, the excuse that the cupboard door is locked, that all but a fraction of our development and disintegration is hidden from view. It is a lame excuse, for we are content to believe in a million things that eye has never seen nor ear heard. Moreover, in this instance, concealment is more accidental than necessary: it need not have happened, and it may not go on happening indefinitely. Many creatures find it convenient to pass through their embryonic phases outside instead of inside the parent's body, as free larvae leading independent lives; and, as various writers have suggested, it is conceivable that man himself may one day deliberately revert to something like this mode of development. One day, half the animals around us may be men-in-the-making, and, as a class, indistinguishable from the rest without the help of some biological training. Perhaps, in the home of the distant future, the nursery will be a combined laboratory and zoological garden, where the swimming race of scores of millions of sperms towards an ovum is an exciting but not unfamiliar sporting event, where the resulting embryo or larva graduates by easy stages from the aquarium \times to the reptile house and the monkey cage, before it is at last certified human by the family physician. In such a home, practical necessity would ensure a measure of awareness. To suppose, however, that this awareness would far exceed that of a sleep-walker, and that the doting parents would find their beast-children astounding, is to suppose a psychical modification more profound that the physical modification which I am imagining. The chances are that such parents would reserve their wonder for the unfortunate and freakish mother of the remote past, who -- fantastic story! -- could never know the tenderness of surrounding herself with animal pets who are also her children, and who had never seen a beast -- her beast -- turn into a man. Even now, after



Human spermatozoon X 3000, seen from two points of view. It can travel at a rate of about an inch in 3 minutes.



Human ovum X 400, surrounded by protective and nutritive follicle cells.

† The Napoleon of Notting Hill, III. 2.

* Samuel Butler, <u>Erewhon</u>, XIII.



The young embryo in the womb (schematic).

× And in fact, as things are, the embryo lives an aquatic life, in the salty fluid medium which surrounds and protects it, and the mother is a kind of walking aquarium. It is virtually true to say that, for the greater part of my developmental life, I am a marine animal, and a land animal only in the last stages. all, we are encompassed by minute seeds turning into flowers and trees, caterpillars turning into butterflies, tadpoles into frogs --- and who of us is specially impressed? + Again, which is in fact the more notable, the fish in the belly (which is virtually the present arrangement), or the fish in the baby-carriage (which is the sort of thing I am imagining)? Is it a <u>less</u> queer thing to be a reptile's father than to be its keeper? Really our aptitude for blotting out reality with smoke-screens of sentiment, and technical jargon, and make-believe, is past all exaggeration. Why, for example, is the Time-machine, which in every pregnant woman is racing at thousands of years an hour, -- the Time-machine which I was, and indeed still am -- why is this so much less interesting than H. G. Wells' gadget of nickel and ivory and rock-crystal, which had not even the merit of being technically plausible, let alone actual?

(There is, of course, a practical explanation. After a short period of uncomfortable adjustment, human nature settles down to take almost anything for granted; and in this adaptability lies the reason for much of our biological success. In the struggle for life, awareness is a precious commodity, not to be squandered indiscriminately, or in accordance with some exalted philosophical or aesthetic estimate of what is worthy. Our success, <u>up to a point</u>, requires that our full and vivid consciousness shall be reserved for the new and unusual, for that which demands a fresh adjustment, and almost none is left over for the immense background of usual things, or for that which demands contemplation rather than action. But beyond that evolutionary point there is a revaluation. Awareness which is proportioned to its object's importance, rather than to its utility * is first non-existent, then a rare and expensive luxury, and at last a necessity --- and even, in the end and in the long run, a practical necessity.) $^{\circ}$

The divine gift of awareness is, in some degree, susceptible of encouragement and cultivation --- as, for instance, by the device of translating the too-familiar into less familiar language, which may have the effect of shaking us out of our stupor. Let me give an example. Suppose that for my car I were to go, not to a manufacturer, but to a nurseryman, and were to buy from him a seed which I am told to plant in a bed of ironfillings, moistened periodically with oil and manured with old pieces of rubber. For the first week or so the seed is, outwardly, no more than an expanding pellet; but gradually it comes to resemble a small primitive cart with mere discs for wheels, and then a more elaborate tumbril and so on, developing by degrees to something like a well-sprung coach, a Victorian steam-carriage, an Edwardian motorcar, and finally into the latest six-cylinder model; greased, fuelled, and running smoothly. Suppose, having sat down at the wheel, I discover that my new car is not only able to steer itself and change gears at the right moment, but also to mend its own punctures, recharge its own batteries, refine its own petrol, and even, after a little education, to read its own maps and to discuss with me the best routes to take; suppose, further, that there comes a day when this remarkable machine talks to me about cars, and the mystery of their growth from tiny metallic seeds --- and, in fact, becomes the author of this very story I am now telling. Suppose all this happened, just once. I could scarcely fail to be impressed. And even if I were a brilliant

+ At the end of <u>Nanna</u>, Fechner attributes his realization of the significance of flowers, to the fact that he came upon a garden full of them suddenly, after a long period of partial blindness. It is an interesting question how far alternating stimulation and abstinence could be used to awaken our dormant perceptions.

We are, as Browning says in 'Easter Day', "a race, whereof scarce one Was able, in a million, To feel that any marvel lay In objects round his feet all day."

"Let but a Rising of the Sun, let but a Creation of the World happen <u>twice</u>, and it ceases to be marvellous, to be noteworthy, or noticeable." <u>Sartor Resartus</u>, I. 8.

* I do not say that this felt importance is an objective character, while its utility is subjective or accidental; but only that, of the two, the first is the completer mode of the object's presence in the subject. Neither utility nor importance is intrinsic in the object.

° We certainly need healing; and "the process of healing is a kind of recapitulation", Mr E. Graham Howe tells us. "We can redeem the past if we accept responsibility for it." (<u>The Triumphant Spirit</u>, 181-2) But I think that if it is for merely therapeutic reasons that we go over our past and save it from automatism, we shall not benefit nearly so much as if we acted for the sake of truth alone, and were impelled by no more practical motives than curiosity and wonder. The law of elsewhereness, of the indirect approach, is surely as much in force here as anywhere else. motor mechanic I would not dream of claiming to know how my car came to be a car, or what it really was. Yet the truth is that this impossible machine, with a few relatively unimportant modifications, is the most ordinary thing in the world --- I am one myself! In short, I am manifestly impossible, and had never noticed it. He who insists on common sense is himself the supreme offence against common sense.

The large and the swift naturally impress us; ° what is small and slow is of small account. × But even if these last excuses for self-unconsciousness were removed --- if, besides being set at large and exposed to view, each of our early phases were so magnified that sperms were as large as eels, and our foetuses as large as our cats and dogs; or if the growth that is now spread over nine months (a period brief enough in all conscience, but not so brief that embryonic growth can be <u>seen</u> as movement) were compressed into as many seconds, so that the egg were seen actually <u>exploding</u> into the baby ----- even so we would, I do not doubt, soon turn our bored attention from such ordinary matters to the really interesting account in our newspapers of the freak egg, in China or Peru, that actually <u>grew</u> into a baby. Only if nothing ever developed except one solitary creature, and only if we had not had time to get used to this phenomenon, would growth become worshipful. But why should a <u>world</u> of growing things be so much less remarkable than a single one?

A great enlargement of the human spirit is due, a quickening of the imagination exceeding that which followed the discoveries of Columbus and Copernicus. So far, the science of the past hundred years has scarcely touched our thinking in any positive way: we have heard distant rumours of a wonderful universe enshrining a wonderful inhabitant, but our eyes have seen neither of them. * A new <u>Divina Comedia</u> is awaited, which will be at once less like and more like the original than we now suspect. Certainly the hierarchical ascent of the embryo is a theme not unworthy of a second Dante.

12. MY FOURFOLD LIFE-HISTORY AS A CONCENTRIC SYSTEM

But it will not do to isolate and treat as independent any one of the four movements of my Life-history. Unless they are held together in a temporal whole -- past and future -- which is based upon this present Centre, and unless this symmetrical system is filled out with all its subordinate and concentric histories, none of the four constituent movements is its proper self. An example will make clearer what I mean. Taken by itself, my past descent from a primeval Life which is barely alive, is in reality no descent at all, but an ascent from the inferior series to manhood; again, taken by itself, my prospective ascent from manhood to a Life which is dying back into the planet, is actually a falling away. In neither aspect is this eviscerated Life superior to my present human condition. To discover Life in its completeness, as a whole which fully deserves the hierarchical status I have accorded it, I have to take for sample my own concrete functioning at this level, and not detached fragments arising out of that functioning. And when I do this, my doubts about Life's su° "Whatever exceeds the common size is always great, and always amazing", says Longinus, in his <u>Treatise on the Sublime</u>.

× Many years ago, H. S. Jennings pointed out that if an amoeba were the size of a dog, instead of being microscopic, nobody would deny to its actions the name of intelligence.

Near the beginning of <u>The Everlasting</u> <u>Man</u>, G. K. Chesterton points out that events are not more intelligible because they move slowly, and it is absurd to suppose that evolution, being gradual, is therefore not miraculous. The word <u>evolution</u> leaves us with the impression that we understand it, just as we are somehow under the false impression that we have read <u>The Origin of Species</u>. Cf. <u>Sartor Resartus</u>, III, 8: "Is that a wonder, which happens in two hours; and does it cease to be wonderful if happening in two million?"

* Perhaps Blake, for all his censure of science, comes nearer to this vision than ever we do:

"And Los beheld his Sons and he beheld his Daughters,

Every one a translucent Wonder, a Universe within,

Increasing innards into length and breadth and height,

Starry and glorious; and they every one in their bright loins

Have a beautiful golden gate, which opens into the vegetative world;

And every one has the three regions, Childhood, Manhood and Age." Jerusalem, 14.

periority are seen to be unfounded: for Life includes the human and all lesser orders, as the chapters and verses and words of its own story. The spatio-temporal whole is greater than its spatio-temporal parts. In their proper places in Life -- Life as a whole-in-time -- Life's beginnings and endings are humble just because they are only beginnings and endings, yet the reverse of humble because they are the temporal extremities of so rich a whole; indeed they can no more be detached and criticized separately than the first and last words of this book can be treated so. Always it is the entire history, with Now for Centre, that counts, and to judge Life by its temporal boundaries, in abstraction from what they enclose, would be like judging a man solely by his hair and his nails, or a picture by its frame. The hierarchical rule is that the whole is both earlier and later than the part. It extends <u>beyond</u> the part in time just as it does in space, but in both cases it extends <u>through</u> the part, or it is not the whole at all.

My habit of isolating episodes of my history and treating them as selfsufficient is the source of endless misunderstanding. Thus I claim to be writing these words as a man, or as Humanity, while it is plain (once I consider the matter) that only Life is old enough and experienced enough to think and to use language. To compose this sentence, one must have been at school some hundreds of millions of years. In claiming the authorship of my deeds, I claim, in effect, identity with Life, and extend my history to coincide with its history. And if this statement should sound far-fetched, I have only to recollect that every cell now concerned with recording this opinion is coeval with Life itself. Common sense's mistake is twofold --- first, to strip man of his Life-shell, without which he is nothing, let alone human; second, to empty Life of man, who is the heart and kernel of Life. Life that is only Life is not Life. Life outlives Humanity in both directions of time, Humanity outlives this town, this town outlives me the man; yet without such concrete filling Life does not live at all, much less outlive anything. Our thinking is vitiated through and through by our failure to see that the vital is the core of the telluric, and the human is the core of the vital. Only by constantly losing hierarchical status can it be maintained. Nothing can happen but by ascent and descent. My human behaviour cannot be understood by concentrating upon the first onset of a stimulus and the last tremor of the response, while ignoring the body that intervenes --- the incoming and convergent impulses, the Central void or synapse, and the outgoing and divergent impulses. Neither can my functioning at the level of Life be understood till past Life is seen as reduced by stages to this present Central void, and built up again in the future, and until the Central void is seen as the receptacle of the whole symmetrical process.

13. THE FOURFOLD RECAPITULATION OF MY LIFE-HISTORY

My aim in this chapter, so far, can be put in a nutshell --- to take the well-known law of recapitulation, multiply it by four, and extend it in all four directions. I have found my little life-span to cover, not merely the past ascent of my individual ancestors, but also the past descent of

The convergence of my immense past and future upon this Centre, which, though it is nothing in itself, comprehends them both, is perfectly expressed in Siegfried Sassoon's verses ---

"<u>Let there be life</u>, said God. And what He wrought

Went past in myriad marching lives, and brought

This hour, this quiet room, and my small thought

Holding invisible vastness in its hands. Let there be God, say I. And what I've done

Goes onward like the splendour of the sun And rises up in rapture and is one With the white power of conscience that commands."

'The Power and the Glory', in <u>The Heart's</u> Journey

In 'Paracelsus', V, Browning describes the two halves of the ascending movement --- "Thus He dwells in all,

From life's minute beginnings, up at last To man --- the consummation of this scheme

Of being, the completion of this sphere Of life: whose attributes had here and there

Been scattered o'er the visible world before, Asking to be combined, dim fragments meant

To be united in some wondrous whole, Imperfect qualities throughout creation, Suggesting some one creature yet to make, Some point where all those scattered rays should meet

Convergent in the faculties of man.

And, man produced, all has its end thus far:

But in completed man begins anew A tendency to God. Prognostics told Man's near approach; so in man's self arise August anticipations, symbols, types Of a dim splendour ever on before In that eternal circle run by life."

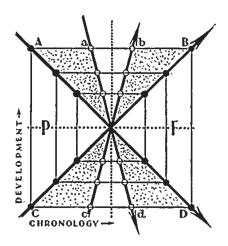
^{.....} All tended to mankind,

their groups and types; and to cover, in addition, a twofold future which is, roughly speaking, the mirror-image of that twofold past. Into what is chronologically an infinitesimal period of time I somehow pack an agelong past and future history, by the drastic telescoping methods typical of biological recapitulation. My womb-history is, as it were, one of four equally indispensable womb-histories, each measuring a maximum of 'developmental time' against a minimum of calendar time. I spend my three score years and ten in the womb of my aeons, and all this life is the recapitulation of a greater. Recapitulation in its entirety, as the fourfold art of scaling down time -- making hours stand for ages, as the cartographer makes millimetres stand for kilometres -- is the secret of successful living, and indeed of all living. On the one hand, as Chapter VIII made clear, nothing less than Life can live; on the other, time is short. The solution is what we should have expected all along --- to live, each of us must, in a sense, be Life as a whole, but Life compressed by a fourfold device to workable dimensions of time.

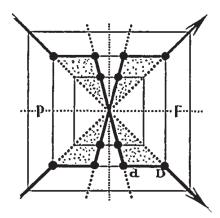
It is the phylogenetic tortoise who really sets the pace; for the faster the ontogenetic hare runs the longer he must stay motionless, while the tortoise goes steadily on. In other words, my past is a story of arrested development, followed by a sudden making up for lost time, and my future is a story of precocity, followed by a long period of waiting. My business is to be as far ahead of the times at death as I am behind the times at conception: but this means marking time at both ends of my career. Thus, all the while my ancestors were evolving into fish and reptiles, into mammals and men, it was enough that I should remain mere single cells in them --- right up to the last moment forty years ago, when I decided at last to take the shortest of all short cuts to their level of attainment. And now, having, so to say, got the knack of taking short cuts, I must press on, and, anticipating the slow development of my descendants, arrive in a few years at the level which they will probably take ages to attain. And there I must await them. Starting as the parasite of man, I must end as his host.

So much for the two phases of ascent. The descent is to match --- first age-long procrastination at a high level, then a downhill rush already half over, finally age-long waiting at a low level. As embryo submerged in my primitive uterine sea, as infant not yet psychically distinct from the primitive society of my equals, as child and youth in a swiftly evolving but narrowing community, as the adult to now asserts himself <u>qua</u> solitary self-conscious individual, as the old and dying man descending towards organ-hood and cell-hood --- in this series I am, once more, first reminiscent, then contemporary, and at last anticipatory. As mere cells and mere molecules, I prophesy in my own person the fate of all that are human and alive, and wait for them to join me.

And this fourfold recapitulation is inseparable from a fifth --- that final condensation of my history in a point of time, in a Central nothing which yet embraces the whole. ° Here is recapitulation of an entirely different order, seeing that it scales down the four original movements, and the four recapitulating movements, to the utmost limit, and expands them again to their original dimensions. The final telescoping of my time results in its restoration <u>in toto</u>. I am conscious here and now of my past



AD, CB represent phylogeny; ad, cb represent the ontogeny which recapitulates these. Though AB in calendar time is thus shortened to ab, AC in 'developmental time' remains the same for the phylogenetic and the ontogenetic series.



The principle of evolutionary delay: I mark time, then rush ahead, then mark time. (My marking time at dD is my future cellular existence in my descendants; or, less probably, in some biological laboratory which confers on me a longevity as cells that I cannot have as a higher organism.)

° This final mode of recapitulation enables Empedocles to say that the man who has "won the utmost wealth of wisdom" can, by straining his mind, see everything that happens in ten or twenty lifetimes. (Burnet, <u>Early Greek Philosophy</u>, p. 224.) And Whitman ---

Think of times you stood at the side of the dying;

Think of the time when your own body will be dying."

(Nonesuch Whitman, p. 511.)

[&]quot;Think of the time when you were not yet born;

and future in Life: it is all present, as from its proper times and places, and at those times and places from this time and place.

And so I come back to the theme with which this part of the inquiry opened --- my history in its primary aspect, my history as actually presented, is a symmetrical thrust into the past and the future from this present moment, instead of the simple one-way movement I generally take it to be. What I have now to do, in fact, is to reverse the whole procedure of this discussion, and speak in terms of the expansion of the present rather than the contraction of the past and future: my longterm history becomes the product rather than the source of this Centre which projects it. × Instead of treating the slow phylogenetic movement as primary, the swift ontogenetic movement as secondary, and the instantaneous mind that comprehends them both as tertiary, I have now to recognize that the truer order, the order that is given in experience, is the other way round. First, I know something or other; then I know some of my individual history as such; then I know that individual history as reflected by a slower and remoter ancestral history. No longer need I be unduly impressed by the popular account of evolution, with its terrifying reckonings of millions and millions of millions of years, its almost unimaginable dreary protractedness, its mindlessness, its false trails, its waste and sordidness; for all this proceeds from the Centre, as the fringe of its time-producing activity, as the outside edge of its dispersion or emanation. Its defects, then, are not intrinsic, so much as due to its position on the periphery, its rarefaction, its remoteness from the Centre which is its source and saviour. To deny this, and to make the Centre that knows derive from the periphery that is known, and to make phylogeny in every way prior to ontogeny, is to turn time inside-out, exchanging the procedure of empiricism for the procedure of faith --- even though the faith should call itself materialism. But this is a topic which must wait for the next chapter.

(iii) THE LAWS OF DIVARICATION AND FOETALIZATION

14. <u>THE LAW OF DIVARICATION: MY ANCESTRAL PAST --- NON-SPECIALIZATION</u>

I do not for a moment imagine that the foregoing schema of my Lifehistory is complete, or adequate to the facts, or capable of reducing more than a fraction of their chaos to decent order. I have no doubt that there are other patterns, which are no less comprehensive and no less true, to be found in this history, and that the 'truth' about it is the interlocking system of all such patterns, together with their filling of concrete fact. I believe, further, that the fourfold system I propose is itself the merest schema of a schema, as yet crude and undeveloped. It is capable of -- or rather it calls out for -- many qualifications and elaborations. But this inquiry has to come to an end, and I must make do with one example of the kind of elaboration I mean --- namely, what I call the law of divarica"The true method of interpretation is to proceed from man to nature, for the highest holds and knows the secret of the lowest, while the lowest neither holds nor knows the secret of the highest." A. M. Fairbairn, <u>The Philosophy of the Christian</u> <u>Religion</u>, p. 171; cf. p. 49.

× And this is the ultimate lesson of my history, which saves it from itself --- namely, its total dependence upon the Centre. As Aldous Huxley has put it, "Only in the knowledge of his own Essence

Has any man ceased to be many monkeys." <u>Ape and Essence</u>, p. 55; cf. <u>Measure for</u> <u>Measure</u>, II. 2.

The retroactivity of mind has nowhere been better described than by Browning, at the end of 'Paracelsus' ---"A supplementary reflux of light, Illustrates all the inferior grades, explains Each back step in the circle. Not alone For their possessor dawn those qualities, But the new glory mixes with the heaven And earth; man, once descried, imprints for ever

His presence on all lifeless things: the winds

Are henceforth voices, in a wail or shout, A querulous mutter, or a quick gay laugh, Never a senseless gust now man is born!" But there is another side to the medal: present 'spirit' is as empty without past 'matter', as past 'matter' is senseless without present 'spirit': light is not light at its source, but in the distant zones it irradiates. Thus Rumi describes himself as escaping at night from a prison into the spacious country of the past, into the hundreds of thousands of years when he was flying to and fro like a mote in the air; in sleep, he drinks the milk of bygone years. (Nicholson, <u>Rumi, Poet and Mystic</u>, p. 40.) tion, with the linked law of foetalization.

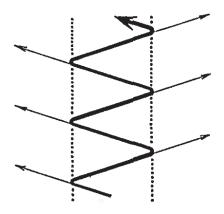
Stare at any object long enough, and it doubles itself. I am such an object. Through and through I am a working duality, 'dialectical'. "In Yes and No all things consist", says Boehme; they, and I, go by contraries. The rule for one who would investigate my nature is: beware of that which is final, which is one, which is simply itself, without another side, or counterpart, or lurking opposition; look everywhere for pairs. Thus my life is half waking, half sleeping. × Thus I am an amphibian, a centaur, half infrahuman and half suprahuman. Thus my space is righthand and left-hand, ahead and behind, above and below; thus my time is past and future; thus both my past and my future have superior and inferior aspects; thus any event of my history -- whether past or future, inferior or superior, -- is both then and now, both there and here, both peripheral and Central; thus the Centre itself is nothing yet everything.° In every way I am much less than I had imagined myself, and much more --- less long-lived and far more long-lived, with humbler beginnings and far grander, with a less promising future and an immeasurably more promising. Always the price of expansion is contraction. There is a sort of rough natural justice whereby I stay, on balance, where I was, and every advance means an equal and opposite withdrawal. I suggest that the art of living is not to try to iron out this twofoldness, or to reform this elaborate constitution of checks and balances, but rather to see that the utmost use is made of its life-giving possibilities.

It is, however, with only one of these creative dichotomies that I am at present concerned. So far, I have pictured each of the four movements of my history as a simple or straight-line process; but, upon closer inspection, it is seen as a zigzagging or tacking movement, in which the overall course is never the one that is at any moment actually being followed. I pursue one route for a time, then change my mind and pursue another; and the resultant direction of my advance is different from the direction of either component. A further complication -- and a further dichotomy -- is that each tack has two parts: a central or viable, and a peripheral or non-viable. The ship fails every time to swing round soon enough, leaves the fairway, and runs aground in the shallows, from which she must be pulled out before setting off on the other tack. Here the error is repeated.

This zigzagging, which is characteristic of all my history, takes many different forms. * It is, for instance, reflected in the shape of the 'evolutionary tree' whose main stem is the lower part of each successive branch, the upper part being a dead end. This is simply a shorthand description of the fact that, when a type of organism hits upon some new weapon, some new aspect of the environment to exploit, some evasion or dodge by which an immediate advantage is gained, the tendency is for that advantage to be pursued as far as it will go. The creature loses its unspecialized character and becomes a narrow expert --- supreme, perhaps, in its own class, but no longer in the fairway, no longer able to get back to evolution's navigable channel. Often the momentum (so to say) of a speciality carries it far beyond the limits of utility, its survival-value becomes negative, and early extinction of the organism follows. Even moderate specialization generally leads to stagnation. + The birds, fringing their arms and fingers with giant scales, were too 'clever' too soon;

 \times Sankara, making the principle of noncontradiction the test of truth, found dreams to be contradicted by waking life, and waking life by higher states of consciousness. R. Osborn (Freud and Marx) looks upon the dream as the dialectical opposite (in the Marxian sense) of waking life: in the former, abstract ideas are concretely presented; in the latter, the concrete is abstractly interpreted. Again, the dream itself shows similar tendencies: contraries are treated like similarities. As Freud says, "Since in the dream-work opposites coincide, it is in every instance uncertain whether a specific dream-element is to be understood in a positive or a negative sense, as itself or as its opposite." Introductory Lectures on Psycho-Analysis, p. 193.

° But the list of dichotomies is endless: others are mind and body, intelligence and instinct, animals and vegetables, male and female, night and day, good and evil..... Many thinkers have been impressed by this universal duality --- from the Yin-Yang School of the third century B.C. to Hegel (<u>Encyclopaedia</u>, 119), Roget (in the arrangement of his <u>Thesaurus</u>), and Bergson (<u>Morality and Religion</u>, p.254).



* Two-party government, in which the excesses of one side are periodically offset by the excesses of the other, is a notable example. This mode of government owes its success, I think, to the fact that it is fundamentally in accord with Life's methods. On this see Bergson, <u>Op. cit.</u>, pp. 252 ff.

+ Julian Huxley (Evolution, The Modern Synthesis, p. 572) considers that only through man is further evolutionary advance possible. There is no hope of other species developing intelligence, in the event of man disappearing --- they are all too specialized. "One of the concomitants of organic progress has been the progressive cutting down of the possible modes of further progress, until now, after a thousand or fifteen hundred million years of evolution, progress hangs on but a single thread." (My own comment is this: when it is realized (a) that specialization is a rather vague term and relative to human standards, (b) that Life may have modes

they allowed themselves to be sidetracked. Those who have rashly grown wings of feathers and skin are unable to get back to the evolutionary thoroughfare, where the forelimbs with their five fingers are preserved inviolate against the day when they will initiate a new phase of evolution by grasping a tool, and eventually a joystick controlling aluminium wings. The horse, running on one of his fingers and sacrificing the rest, became a speed-expert too soon, instead of waiting till he could travel far more swiftly, with unmutilated hands on a steering wheel. The whale impatiently became a submarine, the rhinoceros a tank, the monkey an acrobat, the nightingale a musician, the spider an engineer, the fly an ace-pilot, the swallow a navigator. But man is all these things and a thousand more, because he is also none of them, and because he was in no hurry to be clever. It is as if every other type, every species except man and his ancestors; has been the victim of some kind of monomania. He alone has stopped short before the critical point in each branching of the evolutionary tree, and turned before it was too late to turn. + He alone has resisted all temptation to gain a minor immediate victory at the expense of the long-term strategy. Content to allow the reptiles to outdo him in armour, birds and insects in flight, fish in swimming, apes in climbing, carnivores in hunting, he could well afford to be patient, seeing that in the end he beats them all at their own game. Of all nature's cautionary tales this is one of the least equivocal --- beware of limited expertness: the race is not to the swift nor the battle to the strong, but all things shall be his who knows how to bide his time, and meanwhile to stay simple, detached, non-committal, not over-bold or over-cunning, but 'broad-minded', sensitive, all-round, plastic. Or, to put the matter another way, the vine must be pruned repeatedly if it is to bear, and the way to wholeness is through maiming. It is as if our ancestors had taken for their guiding text the words: "Wherefore if thy hand or thy foot offend thee, cut them off, and cast them from thee: it is better for thee to enter into life halt or maimed, rather than having two hands or two feet to be cast into everlasting fire." °

Actually this is an over-simplification. It is altogether too easy for me to disown ipso facto every part of myself which leaves the main line, and then congratulate myself for never having been side-tracked --- as if I set up to be a good man on the grounds that, though I am often wicked, I am not then myself. † The truth is that I have, on innumerable occasions, run off into branch lines and dead ends, and that is why I am here and now on the main line. For every section of me that went on, hundreds have been diverted or shunted off, till now the sidings are everywhere full of my rejected rolling-stock. The vegetable and animal worlds are littered with my bright ideas, pushed to their logical conclusions. "It is as if a vague and formless being, whom we may call, as we will, man or superman, had sought to realize himself, and had succeeded only by abandoning a part of himself on the way. The losses are represented by the rest of the animal world, and even by the vegetable world...." × But the essential point is that the system is really indivisible: branches and main lines, through traffic and local traffic and the goods piling up in the sidings, are the parts of a great whole. Dr Moreau's plan to save the animals, by vivisection, from the bodily consequences of their specialization, * was basically wrong-headed --- unspecialized man means speof advance as valid as the human, but very different, up her sleeve, and (c) that many species have still to be studied --- I think it is premature at this stage to make Life utterly dependent upon man. All I can feel certain of is that, in the unlikely event of another species taking over the lead, it will do so as our 'better self' in Life, and not as an alien usurper.)

"It is this inherent power to prevent growing up from meaning -- as it does mean with all other animals save man -- hardening up, closing in; it is this power of being full formed in stature and yet supple, free, and open in spirit, which is man's unique endowment and on which his supremacy depends." Gerald Heard, <u>The Creed of Christ</u>, p. 11.

+ In <u>The Uniqueness of Man</u>, Julian Huxley points out that man's fate has been unusual so far. Apart from the remarkable correlated development of eye and hand and brain, he is an unspecialized member of an unspecialized mammalian group. It is noteworthy too that he has not divided into mutually sterile species, seeing that there has been ample time for this to happen.

° Mat. XVIII. 8.

Emerson's naturalist (in the essay on Compensation) who "regards a horse as a running man, a fish as a swimming man, a bird as a flying man, a tree as a rooted man", is, after all, a very competent observer. In fact, the human and the nonhuman in Life are just another instance of divarication, in which two unlike movements are integrated as a third, which is of a higher order. Cf. Hegel: "The other is seen to stand over against its other. Thus, for example, inorganic nature is not to be considered merely something else than organic nature, but the necessary antithesis of it. Both are in essential relation to one another; and one of the two is, only in so far as it excludes the other from it, and thus relates itself thereto. Nature in like manner is not without mind, nor mind without nature." Encyclopaedia, 119. † Cf. Hamlet, V. 2.

× Bergson, <u>Creative Evolution</u>, p. 281. Cf. Plato, <u>Timaeus</u>, 91-2, where birds are derived from harmless light-witted men, land animals from men that have no taste for philosophy, and fish from stupid men. (I say that to derive animals from man is just as correct as to derive man from animals, but that it is more correct to do both.)

* H. G. Wells, <u>The Island of Dr Moreau</u>. "In the west the prevalent feeling is that nature belongs exclusively to inanimate things and to beasts, that there is a sudden unaccountable break where human-nature begins.... It is like dividing the bud and the blossom into two separate categories, and putting their grace to the credit of two different and antithetical principles." Tagore, Sadhana, I. cialized animals, and vice versa. Types do not evolve in isolation, but in complexes or ecological groups of all sizes, and ultimately as a single living thing whose organs they are. Moreover, apart from their intertwined evolution, there is the day-to-day dependence of these organs upon one another: the highly specialized upon the generalized, and vice versa. In this sense the specialists are by no means unqualified failures, seeing that alike in their genesis and in their continued existence they are the condition of man's success and his survival. His success is theirs. Nor is he in any position to boast, seeing what that success has cost the rest of Life. His all-round-ness is nothing apart from their one-pointed-ness: they are his specialized limbs, he their unspecialized trunk. In a word, Life is one, and Humanity's achievement is Life's. Truly speaking, it is as mistaken to attribute even this present account of the situation to my human body apart from all other human bodies, or to Humanity apart from all other species, as to attribute it to my arm alone or my hand alone. A man is animals thinking. He is what they have to do to know themselves better. His mouth, lately a fish's, speaks these words on behalf of fish, and his hand is their fin, improved for writing this sentence of their autobiography.

15. <u>THE LAW OF DIVARICATION: MY INDIVIDUAL PAST --- FOE-</u> <u>TALIZATION</u>

The lower series is the counterpart of the higher. My refusal to specialize is ontogenetic no less than phylogenetic, individual no less than ancestral. † As embryo, I kept to the main channel of advance, and if for a time I did develop some too-specialized structure, I very soon abandoned it. The fact is that, individually, I sail closer to the wind, more directly towards my destination, than I do racially. I cut off corners, avoid delays, take the shortest possible route. I avoid much of the specialization of my <u>adult</u> ancestors.

Earlier in this chapter I wrote that my history in the womb reflects the history of my forebears. What I have now to add is that it reflects their embryonic rather than their adult history: a great deal of what they grew up to be lies for me beyond the fairway, in the dangerous shallows of over-specialization. For example, it is probable that my gill-slits in the womb are more like those of my fish ancestors in their immature phases, than like those which they acquired in maturity. × The dog has been called the miscarriage of a wolf -- a wolf whose later and more specialized development was somehow arrested, and not, of course, a miscarriage in the proper sense -- and man the foetalization of an ape: certainly his resemblance to the foetal ape is far closer than to the more developed animal. + At about the time of birth the anthropoid ape has a light skin, is almost hairless, lacks the prominent bony ridges of the cranium and the obviously non-human snout that are typical of the adult: in fact, the foetal ape is so strikingly 'human' that Metchnikoff went so far as to suggest that man did actually result from an ape's miscarriage.* In principle, at any rate, he was right. Often it happens that "the adult descendant will resemble the ancestral embryo, and, this lateness in the repetition

It is a rule both of individual and ancestral history that present enjoyments and advantages are based upon (and indeed unitary with) past self-denial or restraint. Illicit pleasure is disloyalty to the elemental virtue that has gone to our making. Present 'vice' means past 'virtue'. In particular, it is because man alone refused for so long to differentiate himself violently from his fellow creatures that he is now able disastrously to repudiate them all. Cf. W. E. Hocking, Human Nature and Its Remaking, p. 123. Something like continence is necessary at every level, to make available the energy for attaining the next: cf. J. D. Unwin, Sex and Culture, on the vitality of those societies that impose pre-nuptial continence.

* "No man can be a pure specialist", says Shaw in <u>The Revolutionist's Handbook</u>, "without being in the strict sense an idiot." Etymologically, an idiot is a <u>private</u> person, who looks to what is his own and not <u>general</u>. It may be said that there are two classes of 'idiots' --- the stupid animal ones who over-specialize early, and the clever human ones who over-specialize late.

× Similarly, the hymen has been interpreted as a survival of what, in our animal ancestors, was an <u>embryonic</u> stage in the development of the urino-genital system.

+ See Julian Huxley, <u>Evolution, The Modern Synthesis</u>, pp. 526, 532, 590; L. Bolk, <u>Das Problem der Menschenwerdung</u>.

* <u>The Nature of Man</u>, I. Cf. Enrico Marconi's <u>Histoire de l'Involution Naturelle</u> (Paris, 1915), in which it is maintained that the apes are descended from man by a kind of degeneration. of characters seems to have played a considerable part in the evolution of species and of the human species." ° It is as if the ape (and indeed every other creature) has it in him at some time or another to become an all-round human being, but decides instead to go in for a single human propensity; and as if man begins to become every other type of animal in turn, but decides instead to wait until, in becoming himself, he becomes them all. • In the convenient seclusion of the womb he can afford to do without even that moderate specialization which, ancestrally, he was obliged to assume in order to get his own living. The individual's history is a <u>childlike</u> version of the race's.

Indeed there is a sense in which animals are suprahuman. They are men that have been rather too brilliantly expert, too sensitive in one direction, too one-sidedly emotional, too good at their trade or profession. For example, Professor and Mrs Kellogg * found that it was excess of emotion, almost as much as lack of intelligence, which held back the chimpanzee's development after the first eighteen months; the Kellogg's own baby, on the other hand, learning to inhibit its emotions, was able to make increasing use of its intelligence. It is the animals' failure to fail, and man's successful failing, which distinguishes them: almost everything he does some of them can do better, and in every species he may see carried to perfection a knack which he has never quite managed to get, or else has inhibited. Man is a gorilla manqué, a lion manqué, an ass manqué, an eagle manqué.... Yet, oddly enough, it is only because he is the gorilla, and the lion, the ass and the eagle, that he can say of them: there, but for law of foetalization, goes Homo sapiens. Animals are not alien beings, but only too good at their jobs to be quite human. Conversely, men are not exclusively human, but only too versatile and too restless to settle down to any one particular animal virtuosity. Accordingly, when a man does over-specialize, when he loses his precious gift of plasticity, he ceases to be the foetalization of an ape -- or, to go back further, of a fox or a wolf, a pig or a sheep, a mule or a turkey-cock \times -and approaches the adult condition in his behaviour and even in his appearance. Once more, our language makes no mistake: there are human sharks and worms and rats. It is altogether appropriate that we should find no incongruity in the talking and clothed animals of the nursery tale -- they wear their waistcoats and bonnets as easily and as gracefully as if they had been born with them on -- and that the animal politicians of the cartoonist should, if anything, carry more conviction than their human prototypes. To the perceptive, lesser creatures really do provide a rough index to the immense variety of human character. On the other hand, as Mr C. S. Lewis tells us, "The beasts are to be understood only in their relation to man.... If Christian cosmology is in any sense (I do not say, in a literal sense) true, then all that exists on our planet is related to man, and even the creatures that were extinct before men existed are then only seen in their true light when they are seen as the unconscious harbingers of man." +

I have already referred to what is, in effect, the most drastic of all the instances of foetalization (to put the broadest construction on that term) which my career can show. If now I surpass the animals, that is only because I have consistently allowed them to surpass me. Throughout my

° Jean Rostand, <u>Adventures Before Birth</u>, p. 101.

• Cf. Mr W. H. Auden's poem 'Eden', in which, after describing the too-early success of the animals, he says --- "finally there came a childish creature On whom the years could model any feature,

And fake with ease a leopard or a dove...."

* W. N., and L. A. Kellogg, <u>The Ape and the Child</u>.



× I am here extending the scope of the word <u>foetalization</u> to include our rejection of <u>all</u> the evolutionary branches which leave the trunk of our ancestral tree.



From Low's <u>Evening Standard</u> Cartoon ---'The Return of Ramsey'.

+ The Problem of Pain, pp. 126, 130. Stockard (The Physical Basis of Personality) has parallel photographs of men suffering from hormone diseases, and of various breeds of dogs: the resemblances are very striking. Old books on character are often illustrated with parallel heads of men and animals, and popular thought has always classified human beings under animal types. Cf. David Katz, Animals and Men: Studies in Comparative Psychology, p. 19. Also men dress as well as act the animal part -- e.g., the Norse berserker (bear-coat); the Bacchic maenad, dressed in pelts; devouring live animals; the contemporary member of the Isawiya, disguised as a lion or wolf or hyena, tearing a live kid to pieces. See Robert Eisler, 'Man into Wolf', Hibbert Journal, Jan., 1946, for a large collection of similar instances of lycanthropy.

vast Life-history, till the last minute of the eleventh hour, I have resisted the temptation to become anything more than cells. I used as deciduous hosts the innumerable bodies which I inhabited, refusing the offer -- renewed every generation -- to become landlord instead of lodger, to grow up to their expertness and complexity --- and their mortality. If now I am human for seventy years, it is because I have been the foetalization of an animal foetus for seven million and more.

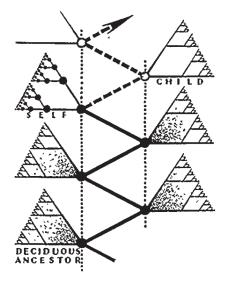
> "All which I took from thee I did but take, Not for thy harms, But just that thou might'st seek it in My arms. All which thy child's mistake Fancies as lost, I have stored for thee at home: Rise, clasp My hand, and come!"

Looking back and looking ahead, I can see that Francis Thompson's famous lines apply as surely to the beginning of my days in this body as to the end --- to the solitary cell fertilized at last for humanity, no less than to the solitary man, fertilized (if I may so put it) for suprahumanity.

16. <u>THE LAW OF DIVARICATION: MY INDIVIDUAL PAST -- POSTNA-</u> <u>TAL 'FOETALIZATION'</u>

After birth, the dangers of specialization do not diminish, or its results become less damaging. A non-vocational, all-round, liberal education, resisting all premature expertness in any one direction, is indispensable.^o Equally essential is the balanced development of aptitudes or powers --- imagination <u>and</u> critical intelligence, scholarship <u>and</u> independent thinking, sensitivity <u>and</u> toughness of mind and body, emotional tenderness <u>and</u> emotional stability, childlike simplicity <u>and</u> plenty of adult good sense, the capacity for wide-eyed wonder <u>and</u> for getting on with the job. Every power must issue in its contrary before the critical point is reached. It goes without saying that none of us is so perfectly balanced. (Indeed, complete refusal to specialize is itself a kind of specialization --- specialization in the classical ideal of the golden mean or 'nothing too much', which should itself be balanced against the romantic ideal of the strenuous, one-pointed, heroic life, powerful because it does not dissipate its energies.)

It is as though we were frightened of being human. The business owns its proprietor; the actor is possessed by his role; the instrument grows an appendage which is pleased to call itself the instrument's user; the book -- <u>experto crede</u>! -- threatens to write its author. Life is easier that way. We like to know exactly where we are with people, to place one another, to know what to expect, to let them know what we expect from them. Our masks are soon grafted on to our faces. 'What is he?' we urgently inquire concerning each new acquaintance, and are vaguely uncomfortable till we can catalogue him, and pin him down in our collection as a good or bad specimen of the medical, or legal, or literary, or commercial family. Ø But to be just a <u>man</u> --- that is the glorious and supremely difficult thing. A man who is (in a manner of speaking) the foetalization of the doctor and the lawyer, the writer and the business man; a man for whom the world of common sense is not yet <u>the</u> world, but only an-



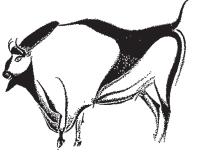
° Intra-specific competition tends to result in over-specialization both amongst animals and men. Just as scarcity of the means of life leads to internecine struggle in the species and the evolution of specialized structures and functions, so the struggle for a living in a laisser faire economy results in premature specialization --- e.g., putting children out to work before they have the rudiments of a general education. "I trusted not mine eyes, and looked and looked again, and said at length: That is an ear, an ear as great as a man! I looked again more closely: and truly beneath the ear something moved, something pitifully small and poor and waste. And, verily, that monstrous ear was borne on a small, thin stalk --- and the stalk was a man! He that peered through a glass might even discern a small, envious face; moreover a little puffed-up soul hung upon the stalk. The people, however, told me that the great ear was not only a man, but a great man, a genius. But I never believed the people when they spake of great men --- and I hold to my belief that he was an inverted cripple which had too little of all things and too much of one thing." Nietzsche, Thus Spake Zarathustra, II. 'Of Redemption'.

ø See D. H. Lawrence's poem 'What Is He?', <u>Pansies</u>, p. 43.

other womb; a man whose present human condition is not much nearer finality than the presomite embryo's. Nevertheless, considering all the facilities for extreme one-sidedness, the surprising thing is, perhaps, that there is not more of it. A beneficent weariness or slackening of the will seems mercifully to intervene. It is as if a warning voice, which throughout our antenatal history has advised us not to become too expert at anything, is still heard in childhood and youth, telling us that too much of a good thing is a bad thing. How often we have in the end to thank our <u>un</u>lucky stars, our bitterest humiliations, our most agonizing thorns in the flesh, our very lethargy and dull-wittedness, for preventing some early success which would have meant stagnation. Nothing succeeds like partial failure. Only that man pushes on who finds the roadside sufficiently uncomfortable. •

One thing he cannot do --- make straight for the ultimate goal. The duality of his nature is such that he must make for a mediate object, and then, before he arrives, before he gets past the fork in the road, be put off that good thing and put on to another good thing which is in some respects its contrary. In this way, by the indirect method, by divarication or dialectic, by the clash of near-opposites, by disappointment after disappointment, by de-bunking after de-bunking, he progresses, he weaves his way. Or, in Hegelian terms, every Gestalt, at first such an improvement upon the last, ends in self-contradiction, points to its contrary, and forces a new departure: thus it is the very nature of the traveller and of the country that he should err. And since it is by being side-tracked that he gets along, the side-tracks are (in a sense, and up to the critical forking) the main road itself. Thus when, having drawn nearer to the main goal, he looks back on his wanderings, he makes the important discovery that though every mediate goal had to be abandoned for a better, it was nevertheless worth making for, and somehow good and necessary. And, looking on ahead, he makes the further discovery that the final goal contains all that the mediate goals promised, but could never give. To miss every objective but the last is to gain them all. Only he is victorious who loses every battle except the culminating one, while doing his level best to win them all in turn.

Hegel's great Phenomenology relieves me of the necessity for multiplying instances of this procedure of success by failure. I will give only one. At five, a boy is commonly adept at make-believe games; at eight he may excel at drawing; at ten handicrafts may claim his undivided attention; and at thirteen music and poetry. Yet such developments are notoriously unsafe guides to his eventual talent: rather they indicate the vigour of his general mental growth through typical stages. 'Fails to fulfil early promise' --- so run our later school-reports. Suddenly, unaccountably, the brilliant child-artist loses most of his skill, and the young manual expert all interest in mechanical things. Many, if not most boys are natural actors, architects, artists, engineers --- for a time. Growing up is failing in each pursuit in turn; and if, much later, success in one or other of these fields is achieved, it is only after an intervening period of frustration and uncertainty. The 'law of the spindle' holds, and the only route to a higher plane of achievement is by way of a lower. Just as I grow from cellhood to babyhood by failing to become one animal exCleverness, as Aldous Huxley warns us (The Perennial Philosophy, p. 163), is all too apt to become "the enemy, a source of spiritual blindness, moral evil and social disaster. At no period in history has cleverness been so highly valued or, in certain directions, so widely and efficiently trained as at the present time. And at no time have intellectual vision and spirituality been less esteemed ... " The trouble with man is not merely that (as Lord Beveridge and others have urged) he has neglected the sciences of man for those of nature, but that he has neglected those aspects of the universe which science is incapable of appreciating. • The entire process may be described by extending to all hierarchical levels Adler's principle of compensation and overcompensation for organ inferiority. The child whose natural feeling of helplessness, added to some peculiarity which emphasizes his fear of failure, leads him to great exertions and success, is only perpetuating a technique in which he has already gained mastery. To put the matter crudely: the boy is the fish's over-compensation for its uterine inferiority as a fish (it was a very poor specimen); the man is the boy's over-compensation for his inferiority at every kind of human skill; the mystic is the man's over-compensation for his miserable failure to be all that a man should be. And, of course, the world is full of toosuccessful fish who are content to remain fish, of splendid boys who will never leave the upper fifth, of men so brilliant that their universe contains nothing greater than man.



An example of Palaeolithic art: a bison in polychrome, painted on the roof of a cave at Altamira: length, 1.5 metres. The extraordinarily able and vigorous art of this age (before language, as Roger Fry speculates, had enabled the artist to break up the object into distinct items like 'leg', 'head', etc.) was followed by the relatively fumbling and uninspired efforts of the Neolithic. It seems that racially no less than individually there are three stages of development --- the primitive, an uncomfortable interim phase as poor in achievement as it is rich in promise, and the cultivated. Cf. Patrick Heron's review, in The New Statesman and Nation, Sept., 17, 1949, of a National Exhibition of Children's Art. Mr Heron points out that "It is apparently normal for young children

pert after another, so I go on from babyhood to manhood by failing -- in spite of my best efforts -- to become one kind of human expert after another. Through his work and still more through his play, the boy grows up by partially and symbolically becoming men of all types. Today it is meccano; yesterday it was gill-slits. Of course the boy is no better engineer now than, a few years back, he was fish. And in that failure lies the promise of a maturity which more than compensates for every youthful inferiority. Not only the best men, but all men, and indeed all creatures, "are moulded out of faults". °

17. THE LAW OF DIVARICATION: MY FUTURE ASCENT

That a man, having achieved birth, schooling, and the character and skills needed to support a family at the appropriate economic level, has done all that can reasonably be expected of him, that he is now at his prime, entitled to rest on his laurels, a success, full-grown, arrived, that there are no tasks of a new order ahead of him --- this is our modern illusion of illusions and heresy of heresies. In fact, he is no more than a foetus, the very embryo of himself; he has travelled no more than half way up the hill, and time is running short. The trouble is that he takes mere manhood far too seriously, mistaking what is only an episode for the entire history, a single milestone for the whole highway. It is true that I know of nothing to prevent him from regarding himself or me as essentially a man --- a creature who has, admittedly, a rather queer past on a lower plane, and certain vague hopes of a future on a higher plane, but still an essentially human being. But neither do I know why he should not look on me as essentially a repulsive fishlike parasite, my belly prolonged into a monstrous blood-sucker which I drive into the living flesh of my victim. Ø And neither can I think of any reason why he should not insist, if it pleases him to do so, that I am, essentially, any one of a million stages of my total history, from a collection of atoms to a star. Nevertheless it would plainly be a more cautious procedure first to review the whole, and only then decide which of the parts, if any, may be reckoned that for which all the rest exist. When in a crowded room it sometimes comes over me, with the force of a sudden revelation, that these beings around me are not so much men, as human activity on the part of something much more than human, a temporary human manifestation of beings who are wildly different from what they seem: here are creatures at once animal and angelic, earthy and stellar, whose present point of contact is a temporary phase which they share. To forget their immense non-humanity is to misapprehend their humanity, and is as silly as supposing that the five minutes, during which you and I are together in a 'bus, is our whole life.

But the point I want to make here concerning the destiny of man is that in essentials it is like his past: the same laws apply, the same dangers lurk, the same safeguards are effective. In particular, every plane below the highest, or every region short of the farthest, holds out its more than specious attractions, its pseudo-finality, its high ideal of expertness, its lop-sided perfection --- and the traveller must turn from them one by Page 518 to express a feeling for colour, design and even form which is remarkably sympathetic to the aesthetic permeating much of the best modern painting.... But the child who is likely to develop into an adult artist is not normal.... Where his playmates happily splash about effortlessly achieving results as pleasing to his sophisticated elders as to himself, such a child is most likely to be already at a stage of uncomfortable artistic self-consciousness." His work is less attractive but more promising.

° Measure for Measure, V. 1.

Nor, as a matter of fact, will man be cheated for long of his ideal realms. When humanism abolishes them in heaven, they reappear on earth as Utopias, apotheoses of man as mere man, located in the ever-receding future. This is only to be expected. The development of every level is pushed to extremes, in the vain attempt to achieve what belongs to a higher level.



ø Well may I consider, with Masefield, repaying to womankind the debt incurred when, as foetus, "all my mouthless body leeched". (See his poem 'C. L. M.')

In a number of his books (e.g., The Source of Civilization, pp. 113 ff., Man the Master, p. 140, The Creed of Christ, p. 12) Mr Gerald Heard has extended the principle of foetalization to the further evolution of man. He writes: "An extended form of consciousness is appearing, a further extension of that retention of foetal characteristics, that power of remaining young and open. It is to this power, in an earlier form, that we owe the fact that we have a civilization at all. It is because 'man is the foetalization of the ape' that we are human and not bestial." But too often "That first trust, and wonder and realization of his own ignorance, and direct poignancy at beauty and suffering --- all that clearness of vision, that single-heartedness, clouds over and corrodes. He fails to remain a child " Cf. Heard's Pain, Sex and Time, p. 13.

one if ever he is to arrive.

The road is turned into a residence. What should be a womb becomes a world. There is no lack of instances. A man ought indeed to love his family, but not inordinately, not to the detriment of wider sympathies, not as a specialist in family love. The lower is always threatening to become its own enemy, by becoming the enemy of the higher. How many of us are diverted into loyalty to one individual at the expense of others, to party at the expense of country, to country at the expense of Humanity, to Humanity at the expense of other species, to the short-term demands of Life at the expense of the planet's resources, to Earth at the expense of other heavenly bodies (as when we deny their life), to the Sun and the firmament of stars at the expense of the Whole (as when we give to them the wonder and worship which belong to God). The blind alleys are innumerable, and few indeed are the men who do not lose themselves in one or another of them --- narrow creeds and sects, -isms and ideologies, panaceas, obsessive enthusiasms and aversions, and anything and everything except Wholeness. Philosophy, science, art, religion --even these at their best, when dissociated, become so many dead ends, specialities, unwholesome by-paths. * But the way out is not the straight middle road which avoids every deviation or excess -- for there is no such road -- but the zigzagging road minus its fringe of dead ends. In other words, it is necessary to change one's mind, to compensate, to divaricate. The phenomenon of 'reaction' is as natural as it is familiar, and it is our saving vice. ° The youth may go too far in his reaction against the politics of his parents and of his own childhood, the adolescent girl against home restrictions, the internationalist against the exclusive patriotism he has just outgrown; but so long as the reaction is itself subject, in its turn, to a new reaction, and does not remain uncompensated, it is the very engine of advance. Every Scylla has its Charybdis, and our business is to use both while avoiding both. Man swings over from classic to romantic modes of thought, from over-cleverness to over-simplicity, from blind faith to blinder scepticism, from pedantic precision to woolly generalization, from legalism to antinomianism, from conventionality to an imperceptive iconoclasm --- yet all is not cancelled out: there is some gain, some progress.

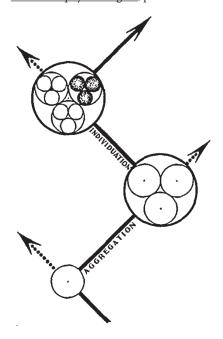
The higher life has its sabre-toothed tigers and its great auks, its parasites, its self-stultifying adepts and monsters of adaptation. Here, just as in the womb, the condition of advance is a stubborn refusal to go any further into the detail of each stage than is necessary to see one to the next stage. The whole territory has to be covered, and the time allowed is enough, provided there are no serious delays. That is to say, the growth of the man to what is above man is necessarily as foreshortened and smudged as the growth of the embryo. The zigzags cannot be straightened out, but they can and must be made fewer, and the route made more direct. Thus, if the saint is lukewarm in his patriotism, if the artist is somewhat lacking in civic sense, if the philosopher cannot afford the time to read his newspaper, these are no accidents arising out of merely human limitations, but instances of a universal procedure. The express train cannot stop to explore every town it runs through, neither may a man's progress be too deliberate. A perfunctory worm and fish * In <u>A New Model of the Universe</u>, P. D. Ouspensky maintained that our grasp of reality suffers from the fact that it is fourfold instead of unitary. Originally one, religion, philosophy, science, and art are now further subdivided into innumerable schools, each of which is apt fondly to imagine that it has the 'truth', the master key.

° Bergson's 'law of dichotomy' records the increasing distinctness and opposition of twin tendencies which are in the beginning united. Thus instinct and intelligence, animals and plants, originally one, diverge increasingly. And his 'law of twofold frenzy' is the demand of each tendency to be pursued to the bitter end. "It is necessary to keep on to the bitter end in one direction, to find out what it will yield: when we can go no further, we turn back, with all we have acquired, to set off in the direction from which we had turned aside.... But the struggle is here only the superficial aspect of an advance." Only thus, by dividing into a pair of opposed trends, is progress possible: the alternation of luxury and asceticism, of conservatism and radicalism, and so on, in history, is not futile. The Two Sources of Morality and Religion, pp. 252 ff; Creative Evolu-<u>tion</u>, p. 122.

and reptile in the womb, the habit of 'skipping' has grown on him, and is prolonged into later life. And it is invaluable, so long as the goal, by embracing all that is foregone <u>en route</u> to it, is a worthy one. \times My thesis is that, just as man's ascetic refusal of 'natural' infrahuman powers was more than rewarded by his eventual assumption of them all 'artificially', as extra-corporeal tools and techniques, so his ascetic refusal of many human and suprahuman powers -- splendid gifts and deep learning and intoxicating delights -- can find in the all-embracingness of the final goal a similar justification. Sir Thomas Browne's notion that it is a waste of time arduously to acquire in this world the knowledge which in the next we shall acquire at once and effortlessly, is thus at once profoundly right and profoundly wrong. It is right inasmuch as all the goods which seemed to be attainable along the road are in fact waiting at the road's end; it is wrong inasmuch as the road itself is the only way to the end of it.

Of the many pairs of alternating tendencies which mark out the upward path, 'individuation' and 'aggregation' are perhaps the most fundamental. Already in biological evolution -- in my double progress towards manhood -- these two are very evident. Individuation -- by which I mean the elaboration of the solitary organism by the development of special structures and functions -- is carried about as far as it will go: it is as if the animal or plant has set before itself the ideal of perfect, selfcontained independence. But meantime the second mode of progress is being tried, and certain less well-equipped individuals have hit upon the method of aggregation --- they combine forces, achieving jointly on a higher plane what they fail to achieve severally on the lower. This time the tendency is for aggregation to be pushed too far, and for individuation, with its differentiation and integration of the new aggregate's parts or organs, to suffer neglect: the organism tends to rely on mere growth, instead of improving the organization of what has already been acquired. Again, some less advanced type breaks away, and goes in for efficiency rather than bulk, for self-improvement rather than new partners in the enterprise, for individuation rather than aggregation. And so the alternating process goes on, from cell to cell-colony, from unsegmented to segmented metazoa, ° from metazoa to simple societies, from simple societies to compound societies. At every stage in the advance there comes a parting of the ways, where choice is between individual improvement and super-individual improvement, and the secret of continued progress is to choose first the one and then the other, and pursue neither too far. The over-aggregation of the labyrinthodont amphibian and the whale is as much a dead end as the over-individuation of the hummingbird; and the turgid, too-centralized business organization is apt to become as inefficient, in its own way, as the one-man-show. Once more, the gain which this level seems to offer is obtainable only at a higher level, which makes no such offer overtly. The oblique approach is the only approach, and the nature of things is such that we can only get what we want by wanting something else, so that the first appears as a by-product of the second. For instance, it is by the aggregation of men in society that each finds his freedom and fulfilment as an individual: so long as he goes on insisting upon his inviolable individuality and resisting the claims of society, he has precious little individuality to preserve.

× "And when you have reached the perfect idea --- the idea of the completely developed or perfect organism --- it is found to be, not the sum or collection or affirmative generalization of all its successive states, but the result of a process of perpetual affirmation and negation, which, whilst it has annulled all the prior stages of its history, at the same time has absorbed and re-affirmed each and all of them in its own perfect unity." John Caird, <u>Introduction to</u> the Philosophy of Religion, p. 220.



° J. B. S. Haldane and Julian Huxley, <u>Ani-mal Biology</u>, p. 236, treat metameric segmentation as a partial form of aggregation. For a fuller treatment of the whole topic, see the table drawn up by these authors, to show how the honours for evolutionary advance are shared out between individuation and aggregation.



Paramoecium, a common unicellular organism having a remarkable degree of organization. It swims about by moving the cilia which cover its body; it has special weapons (trichocysts) which shoot out long threads when the animal is irritated; it has a large mouth by which it feeds, and something like an anus; and in addition it has the ordinary internal structures of a cell. In brief, Paramoecium is a passable imitation, at the cellular level, of a multi-cellular animal. But this precocity lies a long way from the main line of evolutionary advance: it is a much less elaborate type of cell which integrates into a metazoon, and, as such, far surpasses the organization of the paramoecium.

Similarly amongst insects: the way to further individuation lies through aggregation --- thus the cerebral ganglia are better developed in the social insects --- the ants, bees, and wasps --- than in most solitary insects. Integrated to the level of cells and metazoa and man, molecules attain to an individual complexity (and even to individual self-consciousness) which could never be had at the merely molecular level. And the mystic only prolongs this same movement --- by a process of unlimited aggregation, by clasping to his heart the whole earth, the whole universe, he becomes of all men the most individual and independent.

We have come to manhood by a process of alternating aggregation and individuation, and if we are to go any further it will be by the same means. + The general direction of advance is already familiar. We must take on all men and all species, must stretch out to embrace all earth and heaven; but unless these successive aggregates are, each in its turn, individuated -- actively grasped, and organized, and granted by science and art and religion every value that is theirs -- they remain above and beyond us. We grow not merely by stuffing our bellies with food, but also by assimilating and incorporating it. But the first essential is that we shall feel hungry. The fatal thing, at all costs to be avoided, is self-satisfaction, absence of need. How much that man loses who, because he is so good at being human, is never driven to find out what else he is! He gains this world, and loses his soul which belongs to all the worlds. He who is too well-balanced is never upset in the direction of the Whole.

18. THE LAW OF DIVARICATION: MY FUTURE DESCENT

The principle of foetalization, then, applies to three out of the four movements of my history. As for the fourth -- my future descent of the hierarchy -- the temptations to delay, the alternating dead ends, the pseudogoals, are particularly evident here. I have to go down, but the manner of my down-going is in my own hands * I may go off into the by-paths of alcohol or some other drug, of sexual excess, of gluttony, of exhausting games, of too much sleep, of monomania, imbecility, suicide. In none of these (be it noted) is there anything wrong with the underlying intention: the overmastering desire and necessity to realize, by some means or other, my lower levels, are inescapable. The fault lies in taking the wrong turning, or rather in not taking the right turning soon enough, and going straight on to some particular perdition. What is wrong with the sensualist is not that he is rushing downhill altogether too fast, but that he has found a way of halting his descent. He has left the main track, lost speed, and come to rest in a <u>cul-de-sac</u> which stops a long way short of the goal --- the bottom of the hill. The suicide brings himself to a halt somewhat lower down. Only the man who gets safely past not only his humanity and vitality, but his materiality also, arrives at the goal of nothingness whose correlate is his other goal of allness. "We have to sink back into the darkness and the elemental consciousness of the blood. And from this rise again. But there is no rising until the bath of darkness and extinction is accomplished." ° Merely to die in the ordinary sense is not enough. To redeem my body from death, it is necessary to die the

+ Let me give an example. We take too much for granted the significant and curious fact that one man may represent many (many constituents, subjects, church or trade-union members, professional colleagues, etc.) and represent them so effectually that, for certain purposes, he may be said to be the persons he represents. (Appropriately, the feudal lord takes the name of his fief, the bishop the name of his see, and, sometimes the king the name of his realm.) All social organization is based upon the ability of the individual to 'grow' thus, to take on others, to aggregate. But the representative of men is only effectual in so far as he is also highly individuated; mere size, mere backing, is far from being enough.

Rilke, particularly in the third of his <u>Duino Elegies</u>, eloquently describes parts of this descent:

"Loved his interior world, his interior jungle,

that primal forest within, on whose mute overthrownness,

light-green, his heart stood. Loved. Left it, continued

out through his own roots into violent beginning

where his tiny birth was already outlived. Descended,

lovingly, into the older blood, the ravines where Frightfulness lurked, still gorged with his fathers...."

* Indeed, according to the Tibetan Book of the Dead, the dying man is beset with greater temptations than at any other time in his life: he must remain clearly conscious till the last moment, avoiding attachment to his private self, if he is to escape from the round of births and deaths. "Why do you stay here and live this mean moiling life, when a glorious existence is possible for you? Those same stars twinkle over other fields than these. But how to come out of this condition and actually migrate thither? All that he could think of was to practise some new austerity, to let his mind descend into his body and redeem it, and treat himself with everincreasing respect." Thoreau, Walden, 'Higher Laws'.

°D. H. Lawrence, <u>Fantasia of the Uncon-</u><u>scious</u>, XV. To Lawrence the "dark otherness" was intensely real and intensely mysterious, and one way to direct experience of it was through sex, leading to a "blind and unconscious" reunion with the divine ground of the universe. Light, vision, science, clear knowledge, must give way to darkness, touch, pre-intellectual experience of the blood and the flesh. "Somehow, that which is physic --- non-human in humanity, is more interesting to me than the old-fashioned human element,.... I death of all its levels. And to do so intentionally, now. I am in somewhat of a hurry, therefore: the road is a long one, and I cannot afford to be sidetracked.

The fourth road, like the other three, is a zigzag, prolonged at each turn into a blind alley. Consequently the descent into this hell is by no means so easy as Virgil imagined. For example, reacting against conventional sexual inhibitions, a man finds in sexual abandon not merely sensual pleasure, but also a way to hitherto unexplored depths of his personality; he lets himself go, escaping from a tyrannous and superficial intellect, from a calculating, censorious, highly individualized and exclusive phase of the self; into a freer, more primitive, less anxious phase. But sooner or later he finds that he has been sidetracked; he can get no further till he returns to the main road and changes direction. And then he is liable to over-compensate, and find himself in some bloodless and puritanical blind alley on the opposite side. The reaction, carried too far, is just as delaying as the vice it corrects. Fasting may arrest my downgoing more than gluttony; self-denial made an end in itself can be more dangerous than self-indulgence; extreme humility is notoriously liable to issue in the pride of being almost nothing. •

Indeed, with so many snares and pitfalls lining the downward road, the wonder is that we ever get to the end of it. \oplus Yet, in point of fact, we are always there, and our descent is only the gradual realization of the nothingness which makes that (and every other) realization possible --- our hollowness is the prior condition of our having any content whatever. Just as we could never begin to climb the foothills of the utmost height of being if we were not, in reality, up there all the while, so we could never seek the opposite abyss of nothingness if we had ever left it by a hair's breadth. Not even the damned can escape "the blessedness of being little". ×

don't so much care about what the woman <u>feels</u> --- in the ordinary usage of the word. That presumes an <u>ego</u> to feel with. I only care about what a woman <u>is</u> --- what she IS --- in-humanly, physiologically, materially...." (Letter to David Garnett, June 5th, 1914, in <u>The Letters of D. H. Lawrence</u>, Introduction by Aldous Huxley.)

• The modes of our descensus ad inferos, and the blind alleys which bring it to a halt, are very numerous. Some further examples are the revolutionary's descent (in his interpretation of history, his own sympathies, and his own status) to the level of the proletariat (cf. Maritain, True Humanism, p. 44); the poet's love for the poor and outcast (e.g., Le Gallienne's 'The Second Crucifixion'); the scientist's reference downwards to the physical substratum, as the ultimate explanation of all phenomena; the modern insistence of many philosophers upon minute analysis ⊕ "Be careful, then, and be gentle about death.

For it is hard to die, it is difficult to go through

the door, even when it opens.

For the soul has a long, long journey after death

to the sweet home of pure oblivion." D. H. Lawrence, 'All Souls' Day'.

× <u>Henry VIII</u>, IV. 2.

CHAPTER XX

AUTOBIOGRAPHICAL --- THE COSMIC PHASE

I died a mineral and became a plant. I died as plant and rose an animal. I died as animal and I was man. Why should I fear? When was I less by dying? Yet once more I shall die as man, to soar With the blessed angels; but even from angelhood I must pass on. All except God perishes.

Jalal-uddin Rumi.

I must Once in a month recount what thou hast been, Which thou forget'st.

The Tempest, I. 2.

For first we are a rude mass, and in the rank of creatures which only are, and have a dull kind of being, not yet privileged with life, or preferred to sense or reason; next we live the life of Plants, the life of Animals, the life of Men, and at last the life of Spirits, running on in one mysterious nature those five kinds of existences, which comprehend the creatures, not only of the World, but of the Universe.

Sir Thomas Browne, Religio Medici, I. 34.

We are unnaturally resisting our connection with the cosmos, with the world, with mankind, with the nation, with the family. All these connections are, in the Apocalypse, anathema, and they are anathema to us. We <u>cannot bear connection</u>. That is our malady. We <u>must</u> break away, and be isolate. We call that being free, being individual..... We ought to dance with rapture that we should be alive and in the flesh, and part of the living, incarnate cosmos. I am part of the sun as my eye is part of me. That I am part of the earth my feet know perfectly, and my blood is part of the sea. My soul knows that I am part of the human race, my soul is an organic part of the great human soul, as my spirit is part of my nation. In my own very self, I am part of my family..... I am part of the great whole, and I can never escape. But I <u>can</u> deny my connections, break them, and become a fragment. Then I am wretched. What we want is to destroy our false, inorganic connections, especially those related to money, and re-establish the living organic connections with the cosmos, the sun and earth, with mankind and nation and family. Start with the sun, and the rest will slowly, slowly happen.

D. H. Lawrence, <u>Apocalypse</u>, pp. 223-4. (These are the last words of Lawrence's last work.)

Our individual presence lies between the eternal past and the eternal future; and this eternity has, as it were, to be re-interpreted by each individual if it is to yield its creative energy. In this process of re-interpretation, each individual has to find his own relation to the eternal laws according to his individual capacity. This puts quite a new and unique responsibility on each individual who, forced by his own experience, finds himself the interpreter of the eternal images, the archetypes. Unless his interpretation does justice to the substance of the archetypal images, their creative energy is lost, and with it the creative energy of man. If, on the other hand, the interpretation is adequate, then our conscious mind, our ego, is again brought into communication with our roots in the non-ego; our present is linked to the past, and the chain of existence is kept unbroken. The individual no longer feels isolated, and his existence gains a new meaning as the particular actualization of an eternal and supra-individual process of life."

Dr Gerhard Adler, Studies in Analytical Psychology, pp. 180-1.

If thou dost draw aside the veils of the stars and the spheres, thou wilt see all to be one with the Essence of thine own pure soul.

Attar, Jawhar Al-Dhat (Margaret Smith, The Persian Mystics: Attar, p. 94.)

The inner clarification and elaboration of man's consciousness ought ... to help him to burst through the outer strata and penetrate into the depths of time, a penetration that is really into the depths of his own nature. Only deep down in his own self can man really discover the secrets of time; for these, far from being something superficial and alien, something imposed and forced upon him from without, represent on the contrary the deepest and most mysterious strata implicit in himself.

Berdyaev, The Meaning of History, p. 23.

By collecting the thoughts one can fly and will be born in Heaven. Heaven is not in the wide blue sky, but the place where the body is made in the house of the creative.

The Secret of the Golden Flower (Wilhelm and Jung), p. 25.

The world is at once a passing shadow and a final fact. The shadow is passing into the fact, so as to be constitutive of it; and yet the fact is prior to the shadow. There is a kingdom of heaven prior to the actual passage of actual things, and there is the same kingdom finding its completion through the accomplishment of this passage.

A. N. Whitehead, <u>Religion in the Making</u>, p. 87.

1. THE PROVISIONAL CHART OF MY FOURFOLD COSMIC HISTORY

I stand where the Poet stood, on Good Friday in the year 1300, "in the midway of this our mortal life", intent on what lies beyond. Already I have described in outline, or implied where I have not described, the total view as I see it. My crude chart -- provisional, subject to endless correction, making short work (as early maps must) of distant terra incognita -- is not to be taken religiously. * The point of it is that half a map is better than no map at all, and that man does not begin to find himself till he begins to find out where he is in space and time, till he tries his hand at map-making. It is a pity to be lost in the world. Two kinds of men are lost --- those who, lacking all orientation, just drift, and those who, imagining they have had issued to them an infallible admiralty chart of the universe, are blind to every feature that is not marked on it. On the other hand, the man who (though woefully ignorant and perplexed) carries in his hand a make-shift sketch-map -- sufficiently definite to set a course by, and sufficiently indefinite to demand a sharp look-out, \times is neither lost nor at a loss. He has a task --- I would say an incomparable, a life-giving (and certainly a life-long) task.

I stand in the midway of <u>all</u> my mortal lives, having as many deaths ahead of me as births behind me, having as far to fall as I have already climbed, and as far to climb as I have already fallen. ^o The earlier a character arrives the later it goes. A little time on both sides of the Now brings me to my human frontier, rather more brings me to the limits of my vital and terrestrial career, more still to my solar and galactic boundaries. Ultimately, it seems, I emerged from the void and shall return to the void. ---- Such, stripped of all detail, is my autobiography so far as I can now discern it.

In the two preceding chapters I have discussed the human and vital phases of this history: it remains to say something about the remoter phases --- terrestrial, solar, and galactic.

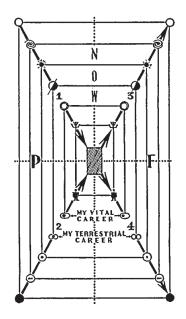
(i) From the vital to the terrestrial phase

My vital boundaries are, like my human, fourfold. (1) The more or less homogeneous, primitive Earth gradually became differentiated, developed new internal distinctions, and the biosphere or Life appeared; at the same time (2) some of Earth's molecules integrated, overcoming stage by stage old external distinctions, and cells appeared; but in the aged Earth all this is reversed ---- (3) the distinction between Life and the other geospheres is gradually lost, while (4) Life's remaining cells break down to mere molecules. In the beginning there is hierarchical convergence -- a division of one superior with a unification of many inferiors -- and in the end there is hierarchical divergence, and something like the <u>status quo</u> is restored. The essential thing is to avoid the fallacy of simple genesis and simple decline. In particular, the integrative chemical and biochemical processes out of which the cell arises cannot be understood in abstraction from their counterpart --- the differentiating planetary and geological processes out of which Life arises. To look, as we nearly * E. Graham Howe (<u>The Triumphant</u> <u>Spirit</u>, p. 90) has what is, in effect, the same quadripartite chart: he sees creation as the breaking of a coin into four parts which are cast in four directions, heavenwards to right and left, and earthwards to right and left.

As an example of further lines of research which the hierarchical schema of this book (and of this chapter in particular) opens up, I may mention the problem: what, if any, is the ratio between my spatial and my temporal dimensions level by level? It is not sufficient to say: the bigger I am, the longer my expectation of life and the life I have already lived. I believe it may be possible to state this relationship mathematically, but I cannot pursue the subject here.

× As J. Bronowski puts it, science seeks in each generation, not the theory that is true, but the theory that is true enough. <u>The Listener</u>, Oct. 27, 1949.

° Cf. Plato, <u>Republic</u>, 614 --- the story of Er, who found the world beyond divided into four roads, one by which souls come up out of the earth and another by which they come down from heaven, a third leading back to heaven, and a fourth leading back to the underworld. My aim is to rehabilitate this myth in contemporary language, and to make clear that each of us has to take all four roads.



always do, in the inferior series alone -- in the realm of chemistry and physics -- for the source of life, is to look in vain. Life springs from innumerable 'seeds' called molecules, and at the same time from a single 'Seed' called a planet; and the maturing of the first by integration, and of the second by differentiation, are one maturing. In other words, we may accept the text "And God said, Let the earth bring forth the living creature after his kind", ° provided we give to the word <u>earth</u> not one but two senses -- a superior and an inferior, a macroscopic and a microscopic.

According to the alchemist Basil Valentine, "The quickening power of the earth produces all things that grow from it, and he who says that the earth has no life is flatly contradicted by the most ordinary facts..... For all herbs, trees and roots, and all metals and minerals, receive their growth and nutriment from the spirit of the earth, which is the spirit of life. This spirit is itself fed by the stars... \times How far Fechner was aware of this ancient tradition, I do not know, but, almost alone in his time, he bore eloquent witness to the macroscopic origin of life: his account of evolution begins with a planet which develops a hierarchy of substructures, ranging from earth and water and air down to individual organisms and their organs. * More recently, L. J. Henderson + and others have brought together many considerations which go to show that vitality is macroscopic as well as microscopic, that it is a function of ocean and atmosphere and soil and planetary conditions in general (as these converge upon the biosphere) no less than a function of molecules and particles and cells. It is true that Henderson speaks of the mutual fitness of the environment and the organism, where I would speak of the indivisibility of the superior and inferior members of a symmetrical pair, nevertheless the effect of his argument is to show the absurdity of regarding living creatures as invaders or parasites upon a dead and neutral (if not actually hostile) ball of rock. It is true, also, that he finds the two evolutionary processes -- big-scale or planetary, small-scale or biochemical and biological -- to result "independently" ϕ (sic) in two complementary fitnesses; but "The fitness of the environment is one part of a reciprocal relationship of which the fitness of the organism is the other. This relationship is completely and perfectly reciprocal." Evolution is twofold. In the language of this book, my vital-terrestrial history is one process having two aspects --- a descending and an ascending.

It is time which forces the observer to abandon his abstractions. Θ He may succeed in looking upon present-day creatures as self-contained instead of Earth-contained, but once he pushes his inquiry far enough back into the past and forward into the future, biology and the sciences of Earth overlap. The remoter Life is evidently geospheric, --- a fact which we acknowledge whenever we identify and date strata by their fossils, and fossils by their strata.

(ii) From the terrestrial to the solar phase

As Humanity is to men, so is Life to cells and Earth to molecules. In the cooler stars a few of the simpler chemical compounds are formed, but the real scene of molecular evolution is the planet. Here temperaWilliam Watson ('Ode on the Coronation of Edward VII') notes the duality of our source:

"Time, and the ocean, and some fostering star, In high cabal have made us what we are"

° Gen. I. 24. Cf. Timaeus, 41, where Plato's Demiurge addresses the heavenly bodies and other gods thus: "If these (mortal creatures) be not born, the Heaven will be imperfect; for it will not contain all the kinds of living being, as it must if it is to be perfect and complete. But if I myself gave them birth and life, they would be equal to gods. In order, then, that mortal things may exist and this All may be truly all, turn according to your own nature to the making of living creatures, imitating my power in generating you.... Bring them to birth, feed them, and cause them to grow; and when they fail, receive them back again." -- A passage which summarizes the upper half of the fourfold schema. × The Twelve Keys', The Hermetic Museum, i. pp. 333-4.

* <u>Ueber die Seelenfrage</u>

+ The Fitness of the Environment. Henderson's work was anticipated in the once famous treatises of Paley and Whewell. Paley was immensely impressed by the mutual harmonies of the living and the non-living, and pays particular attention to the life-supporting properties of water. Whewell developed this theme with great thoroughness, showing how no fewer than seven unique properties of water are favourable to life; moreover, like Henderson, he goes on to draw similar conclusions with regard to carbon, hydrogen, and oxygen. The environment, he concludes, is prepared in advance for the organism. See William Paley, Natural Theology, William Whewell, Astronomy and General Physics considered with reference to Natural Theology, William Prout, Chemistry, Meteorology and the Function of Digestion, and Frederic Wood Jones, Design and Purpose. φ Henderson, <u>Op. cit</u>., p. 300. But a little earlier in the same book (pp. 278, ff.) Henderson describes biological and cosmic evolution as a single orderly development. Vitalist thinkers, on the other hand, try to distinguish sharply between the living and the non-living. H. Wildon Carr for instance (Changing Backgrounds in Religion an Ethics, pp. 43 ff.) goes so far as to say that there is "nothing in common" between cosmic and vital evolution: they seem "completely independent". Ascending and descending movements are discerned, but the first is 'vital' and the second 'material' --- as if anabolism could dispense with katabolism, or the organic with the inorganic!

ο Death is the progressive discovery of what really lives. It is that saving realism which shatters the illusion of our wholeness. It establishes by hierarchical stages tures become low enough, here the motion of individual particles is sufficiently subdued, to allow the formation of very complex substances. Once more the condition of the synthesis of the lower units is the analysis of the higher unit: the progressive sorting of the planetary material into geospheres ° with their many subordinate layers and interfaces, gives chemical evolution its chance. Above all, there is elaborated that great biospheric interface where the solid and liquid and gaseous 'elements' meet, and the stage is set for the long evolutionary process from Earth-molecules to Life-cells.

A number of alternative hypotheses have been drawn up in modern times, concerning the origin of the Earth and the other planets. There is the Nebular Hypothesis of Laplace, according to which the solar system began as a rotating gaseous disc which eventually contracted, leaving behind a series of rings (tide-marks, so to speak) each of which gradually condensed into a planet. There is the Planetesimal Theory of Chamberlin and Moulton ×, which supposes that some outside celestial body once passed so near to the sun as to pull out from it two jets of matter: in this matter nuclei are formed, the larger of which gradually pick up the smaller (planetesimals), so growing to planetary dimensions by accretion. There is Jeans' Theory which, like the last, supposes the planets to originate from a tide raised on the sun by a passing star: * the ejected filament of gaseous matter was cigar-shaped, and condensed by gravitation into planets which still reflect, in their respective masses, that original configuration. There are the Capture theory of See and the Collision Theory of Jeffreys. There is the Double-Star Theory, to which R. A. Lyttleton and Fred Boyle, and several other British mathematicians and astro-physicists, have contributed. According to this hypothesis, the sun was originally a double star --- a system of two relatively close stars, pursuing orbits about each other --- and one member of this system flew to pieces as a result of its own rotation, leaving around our sun a residue of debris which eventually became the planets. + There are numerous additional theories, both outmoded and current, but all may (from the point of view of this inquiry) be subsumed under two heads: (a) those which attribute the planetary system chiefly to outside influences brought to bear upon the original sun, and (b) those which attribute it chiefly to the internal development of the original sun itself, whether as a single or a double star. † At one extreme are the hypotheses which credit the sun with practically no share in the formation of the planets, and at the other the hypotheses which credit the sun with practically the entire work. Fortunately it is unnecessary for me to go so far beyond my competence as to choose between these alternatives: it is sufficient that I take as a reasonable hypothesis that the original sun or sun-system developed, some thousands of millions of years ago, into our solar system (or Sun, as I call it), but the part which other stars (and, in particular, one other star) played in this development may have been very great or very small. In short, while the Earth's derivation from the Sun is not quite as certain as its inferior counterpart --- the molecule's derivation from the atom --- it is extremely likely. And that degree of probability is as much as can be expected.

the conditions of immortality. "Thus will I myself to die", says Nietzsche's Zarathustra of one of these stages, "I will to become earth again that I may have rest in Her which bore me.." And Miguel de Unamuno:

"If man wants to die, he is longing for the body of Mother Earth."

° Not only is this sorting the prerequisite of dawning Life, but a deeper and more thorough sorting is the prerequisite of a developed, intelligent Life. In a thoroughly mixed-up state, the geological materials of the planet would be practically useless to man, who could never have discovered the existence -- much less the value -- of metals, clay, stone, and so on. Even as things are, there is discernible a tendency for civilization to thrive upon secondary geological formations, rather than upon the relatively undifferentiated primary formations. Cf. Gregory, <u>The Making of the Earth</u>, pp. 92 ff.

× T.C. Chamberlin, <u>The Origin of the</u> <u>Earth; The Two Solar Families: the Sun's</u> <u>Children</u>.

* Jeans' view has been criticized by H. N. Russell, on the grounds that the orbits of the planets are too great to be accounted for on the tidal-action theory: according to Russell, these orbits cannot far exceed the minimum distance between the intruding star and the sun; and this distance must have been very small.

+ Some points in favour of this theory are (a) that double stars are almost as common as single stars, (b) that the explosion of stars -- supernovae -- is observed to happen, (c) that some marked discrepancies between the relative proportions of the chemical constituents of the planets on the one hand, and the sun on the other, point to separate origins.

† It is tempting to compare these rival views of celestial reproduction with rival views of biological reproduction --- with the primitive view which does not recognize fatherhood at all, or, going to the opposite extreme, looks on the mother as a mere receptacle or garden-plot for the father's seed, and the modern view which divides the honours more equitably. But in fact there is no reason to expect much resemblance between these two levels of reproduction. On the face of the matter, 'parthenogenesis' seems very appropriate to celestial bodies, so long as we do not imagine any star to be, at any stage, unaffected by all external influence.

The manner and date of the planet's dying back into the Sun are at least as uncertain as the manner and date of her birth. It may be doubtful whether her death will be a lingering one due to a gradual increase, or decline, in the solar radiation; or a sudden one due to some spectacular commotion; but at least death of some kind is practically certain. All, or nearly all, that now differentiates the terrestrial -- alike in its superior and inferior aspects -- from the solar, is destined to pass away. * And it is not man who knows this, but a planet.

(iii) The solar phase

The history of a star and of its atoms are not two histories, but two aspects of a single history. In so far as this book is concerned with details, they have been discussed in earlier chapters. Here it is enough to bear in mind that, as atoms, I derive from and inalienably belong to the Sun, in just the same way that, as molecules, I derive from and inalienably belong to Earth. The solar atom-factory (if I may so describe it) has to be in full production for ages before its terrestrial branch -- the molecule-factory -- can be started up; and there is another long but necessary delay before its vital sub-branch, or cell-factory, comes into production: that is to say, the heavy or basic industry of the hierarchy is the prerequisite of its light industry, and its light industry of the finished consumer goods, in which the meaning of the whole venture at last becomes apparent. If I ask when an article was made, I must make clear which phase of its manufacture interests me. So it is with myself. As terrestrial-molecular, I am old; as solar-atomic, very old indeed. And I take it that (somewhat as the finishing touches of a utensil soon wear off, while the basic material outlasts all else) my solar-atomic phase is likely to persist long after almost all traces of my terrestrial-molecular phase have disappeared. \oplus 'Easy come, easy go.' Boehme correctly calls us "children of the stars and elements", × and, as such, our career, whether we look back or ahead, is in every sense astronomical.

(iv) The galactic phase

In fact, of course, it is more than solar-atomic. Browne ° is certainly right in declaring that there is something in us which was before the elements, and owes no homage to the Sun. That we have a galactic phase, and even a pre-galactic, extending in time and space far beyond the limits of our solar phase, is clearly indicated by modern science. (For instance, one famous hypothesis postulates a primeval gas, uniformly distributed and extremely tenuous. Somehow or somewhere a disturbance occurs. It spreads; condensation, due to gravity, begins, and with it rotation. The mass of the resulting body is determined by its tenuousness: the rarer the gas the greater is the minimum mass which the body needs for survival as a gravitationally stable unit. In fact, a kind of struggle for existence is initiated, in the course of which the bigger and better-adapted rotating bodies absorb the smaller and less well-adapted. It is supposed that by such means the cosmos resolves itself into thousands of millions of globular nebulae consisting of widely scattered electrons and protons, and each nebula is so gigantic that it contains the makings of thousands

* "It is fair to say that we all have our infinite identity in the sun. That in the rush and swirl of death we pass through fiery ways to the same sun.... The sun is the centre of our infinite oneing in death... and in that great central station of travel, the sun, we meet and mingle and change trains for the stars." D.H. Lawrence, <u>Fantasia of the</u> <u>Unconscious</u>, XIV. Cf. his poem 'At Last -- '(Pansies, p. 105):

"In death, the atom takes us up and the suns."

And 'Aristocracy of the Sun' (p. 119):

"I am that I am

from the sun,

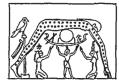
and people are not my measure." Lawrence's works have many such passages, and their general intention is only confirmed by the science which he repudiated: the scientist exposes the anatomy, and the poet thrills to the life. What has happened is the key to what will happen. The Doom or Weird of the Scandanavian gods of heaven and earth had its beginnings in the remote past, when the gods broke their oaths. Before the end, the Fimbul winter, with its three years of wind and frost and snow, sets in, the awful Fenris wolf breaks lose, and the sun is swallowed up. (See J. A. MacCulloch, The Celtic and Scandanavian Religions, p. 164).

⊕ All the things of time wear out in time", says Maritain. (True <u>Humanism</u>, p. 239) But, it must be added, the more recent things wear out soonest. As Kathleen Raine so economically puts it: "Only my dust is never laid" ('Dust', in The <u>Pythoness and Other Poems</u>)

The ancients who connected the metals with various parts of the solar system (as iron with Mars, lead with Saturn, tin with Jupiter, quicksilver with Mercury) did at least have a lively sense of the cosmic origin and bearing of terrestrial things. They knew too little to get the details right; we know too much to see the whole.

× Confessions, p. 84.

° Religio Medici, II. 12.



The Egyptian sky-goddess -- star-spangled Nut -- gave birth to the sun



A sequence of types of nebulae; increasing age is marked (it would seem) by flattening, due to increasing speed of rotation. The nebulae are viewed edge-on. of millions of suns. As the nebula shrinks it spins faster and flattens, and its outer material begins to repeat history, and condense into distinct masses which are primitive stars --- the stars in which the electrons and protons of the galaxy are destined to be worked up into atoms of many grades. +) There are many modern cosmogonies -- blended variously out of observation, calculation, and speculation -- and it would be unwise to think of any of them as much more than a platonic 'likely story'. Happily, the schema of my fourfold history commits me to none of them. All I ask is a uniform substratum which develops the twin aspects of whole and part --- a whole which proceeds to divide as its parts unite. + Such, at any rate, is <u>my</u> likely story.

But what is the fate of the galaxies, of the entire physical world? From the earliest times to the present day there have been two contrasting opinions --- one attributing to the universe beginning and an ending in time \dagger , and the other denying that there are any such boundaries. ϕ Generally speaking, those cosmologies which credit the world with an infinite past are equally generous as to the future, and those which assert a beginning assert also an end. (A familiar compromise is a finite worldhistory bounded before and after by chaos, a waste without form and void; but since it is, to say the least, doubtful whether the uniform can be said to exist through time, this third view must be assimilated to the second view of the universe as finite in time.) The most notable protagonist of the eternal cosmos was Aristotle °, and one of his criticisms of Plato is that he taught that the world "had a beginning". The Epicureans, on the other hand, held that the earth and the heavens are of finite duration, and this view found favour with Christian philosophers (in spite of their reverence for Aristotle) since it was, apparently, a revealed truth*; moreover (some argued) the finiteness of creation is necessary to its order --- an infinity of terms cannot be ordered. And modern science, in general, is no less unfriendly to the notion of an endless universal history. Certainly this galaxy, and every other galaxy, is doomed. "With universes as with mortals, the only possible life is progress to the grave."× The "main process" of the cosmos is the transformation of energy of high availability (in the nuclei of the stars' atoms) into unavailable heat energy, by radiation. The Second Law of Thermodynamics is, it seems, inescapable. However successfully the living may take advantage of the statistical nature of this law, and augment the availability of energy here and there in the universe, they can only do so at the cost of decreasing availability elsewhere. Evolutionary advance only hastens the general disorganization, which is bound to drag life down in the end. Nothing can seriously delay the increase of entropy; and the end of all things -- our modern equivalent of the Fimbul winter -- is the 'heat-death' of the universe, when no energy is concentrated anywhere. ⊗ When at last, says Eddington, * the universe "again reaches undifferentiated sameness, that is the end of the physical universe." Time's arrow (whose direction was given by increasing entropy) does not know which way to point; nothing ever happens; time has a stop. Nor does this prospect appal Eddington, • who feels "more content that the universe should accomplish some great scheme of evolution and ... lapse back into chaotic changelessness, than that its + Of the Miltonic cosmology, Denis Saurat writes: "Being is thus organized from God to matter, by the retraction of God, and from matter to God by the evolution of the latent divine powers of matter." (Milton, Man and Thinker, p. 116) I add that each man is, as man, at the point where these two lines of process bisect each other. † "All is mortal in nature", says Touchstone, in As You Like It (II. 4). God, according to Mr C. S. Lewis, desires neither races nor worlds to live for ever. (Out of the Silent Planet, pp. 139, 155.) For the Christian, God's kingdom is outside time, though it is prepared in time. (Cf. Maritain, True Humanism, pp. 93-4.)

 ϕ These two views are not necessarily incompatible. For example, there is the theory of Milne which makes creation infinitely remote in 'ephemeral time', but finitely remote in 'absolute time'.

° Cf. Marcus Aurelius, <u>Meditations</u>, II. 12. * According to St Bonaventura, it is at once incompatible with God's perfection, and repugnant to the nature of created things, that they should be infinite. For God can only create an orderly universe, and order supposes number and number supposes measure. Moreover the order of objects is only intelligible if their relations are finite in number. Similarly, the principle that an infinity of terms cannot be ordered ensures that the world is not eternal. All order has beginning, middle, and end. See Etienne Gilson, <u>The Philosophy of St</u> <u>Bonaventura</u>, pp. 170-1, 191

× Jeans, <u>The.Universe Around Us</u>, p.280; <u>The New Background of Science</u>, pp. 267 ff.

⊗ Professor Tolman has maintained that a universe expanding or contracting at a finite rate may, under certain conditions, do so reversibly, without tending to an ultimate heat-death: there is, perhaps, a tiny loophole of escape.

• See The Expanding Universe, II. 6, and The Nature of the Physical World, IV. Eddington was well aware of certain unsatisfactory features of the theory of thermodynamic degeneration; in particular he was not at all happy about "the naive theological doctrine which (suitably disguised) is at present to be found in every text-book of thermodynamics, namely that some billions of years ago God wound up the material universe and has left it to chance ever since." This is, he adds, quite incredible. "As a scientist I simply do not believe that the present order of things started off with a bang; unscientifically I feel equally unwilling to accept the implied discontinuity in the divine nature." Here he agrees with Dr Hoyle, who points out that the "big bang hypothesis" is "an irrational process that cannot be described in scientific terms", and moreover "in the philosophical sense a distinctly unsatisfactory notion, since it puts the basic assumption out of

purpose should be banalized by continual repetition". °

But the opposite school of thought -- heir to Aristotle and Marcus Aurelius -- is by no means dead: indeed it flourishes. There is, for example, the hypothesis, proposed by Hoyle, Bondi, and Gold, of Continuous Creation, according to which the uniform gaseous substratum, of which all the galaxies are condensations, is inexhaustible, and new galaxies are always in the making. Now it is generally agreed that the universe is expanding -- the distances between the galaxies, but not the galaxies themselves, are growing at a fabulous rate -- and, on most theories, this expansion can only mean that the density of the background material increases as we go back in time, and decreases as we go forward. In fact, however, observation does not support this view, for the mean densities of even the maturest galaxies indicate that they are condensations of material not much denser than the present substratum. The Continuous Creation theory surmounts this difficulty by supposing the background material to be self-replenishing, so that, in spite of the expansion of the universe, its density remains constant: or rather, this expansion is itself the consequence of the outward pressure exerted by the new matter which is all the while being created throughout space. According to this theory, the universe has an infinite volume, an infinite past, and an infinite future. Though each particular item -- planet, star, and galaxy -- has its term of years, the whole system goes on interminably, for new galaxies and stars are always emerging from the miraculously fecund substratum, to replace the old. And so there is no universal thermodynamic degeneration: the physical universe is not ageing, but renews its youth for ever and ever.

I suspect that, so long as science and speculation survive, there will always be someone to put the case for the infinite universe, and someone to refute him; for this is hardly a question which empirical observation is capable of settling once and for all. And I strongly suspect that, in the last resort, the two doctrines are not incompatible. + For the noteworthy feature of the Continuous Creation theory is that it holds nothing to be immortal except the substratum on the one hand, and the cosmos on the other; and the noteworthy feature of the Heat-death theory is that it is perfectly consonant with the doctrine of the timeless Whole-Centre. Neither is, ultimately and necessarily, at variance with the thesis of this book --- I mean the thesis that, at the upper and lower extremities of the hierarchy, time itself changes its character, and distinctions which are properly drawn, at other levels, between finite and infinite time, lose their meaning. I have already sought to show that the ascent (or rather the ascent-descent) of the hierarchy involves the progressive overcoming of crude temporal distinctions, till at the summit (with the base) there is no more time as such: it is as if the ultimate observer makes so free with time that he is free of time. At this level each moment alike is the Central Now, in which every other moment is regionally present (that is to say, present from its Then, with such content and qualities as are appropriate to its range); and it is equally permissible and equally inadequate to describe the observer's experience as continuous creation

sight, where it can never be challenged by a direct appeal to observation."

° It is very necessary to distinguish between the biologist's organization of vital structures and functions, and the physicist's organization of energy. Thus, while I say that the living Sun (solar system) of today is more organized than in its 'dead' original state, its history, from the physicist's point of view, is one of steady degeneration --- of energy becoming less and less available. For a time, the one kind of organization advances while the other falls away, but it is dragged down in the end --- unless something like continuous creation intervenes: and even in that case there is no hope for anything less than the totality. Cf. Bergson, Creative Evolution, pp. 256 ff., Joseph Needham, Time the Refreshing River, pp. 213 ff., H. Levy, Modern Science, p. 203.

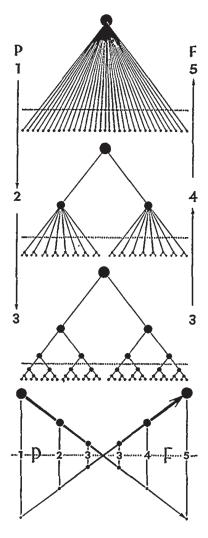
+ It is not so much a case of truth and error, as of elsewhereness: we give up the idea of a creator God at the summit of the hierarchy --- and find instead the divine progenitive substratum at the base; we abandon the idea of creation at the beginning of time and judgement at the end --and find both Now. The nature of things is such that, directly we see one aspect clearly, it refers away from itself to another. and primal creation; as of infinite duration, and of finite duration, and instantaneous; as temporal and non-temporal. Here all our categories fail. So long as we insist on extrapolating the curve of the part as far as the Whole, the Whole escapes us utterly.

(v) <u>Summary</u>

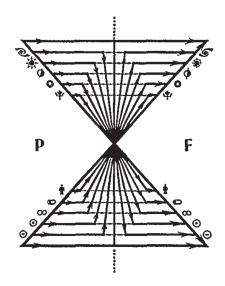
In summing up these phases of cosmic history, I revert to the metaphorical language of Chapter XIV. (1) The hierarchy may be described as a business which opens with a proprietor and a staff of menials. (2) Some of these earn promotion to the next trade, which is administered by a new class of high officials deputizing for the proprietor. (3) Promotions from below to still higher rank require the appointment of further grades of supervising officials, in accordance with the rule of symmetry --- the lower the menial the higher his supervisor. And this goes on till the gap between supervising officials and supervised staff has been closed, all grades of office from highest to lowest are fully staffed, and the entire organization is working to capacity. Such is its present condition. But, looking ahead, it seems that retrenchment will become necessary. (4) The first to be discharged are functionaries of the middle and most recent grades. (5) And retrenchment is bound to continue -- dismissals occurring always in the order of juniority -- till the organization is more or less back where it started. ---- And if this story is not altogether unlike the stories of some human organizations, that is not to be wondered at, since they are tiny excerpts from it.

2. <u>THE THEORY OF RECAPITULATION EXTENDED TO THE COSMIC</u> <u>PHASES OF MY HISTORY</u>

One very important amplification of this schema must be made at once: it is not only to my human and vital phases that the great law of recapitulation applies. At all levels I fold up my time as if it were my umbrella. My fully extended cosmic history, occupying as it does the whole of time, is only (so to say) the opened-out state of many shorter cosmic histories --- outlines of history and outlines of outlines of history. Indeed such abbreviations of the whole are its body and proper filling, without which it is an empty shell; conversely, without it, they are naked and ashamed. By a great variety of means my total biography is epitomized: as if for the convenience of the busy reader its past and future are reduced to handy dimensions, at the cost of much detail but without sacrifice of the main features. Moreover each phase of my career has its own degree and means of abbreviation: thus, not surprisingly, the extremely protracted and relatively uneventful earlier and later phases call for more drastic cutting than the more compact middle phases of my history. I come now to examples. And, in extenuation of their incompleteness, I can only say that it is one further (and very necessary) instance of the law of abbreviation, which is their topic.



Five stages of cosmic history



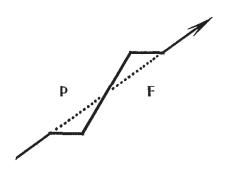
(i) Recapitulation --- the terrestrial phase

In the previous chapter I have discussed the human and vital phases of recapitulation, in which I re-enact ancestral history till I become contemporary, and then go on to anticipate it. As for the past, the rule is that I divide into two streams of events, the first of which goes on developing steadily while the second is delayed to the last moment; then, making up for lost time, it rejoins the first, accomplishing with facile swiftness all that the other has so laboriously brought forth. The future is the mirror image of this: one side of me crawls on at the world's pace, while the other, impatient for what shall be, goes on far ahead, and then is obliged to wait for the world to catch up. ° Now my molecular-planetary phase follows this same pattern. Once I was planetary --- nothing less. And still I am surrounded by portions of my discarded Earth-body, reminding me of what I used to be: around me everywhere lies 'dead' planetary material with which, before Life's dawn, I was fully identified, but have since repudiated. I have divided into two streams, one animate and now human, and the other inanimate. But now, at the very last moment, the two streams flow together --- some of the retarded and still inanimate part of me catches up with the rest, attaining vital and human status in a matter of minutes. × In plain language, I eat and drink and breathe, and so live. How commonplace and unmysterious: how much less remarkable this lightning evolution seems than (for instance) the sluggish procedure of individual and ancestral evolution, of which it is the conspectus. As if it were only to be expected of earth and air and water that, commingling, they should suddenly rise and walk, and make this record of the fact!

Life is a nest of self-epitomes, the simultaneous telling of its own story in many briefer versions. For me to live is to repeat, all day and every day, my fourfold terrestrial ascent-descent, which is spread over hundreds of millions of years of the past and the future. Of course it is useless to look in so brief a résumé for the details of the original. Foetal man and dying man have little time or opportunity to go into the minutiae of ancestral achievement; anabolism and katabolism have still less. Nevertheless in a perfectly genuine sense feeding is the beginning of life \otimes , and defecation its end: from breath and food and drink man is always being born; into faeces he is always dying --- leaving behind him, in witness of his daily death, as it were a string of little corpses. + And while it is true that this epitome of the whole of Earth's life fails to do justice to the original, it is equally true that the original does not do justice to the epitome. There is nothing makeshift, nothing trivial and secondary, about this miniature life history: there is no reason why it should not be given primacy over the more extensive versions. Thus it may be said that to live is to do slowly what one's food does quickly, or that the organism is its own alimentation in slow-motion.

(ii) <u>Recapitulation --- the solar phase</u>

If I exist at any Pair of levels, it is only because those above and below are for ever merging with mine, at different rates of merging. Humanity and men, Life and cells, Earth and molecules, having once produced me



° In several senses we come, as Emerson puts it, "to the centre of the world, where, as in the closet of God, we see causes, and anticipate the universe, which is but a slow effect." ('The Over-Soul') Wordsworth's lines

"Thou hast left behind Powers that will work for thee; air, earth, and skies"

are particularly true of all those who, while still in the flesh, were not content for the slow processes of nature to show what they were, but were gifted with anticipation.

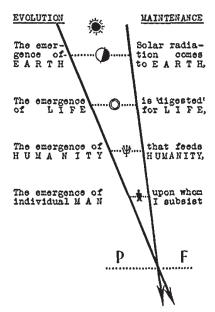
× Cf. Benjamin Moore, <u>The Origin and</u> <u>Nature of Life</u>, pp. 155-6. On the subject of the living cell's dependence upon non-living crystalloids and colloids, he says: "It forcibly calls to mind that law of the evolution of the higher animal which records that the higher embryo passes rapidly through some of the lower forms of its ancient ancestors in its individual evolution. So, probably, living matter is still unable to dispense with those simple inorganic substances by means of which it first arose from inorganic nature."

 \otimes Samuel Butler was fond of pointing out that to eat an animal is the most thorough and intimate of all the ways of 'loving' it. Though it is on the eater's terms, eater and eaten join forces, sharing a resurrected body. The spider offers the fly death now, and a spider's life hereafter. It is as if the spider were the cooperative predatory effort of many flies or as if a man were <u>other</u> animals' way of becoming human --- the law of elsewhereness decrees that (cannibalism apart) it is only the non-human that can, in a matter of hours, become human.

+ Schopenhauer points out that nutrition is different in degree rather than in kind from generation, and excretion from death. The latter is at once a kind of dying, and a reminder of death. And it is as foolish to embalm the body, in the effort to arrest corruption, as it would be carefully to preserve its faeces. <u>The World as Will</u> and Idea, i. pp. 357-8. cannot for a moment disclaim further responsibility. What they achieve they maintain. It is the same with the atomic-solar Pair. \times The atoms comprising my body at this moment are solar products; and in becoming planetary and peripheral they ceased neither to be within the Sun nor to depend upon the Sun --- the hand that sets this down is a Sunhand or it is nothing. The solar radiant energy, upon which the living Earth with its 'filling' (notably, Life and Humanity and man) relies in so many ways, arises from the perpetuation, right up to the present day, of my ancient atomic-solar phase. It is not merely that the earlier remains as the indispensable basis of the later, but also that the earlier and basic processes are constantly being repeated, in a changed and enormously accelerated form, for the benefit of their derivatives at other levels. It takes thousands of millions of years for the stellar to become human --and it takes a few minutes. Or rather, it takes all periods of time between these two extremes. The Sun becomes the man at many rates, and all are necessary to him. To cite the most familiar example, (I should say: to abstract a well-known train of events from the single manifold concrete process), I look to Humanity for my sustenance, Humanity to Life, Life to Earth, Earth to the Sun's radiant energy: this energy becomes in due succession an ingredient of the planet (as the various layers of the atmosphere 'digest' it), an ingredient of Life (as the leaves of green plants use it in the synthesis of their particles), an ingredient of Humanity (as the plants are cultivated, garnered, made into foodstuffs, and distributed), and finally an ingredient of man (as he eats his food). In this and other ways the main historical stages -- terrestrial, vital, human -- which lie between the star and the man are continually being recapitulated. Again it may be said that while one part of me -- the advance party -- goes off to become a planet and a geosphere and a species and an individual, the other stays behind till all this is accomplished, and only rejoins the advance party in the nick of time; moreover it is only by this dissociation into a steadily progressive part and an erratic one that my survival and progress are at all possible. In this race, the hare and the tortoise are the two natures of a single contestant.

The Sun lives by recapitulating the future no less than the past. I shall give two diverse examples. <u>First</u>, there are innumerable descending processes -- the decomposition of water and carbon dioxide in green leaves, by solar radiation, is one of them -- whereby terrestrial molecules are broken down into their atomic constituents. (This degeneration is a prelude to, or an aspect of, its opposite, the synthesis in which new molecules are built up: single atoms are rare under terrestrial conditions.) <u>Second</u>, as I have already shown, Earth is always becoming solar and thus transcending herself --- it is only a question of allowing her enough time. Give her a year, and she turns into a ring of 186,000,000 miles diameter --- a Sun-ring, of truly solar dimensions. She is continually completing such a ring, maintaining her life by anticipating the time when she will have no life, and will lead no separate existence in the Sun. when she ceases to recapitulate her dying, she dies for ever.

× Cf. the doctrine of Roberto Ardigò (La Formazione naturale nel fatto del sistema solare) that the original sun survives the parts into which it has become differentiated, and is the ground of their interaction; and that this survival is only one instance of a universal law which governs thought as well as nature. In the words of Harald Höffding, "According to this hypothesis, the present situation of the solar system follows from a process of separation (distinzione), smaller parts or units having coalesced within the great compact mass. But the totality is not therefore dissolved. The totality -- the unarticulated (l'indistinto) -- exists continually, and only thus it becomes intelligible how there can be a reciprocal action between the differentiated parts (the heavenly bodies). They cohere together now just as before their separation. The existence of the unarticulated is the ground of solidarity." Modern Philosophers, p. 46.



Any adequate estimate of our future is complex. It should recognize, besides the division into superior and inferior aspects, the further division of these into swift and slow aspects. Thus we have little excuse for accusing the ancient Egyptians of inconsistency, because they had three different abodes of the dead -- the Earthly, the Elysian, and the Solar. (Flinders Petrie, Religion and Conscience in Ancient Egypt, pp. 49 ff.) The Hebrews had Sheol (the underworld, originally the realm of chthonic gods) and, later, the heavens. (Cf.Robertson Smith, The Religion of the Semites, pp. 198 ff.) Cf. Ps. XLIX. 15: "God will redeem my soul from the power of Sheol, for he shall receive me."

(iii) <u>Recapitulation --- the galactic phase</u>

We must suppose that from the primitive Galaxy the Sun derived almost all its properties --- its raw material, its place and motion in the community of stars, its mass. And, ever since, the Sun has not ceased to acknowledge (as it were) this dependence, by rotating about the Galaxy's centre of gravity. ° It is true that we seem to derive little physical benefit from our presence in this prodigious stellar setting. (But, in the first place, I think it likely that we have much to discover here. It would be untypical if there should prove to be nothing at all, of which the physical sciences can take account, in the ancient and universal tradition of sidereal influences. Cosmic rays -- which possibly date from the very earliest phases of the universe -- may well turn out to perform some vital function, to do, for example, with biological mutations. × And, in the second place, it is only to be expected that the tendency, which is already becoming evident at the solar level, for high-level processes to be proportionately subtle and imponderable, should render them difficult of detection. But etherealization is not extinction --- more likely the reverse. After all, nobody imagines that our inability to weigh our dependence upon the Whole is proof of our independence.) But -- to leave aside mere guesswork -- what is quite certain is that the firmament of stars has, in fact, had the profoundest effects upon the later stages of solar evolution, upon the psycho-physical development of the Sun. I have already pointed out that our science derives very largely from early observation of the heavenly bodies, and that (more generally) the intellectual and emotional growth of man -- sidereal man * -- derives both impetus and direction from the cosmic environment. It is doubtful whether the inhabitants of a permanently cloud-encased planet, such as Venus is believed to be, could ever rise much above animal status +: you need other planets to know yourself a planet, other stars to know yourself a star, other galaxies to know yourself a galaxy. The fact is that our culture, little as we realize it, is the culture, not of men as such, but of heavenly bodies; its material and mental achievements are literally astronomical or they are nothing --- only we allow ourselves to be deceived by mere lack of bulk, as if the intelligence of the Galaxy were measurable in tons and miles, or in parsecs. Once more, then, the survival of the ancient whole -- in this instance, of the Galaxy -- is the prerequisite of its contemporary functioning and development.

Once more there is on the one hand a steady evolutionary advance, and on the other a very long period of waiting. † The colossal, lumbering machinery of stellar evolution, the crazy expanses and frantic extravagance of material, the reckless disproportion between the cosmic mountain and the miserable mouse it at last brings forth --- these are matters that we are not allowed to forget nowadays. But what we nearly always forget is that the mouse, once in being, has a curious way of comprehending the mountain: indeed, on closer inspection, he turns out to be no mouse at all, but the mountain becoming aware of the fact that it is a mountain --- excessively vast and self-critical mountain. To drop the metaphor, the Galaxy cannot be intelligently appraised so long as only ° According to some authorities, the evidence for this rotation is far from conclusive. Thus G. C. Mc-Vittie (<u>Science Prog-</u> <u>ress</u>, July, 1949): "It is observationally very doubtful whether spiral nebulae are in a state of internal motion at all; certainly no 'orbit' of a portion of a nebula has been determined." But for my purposes here the question is unimportant: it is sufficient to note that a galaxy is a persistent and ordered whole, whose parts are related in a fairly permanent manner.

× Cf. D. H. Lawrence: "Who knows the power that Saturn has over us, or Venus? But it is a vital power, rippling exquisitely through us all the time. And if we deny Aldebaran, Aldebaran will pierce us with infinite dagger-thrusts.... Now all this is literally true, as men knew in the great past, and as they will know again." (Apocalypse, pp. 50-1.) But in fact our poetry and religion and science, inextricably bound up as it all is with the stars, constitutes the completest possible evidence of sidereal influence. To give a topical instance, the study of the atom-shattering particles of cosmic rays promotes nuclear physics, which is likely to make history.

* "I believe our best wisdom does not come from without, but arises in the soul and is an emanation from the Earth spirit." A.E., <u>The Interpreters</u>, p. 60. There is a solid basis of sober fact underneath the poet's <u>Schwärmerei</u>.

+ Mr C. S. Lewis, in his novel <u>Perelandra</u>, pictures Venus as a kind of Garden of Eden, the home of an unfallen human pair. But he makes the woman say to the visitor from Earth "Do not wonder, O Piebald Man, that your world should have been chosen for time's corner. You live looking out always on heaven itself.... You are favoured beyond all worlds." (p. 75)

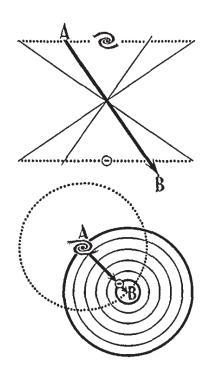
† Kahlil Gibran has what is, I think, a poetic version of this dual location in time: "And that which sings and contemplates in you is still dwelling within the bounds of that first moment which scattered the stars into space." "Your thoughts and my words are waves from a sealed memory that keeps records of our yesterdays, And of the ancient days when the earth knew not us nor herself, And of nights when earth was upwrought with confusion." <u>The Prophet</u>, pp. 74-5, 106. one of its modes of evolution -- either the original, or the recapitulatory -- is taken into account. The conservative side of me which stayed behind in the Galaxy, refusing all progress, and the radical side which became involved in solar and terrestrial evolution, make up a whole whose meaning is revealed here and now, where the two sides come together.

In this instance, the recapitulating agency is what (glibly, as if we knew all about it) we call light, traversing hierarchical regions. And a very thorough epitomizing agency it is --- as earlier chapters have, I hope, made clear. Thus, suppose I am observing Galaxy A, which is in turn observing me, B. I am where A, having graduated from nothing at A's Centre, through regions ranging from electronic to stellar, at last becomes a galaxy here in me. This evolution-by-light occurs at my expense, seeing that it involves my devolution-by-light from galactic status at A's Centre to nothing here at my Centre, so that I shall make room for the regional A. The one movement is twofold or metabolic --- anabolic or progressive or integrating for my companion, katabolic or retrogressive or disintegrating for me. And the return journey is, of course, anabolic for me and katabolic for A. This much has been said at greater length earlier on: the point I want to make here is that this two-sided regional activity, this light-mediated social intercourse, without which there are no galaxies, recapitulates their hierarchical long-term history in its four aspects, ascending and descending, past and future. ° In a mere million years (say), intergalactic light sums up the whole evolutionary story from its double start to its double finish. It begins with the inconceivably big and the inconceivably little, which converge (the first by shrinking and the second by swelling), meet midway, and diverge till they have changed places. That is to say, my entire galactic history, reduced to convenient dimensions, is involved every time I glance at a spiral nebula. The rule that social relations at any level are the history of that level in miniature, here finds its most comprehensive exemplification. Galactic intercourse is abbreviated galactic history.

(iv) Recapitulation -- the final conquest of time

Light is by far the swiftest of all the modes of recapitulation which I have described: it gets as near to freeing space of time as is physically possible. But in this matter a miss is as good as a mile, and I am entirely out of touch with what is going on, at this moment, in even the nearest regions of my space. Only my Here is unconditionally Now, and that is because it is 'sub-spatial'. In another respect light fails me, after coming within sight of complete success: it can reveal galaxies and systems of galaxies, and, at the other end of the scale, the path of an electron, but these are its limit. The Whole, and its counterpart the Centre, must for ever remain invisible, for here the process of etherealization is completed. Finally, light is liable to fail me in a third respect: I may go blind.

Is there a final mode of recapitulation which overcomes these three defects --- which, being instantaneous, puts me in touch with my whole present; which can compass the whole hierarchy and its history; and which is independent of any special sense? Indeed there is. The fact that



° This theory has certain links with mediaeval perspectivism. St Bonaventura taught that "bodies are hierarchically ordered according to the degree of their participation in the common form of light... because the dignity of beings is found in their operations and because these operations in their turn have light as their principle." Light propagates itself somewhat as species propagate: it "has productivity, activity and the faculty of preparing the ground for the act of knowing and of consummating it." Gilson, The Philosophy of St. Bonaventure, pp. 281 ff. Cf. Richard McKeon, Selections from Medieval Philosophers, i. p. 261; ii. pp. 59 ff, 467-8.

According to Rumi (Nicholson, <u>Rumi</u>, <u>Poet and Mystic</u>, p. 102), "The mystic ascends to the Throne in a moment; the ascetic needs a month for one day's journey.

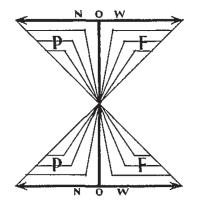
In the life of the adept, every day is fifty thousand of the years of this world." And the Isa Upanishad says of the Self: "Unmoving, it moves faster than the mind. The senses lag, but Self runs ahead. Unmoving, it outruns pursuit." Milton can write the sonnet 'On His Blindness' is itself sufficient to show that vision is <u>not</u> "that one Talent which is death to hide", • and that the unbodied or intellectual light is not less bright because no retina is sensitive to it. If I have, so far, exalted vision and light unduly, it is that they shall in the end give place to a more fundamental activity. Light, Bacon tells us, is God's first creature; and certainly it suffers creaturely restrictions. Astronomers in their observatories are out of touch, by thousands or millions of years, with their objects; but worshippers in their church, which is their observatory of the Whole, are compresent with their Object --- and that without instruments. Here is a mode of recapitulation which is at last altogether free of all temporal restrictions, the true Magic Carpet, the ideal vehicle; not the <u>lumen</u> or illumination by which things are seen, but rather <u>lux</u>, the divine light of the understanding, at home in regions that eye hath not seen nor ear heard, all-comprehending, all-sustaining. ×

Strictly speaking, of course, this final mode of recapitulation is not recapitulation at all (in the sense which I have been giving to that word) since it cannot be said that there is any time-interval between my original derivation or defection from the Whole-Centre, my eventual reunion, and my present realization of both. The three moments -- 'past', 'future', and present recollection of the one and anticipation of the other -- are, viewed from below, as remote from one another as they could possibly be; but extremes meet, and everything suggests that, from the point of view of the level at which these moments belong, time (as such, or as mere time) does not separate them. Neither, at this level, can it be meaningful to describe the process of recapitulation as anything distinct from the twin processes which are recapitulated. In other words, the perfected mode of recapitulation is the end of recapitulation and the beginning of assimilation.

Every successive mode of recapitulation has its own hierarchical ceiling and its primary hierarchical object. In the ultimate instance, that ceiling and object are the Whole. That is to say, the proper object of our awareness is nothing less than the Whole itself: 'consciousness' belongs to the Whole as 'light' belongs to heavenly bodies. But just as light, though originating in galaxies and stars, illuminates lesser bodies, so consciousness is not confined to the ultimate Pair, but is basic to all hierarchical Pairs. Being in the Sun, we see what is less than the Sun; being in the Whole, we know the parts. It is not only the Whole which is present here and now at this Centre; but, as a result of the Whole's presence, all my other objects are present too. This instant finds room for all the things of space, and time for all the things of time, because it is vacant, emptied of all space and time by the one Agency capable of absorbing it all. Only as accommodation for the Whole am I nothing, and only as nothing am I accommodation for anything. Common sense says we are capable of entertaining inferior objects, and the highest is beyond us: in fact, it is the other way about --- complete awareness is the ground of partial awareness, and our potential knowledge of the perfect object makes possible our actual knowledge of imperfect objects. It is not so much that

• It would, be a mistake, of course, to take this line of Milton's poem as a philosophical pronouncement. Milton is alive, if anyone is, to the space - and time - transcending power of the mind, and the keen vision of its inward eye. In <u>Prolusiones</u> <u>Oratoriae</u>, for instance, he exclaims:"What delight it affords to the mind to take its flight through the history and geography of every nation and to observe the changes in the conditions of kingdoms, races, cities, and peoples, to the increase of wisdom and righteousness. This, my hearers, is to live in every period of the world's history, and to be as it were coeval with time itself."

× This 'intellectual light' is no luxury, no refinement of physical light or final ornament of a universe already in being, but the ground of all. Without this light there is no other; or, as Dante has it ---"Light is none, Save that which cometh from the pure serene Of ne'er disturbed ether: for the rest, 'Tis darkness all...." <u>Paradiso</u>, XIX.



"God appears to us as in Himself eminently knowable.... In itself, such a being is at once the supreme intelligible and the first principle of all our knowing." Gilson, <u>The</u> <u>Philosophy of St Bonaventure</u>, p. 118. "The more excellent an object is, the more easily will the mind comprehend it." (p. 130). Of course this is not the whole story --- in Chapter XII, §10, the subject is treated more thoroughly.

Plato (<u>Timaeus</u>, 37) describes created temporal things as likenesses, so far as may be, of eternal being: they 'recapitulate' it. "Now the nature of that Living Being was eternal, and this character it was impossible to confer in full completeness on the generated thing. But he took thought to make, as it were, a moving likeness of eternity; and at the same time that he ordered the Heaven, he made, of eternity that abides in unity, an everlasting likeness moving according to number --- that to which we have given the name Time." we ought to see all things in God, but rather that we ought to realize that there is no other way of seeing them.

Only as in the Whole am I anything now. Only by virtue of the Whole, and its ultimate mode of recapitulation, am I contemporary with anything I can call myself or mine. All lesser, retarded modes look back to what I was and forward to what I shall be, but are unable to grant me anything at present; but this final mode, by establishing the worldwide instant -- the simultaneous existence of all things in space -- saves me and all other beings from mere nothingness now. It ensures that my present is comparable with my past and my future, enabling me to say that there is one hierarchical order of my being and of my genesis. ° And this proposition may be taken in two ways --- first, all the contents of this Centre, however dated, are present here and now, and instantly propagated or projected throughout all the regions of my space; second, (once it is accepted that, as in the Whole, <u>contemporary</u> space does exist \times) there is abundant empirical evidence pointing to a spatial hierarchy which is, in its broad lines, the same as the temporal. The evidence collected in these three chapters is enough, I think, to make out a prima facie case for a single spatio-temporal schema of regions: the one hierarchical system is equally applicable to my present, my past, and my future. In other words, the first half of this inquiry is the recapitulation of the second.

Nor is this putting the cart before the horse. The non-temporal is logically prior to the temporal, seeing that the temporal is its projection. I have been describing my space as if it were what is left when my time collapses to an instant, but it would be truer to say that my time is the explosion of my space in all directions. * Empirically, as given in the first instance, my history is not a one-way chain of events which began a long while ago, has arrived at this moment, and goes on into the remote future: instead it is, as I have tried to make clear, a shower of projectiles fired out into time from the present moment. As the intermediate Pairs are subordinate to the ultimate Pair, as the retarded modes of recapitulation are subordinate to the instantaneous, as body is subordinate to mind, so is time subordinate to space, + and for the same reason in each case --- the part is subordinate to the whole, and the particular aspect to the totality. Hierarchical individuals, and the time-taking processes that relate them, have their measure of reality in the supreme Individual who is beyond time; matter and succession are no mere illusions, for it is mind and timelessness which cause them to appear.

3. <u>RECAPITULATION ---- SOME GENERAL PRINCIPLES</u>

I have distinguished the main modes and levels of recapitulation. Some rules which apply to them all must now be mentioned.

i) <u>The later and more retarded modes are added to the earlier and less</u> retarded, and do not supersede them.

° Cf. C. Lloyd Morgan, <u>Mind at the</u> <u>Crossways</u>, p. 13: "If the body of a man, though in some measure a mechanical system, is also in some measure built up of a linear series of subordinate organisms in hierarchical order, the question arises: Is this hierarchical order that of evolutionary genesis? Some of us believe that it is."

× Cf. Whitehead's hypothesis that temporal process is not necessarily "constituted by one single series of linear succession", and that "temporal process of realization can be analysed into a group of linear serial processes". In support of this hypothesis, Whitehead appeals, <u>inter alia</u>, "to the immediate presentation through the senses of an extended universe beyond ourselves and <u>simultaneous</u> with ourselves", and "to the intellectual apprehension of a meaning to the question which asks what is <u>now</u> <u>immediately happening</u> in regions beyond the cognizance of our senses". (<u>Science and the Modern World</u>, VII.)

* "Creation is spreading, ever spreading, into the past as into the future ... " Denis Saurat (Death and the Dreamer, p. 80) is reporting the words of an old French cathedral canon, who goes on to ridicule the idea that God began, as if he were an apprentice, with small things like atoms and amoebae, and gradually worked up to man; these little things arise, on the contrary, out of a creative push back into the past. See also Saurat's Gods of the People, p. 41, on the tradition that Christ is the centre of time. The "XXth Century Texts" say: "Christ is the centre of space as well as of time It is a question of speed in mental travel. ... The tempo of spirit is quicker than yours. At the Centre, in Christ, all is so quick, that all is instantaneous, simultaneous.... The higher we are then, the quicker things appear to us."

+ But space itself, as I have shown in Chapter XII, is transcended at the highest level. As Saurat's texts have it: "Space is much more important than time.... Our space is above time; and God is above space." <u>Gods of the People</u>, p. 41.

The chief modes of recapitulation, with their respective levels, may, for convenience, be summed up as follows: (1) Whole-Centre --thought; (2) Galaxy-electron --- light; (3) Sun-atom --- 'metabolism' (Sun-atoms energizing Earth-molecules); (4) Earth-molecule --- 'metabolism' (Earth-molecules energizing Life-cells); (5) Life-cell --- animal ontogeny; (6) Humanity-man --- human ontogeny. All these are modes of recapitulating my history, but only the first epitomizes the whole of it: the others apply only to a part. The earlier and swifter modes are not superseded by the later and slower ones, but remain as their indispensable basis. Or rather, the later modes are included within the earlier, as their development and further specification. Thus all my levels are dependent upon and accessible to thought, and not merely those ultimate levels which are accessible <u>only</u> to thought and hidden from sense. Thus <u>all</u> my levels between and including the Galaxy-electron Pair, are revealed by light, and not merely those levels which, like the nebulae, are revealed in practically no other way. ° Thus the atomic-solar energizing is basic to, and shared alike by, the merely terrestrial, and the terrestrial-vital, and the terrestrial-vital-human, for these are also atomic and solar. Much the same is true of the terrestrial Pair: for instance, in order to live, animals and men need 'dead' planetary air to breathe, water to drink, earth to tread, gravity to pull against. Again at the vital levels, the animal lifecycle -- the development of the organism from the merely cellular stage to the height of metazoan attainment, and then reversion -- is as characteristic of men as of animals. In short, I may describe myself as a system of vertical recapitulatory layers, of which the later (and more restricted and slower and less fundamental) are added to the earlier (and more inclusive and swifter and more fundamental).

What I call multiple recapitulation may be described as multiple inheritance. The "heir of all the ages", I come into a different legacy -- social, vital, terrestrial, and so on -- from each past ancestral period. Besides, I am empowered to make drafts now to the full extent of my future expectations. By what right can I claim all this wealth? It is more than mine --- it is myself. Heritage and heir were one; they parted; now they unite again, thanks to the accelerated procedure of recapitulation.

(ii) The modes of recapitulation are modes of maintenance.

As J. H. Woodger has pointed out, the spatial form or structure of an organism is not merely spatial, but a part of the organism's history: * there is not a spatial structure with temporal activity dangling from it, but a structured activity which is spatio-temporal. Now this structured activity consists of (so to say) a number of strands, which must be carefully distinguished; distinguished as to tempo, and hierarchical scope, and functional priority. And these strands of process, or diverse modes of maintenance, are (or, at any rate, include) the modes of recapitulation which I have just described.

The rule is that only by the unremitting recapitulatory revival of my total past and my total future do I exist now. \times I was and shall again be lost in the Sun, and must meantime draw my energy from this same source;

° Atoms and electrons are, of course, not directly visible, but some of the effects of individual atoms and electrons can be made visible, as in the Wilson cloudchamber.

Plato furnishes me with an instance of the rule that we cannot cease to be what we were. He makes our "guiding genius" lift us "from earth toward our celestial affinity, like a plant whose roots are not in the earth but in the heavens. And this is most true, for it is to the heavens, where the soul <u>first came to birth</u>, that the divine part attaches the head or root of us and keeps the whole body upright." (<u>Timaeus</u>, 90: my italics.) As for the future, Whichcote says: "They... that live according to the Law of Heaven... may truly be said to have begun Heaven, while they are upon earth." (<u>Aphorisms</u>, 282.)

* Biological Principles, VII.

 $[\]times$ Cf. Alfred Noyes' lines:

[&]quot;Here, now, the eternal miracle is renewed;

Now and forever God makes heaven and earth."

And, just as the creation of the world as a whole is spread over all time, so the creation of each subordinate world is spread over its entire history.

I was and shall again be solidary with the 'dead' planet, and meantime I live by breathing and eating and drinking it; I used to share one life with the creatures that are now vegetables, and I still do so, though spatially we have drawn apart; • not so long ago I was identical with the animal whose flesh I eat --- cannibalism is the <u>sine qua non</u> of all feeding --- and in the not very distant future I shall rejoin the animals; finally, I was and shall be literally at one with all men: and past and future unity means present community, without which there is no humanity. In general, I line the route of my invasions with garrisons, to keep open my lines of communication --- the life-lines to my bases. Or, changing the figure, I leave behind me, not <u>disjecta membra</u>, but vital organs, my living body. And, in temporarily dissociating myself from these organs, I become them more truly than ever. If I mount to higher things, it is on stepping-stones of my <u>living</u> selves.

Thus evolution, far from being a single linear process, is a great and involved bundle of processes; it includes such partial versions of itself as are necessary to maintain the individuals that are evolved, throughout the full period of their existence. In terms of the hierarchical organization of Chapter XIV, all communication is passed through the proper vertical channels, but it is of the essence of that communication that it shall be kept moving at many speeds: the permanence of the whole proceeds, not from anything immobile, but from the great variety of its motions, and from their capacity for reflecting one another. Evolutionary process itself is infected with elsewhereness. Instances are not hard to find --- my present thought of myself is thought of my past or future, or of nothing; my good action is not good now except as it anticipates the eventual triumph of goodness; I cannot look at the heavens there without looking at my past and future here: they are my time-mirror; I cannot be or think or do anything now which does not proceed from the confluence of many evolutionary streams, each rising in some remote time and place.

(iii) The modes of recapitulation involve 'foetalization'.

Recapitulation means distortion, or rather revision --- the process which I described in the previous chapter under the title of foetalization. At other levels besides the human and the biological, recapitulation is largely a question of avoiding the blind alleys of full-scale history; it no longer goes into details that have become irrelevant to the movement as a whole. The zigzag path is somewhat straightened, the relatively futile and meaningless progressively removed. Recapitulation makes sense of history.

The manner in which each tendency, in the course of vital and human large-scale evolution, is pushed too far before it is corrected by the opposite tendency, and the manner in which recapitulation (e.g. in the womb and the school), avoiding these extremes of specialization, still manages to get in the end much of what has thus been forgone on the way, are subjects which have been sufficiently dealt with in the previous chapter. The question for consideration here is what evidence can be found for • Rumi asserts the principle: "The body desires green herbs and running water, because its origin is from those." In more modern terms, the body is like a factory full of machinery, each item of which is maintained throughout, under contract, by its original manufacturer.

Milton's description of Chaos --- "The womb of Nature, and perhaps her grave" --- fits the supervenient hierarchical levels also: what produces us receives us at the last. The worn-out machine is returned to the original supplier, who has kept it in running order meantime. It is because we are never born out of Chaos that we grow up, and because we have already died back into that womb that we live.

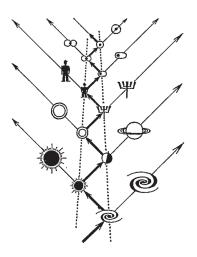
Some of the Gnostic doctrines of creation and redemption are, in effect, essays on the reality and importance of recapitulation. The universe proceeds from the ineffable Father, not all at once or directly, but through a long descending series of manifestations and powers. And, in the fulness of time, this same descent is (more or less) recapitulated by the divine Saviour, who comes down from heaven to earth, passing on his way through the successive spheres of the Archontes or Kosmokratores, or planets, so that he may rescue that hidden Pearl which is the soul of man. The Archontes let him pass because he is disguised (cf. I Cor. II. 6ff), or because (as I would say) he conforms to the regional pattern. And, his work done, he ascends to the Father, leading the Archontes captive. (Col. II. 15). (And it may be added that our salvation involves double recapitulation --- namely, our 'believing on', appropriating, realizing, identifying ourselves with, this recapitulatory process.) In brief, soteriology recapitulates cosmogony, and (as Harnack says of the doctrine of Valentinus) "the history of redemption constitutes along with the history of nature and of the world one great drama." See Enc. Brit. IXth Edn, "Valentinus"; Bardesanes, The Hymn of the Soul (Ed. A. A. Bevan); Gilbert Murray, Five Stages of Greek Religion, pp. 163-4; C. G. Jung, The Integration of the Personality, p. 67.

the view that this 'twofold frenzy', and its partial abatement by foetalization, are characteristic also of the cosmic levels.

And, in fact, I do find at intervals along the path of my development a forking of the way --- what seems to be the main road leading straight on at the same level, and what seems to be a side-track leading off at an angle to higher levels. The first means short-term advantages and longterm stagnation, while the second means abnegation for the sake of real progress. I have shown how Man, distinguished for little but his lack of distinction, surpasses the other animals by allowing them to surpass him. It is much the same with Life itself, whose beginnings were miserable indeed, and mistakable for a kind of planetary eczema: the biosphere is primarily a mere planetary film or interface, yet it immeasurably outdoes the other geospheres in everything except bulk, and then proceeds to colonize them. Earth is an ordinary planet, neither very small nor very big, neither the nearest to nor the furthest from the sun. The Sun, again, is a commonplace star, remarkable neither for mass nor for brilliance. And it seems probable that the Galaxy is not, as was once supposed, a giant, but is comparable with the average nebula of its own age.

On the whole, then, the indications are that something like restraint pays even at the cosmic levels, and that here also nothing succeeds like a moderate degree of failure. It is as if the individual who is too complete, too grown-up, too self-sufficing -- whether he is a heavenly or an earthly body, a man or an animal *, a cell or a molecule or an atom -- never discovers the need to transcend himself. As the over-developed single cell is debarred from becoming multicellular, so, amongst molecules and atoms, certain kinds of complexity, taken too far, lead away from life. Hydrogen and oxygen and carbon atoms are relatively simple, ranking low in the table of elements, yet their molecular compounds are the basis of Life's protoplasm; in particular, the phenomenal versatility and productiveness of the tetravalent carbon atom is attributable to the fact that it is one of the least 'self-satisfied' of atoms --- it bristles with needs. Most of the higher elements and their compounds are left on one side by the living. Yet they are not lost to Life. For, in the first place, many of them are eventually incorporated as 'trace elements' in organisms °; and, in the second place, there are elaborated in Life molecules and particles of a complexity quite unknown outside +; and, finally, through man, Life comes to need for her higher structure and functioning practically all the elements, and vast numbers of their compounds --- indeed (again, through her organ Humanity) she deliberately makes many new compounds to suit her needs, and has even prepared what is probably, so far as this planet is concerned, a new element, namely plutonium. The indications are that, so far from anything being lost by foetalization, it is the only way to make sure that nothing is lost. Growing up is repeated refusal to grow up.

(Thus foetalization turns out to be a less inappropriate term than at first it seemed. Foetus and adult, or larva and imago, are relative terms, and the higher level may be described as the adult form of the lower. The ascending hierarchical process is a growing up, at many rates, of the



* Who, at the last, inherits the earth, but the meek man of the Sermon on the Mount, the self-effacing man of the Tao Te Ching, the poor wise man and the feeble wise animals of the Wisdom Literature, the small but ingenious animals of negro folklore, and (dare I add?) Strube's Little Man? Cf. <u>Pro. XXX. 24 ff; Ecc. IX. 13ff; also Tao. Te Ching</u>, XXIX: "The men who set out to capture all under heaven and make it their own, according to my observation do not succeed."

° The number of trace elements found in organisms, and believed to be necessary to their healthy functioning, is surprisingly large. For health, one needs a trace of iodine and copper, besides, of course, larger quantities of iron, magnesium, etc. Tin and arsenic also occur in the human body. Some species of plants need aluminium, molybdenum, or gallium, and it has been said that all plants need manganese, zinc, and copper.

+ "We may suppose there has been no advent of a new type of living thing without the production of some chemical compound the exact like of which has not existed previously, at least so far as concerns Earth. The evolution of a series of types of life includes the invention, so to say, of many molecules of pattern fresh to our planet. Evolution has in its time produced a vast array of new forms and in virtue of that an even vaster array of chemical stuffs." Sir Charles Sherrington, <u>Man On His Nature</u>, V. Central Seed, through all the foetal-adult forms that encase and mother it, to the one true and all-enfolding Adult, or universal Parent. My own growing awareness is an aspect of this process, and the danger is that I shall mistake one or other of the larval stages for absolute, instead of relative, maturity. × Alternatively, the situation may be described in terms of energy-developments which are repeated level by level. The rule (as I tried to show in Chapter XIII) is that the integration of units up to a certain degree of complexity liberates energy, but beyond that point begins to absorb energy. In other words, there comes a time in the history of a level when the needs of self-maintenance leave less and less energy for outward activity: the unit is working itself out, becoming old and obese and no longer capable of progress.)

(iv) <u>The modes of recapitulation involve anticipation of the higher by</u> <u>the lower</u>.

One of our chief difficulties is that the lower plane anticipates, often with surprising verisimilitude, some of the attainments of the higher. Worse than this, what is painlessly to be had at the old level may be genuinely superior, at the start, to what is painfully acquired at the new. I have already pointed out that the mobile single cell may outdo, in the complexity of its organization and behaviour, many of the more primitive multicellular animals; that almost every animal excels primitive man at something or other; that the common-sensible man is often in a number of ways the superior of the mystic and the saint and the artist --- of the men who are less than normally out of touch with the higher planes of consciousness. Indeed every level has its own common sense, offering so much that is excellent that further ascent is made to seem not only foolhardy, but a waste of time. Each level of atomic organization, as brought out in the periodic table of the elements, repeats in a rough fashion the characteristics of the level above; the higher atoms anticipate the large masses attained by molecules °; the labile and gigantic colloidal molecule, responding delicately to subtle changes in its environment, ingesting its proper 'food' and no other, exhibiting cyclic changes, plainly prophesies the living cell. The State becomes a dangerously specious substitute for Humanity; and Humanity for Life --- as the more uncompromising nationalists and vivisectionists testify. And the gods of Earth and Sun, masquerading as God, usurp the loyalty that is due to the Whole. In short, the most persistent of illusions, involving all but the extremities of the hierarchy, is that one can get what one wants at this level, without death and rebirth on another level.

4. <u>THE GENERAL THEORY OF HIERARCHICAL PROCESS: (i) THE</u> <u>THREE 'EXPLANATIONS'</u>

In describing, provisionally and inadequately, the outstanding features of my manifold self-recapitulating history, I have said <u>what</u> these features are, not <u>why</u> they fall out as they do. What, then, is the 'explana-

× Jaworski suggested that as embryonic development recapitulates the evolution of Life, so the latter recapitulates some still vaster history, into which Life will one day be born. But he need not have supposed this new order and epoch, in which foetal Life is enclosed, to be unimaginable. Life is the foetus in the womb of Mother Earth, as Earth in the Sun's womb, and the Sun in the Galaxy's. And in every case I can act the midwife <u>now</u>, for to ascend the hierarchy is to bring to birth all these hierarchical generations. Well might Heraclitus declare that man is called a baby by God, even as man (we may now add) calls himself a grown-up cell.

In the matter of size, there is not only much 'anticipation' of the higher by the lower, but also much 'recollection' of the lower by the higher. Thus there are some insects (e.g. the parasitic Chalcid wasps), and even vertebrates (e.g. the frog <u>Phyllobates limbatus</u>) which are smaller than the largest unicellular organisms. (See the useful table of comparative sizes in Haldane and Huxley's Animal Biology, pp. 276 ff.) Again, there are stars (e.g., van Maanen's) no larger than this planet.

° L. T. Henderson (The Fitness of the Environment, p. 303) makes the interesting suggestion that the periodic system is, so to say, a fossil of the period when "the chief cosmic process was the evolution of the elements themselves." In much the same way, Freud and others have suggested that the first wave of infant sexuality is the fossil of some animal ancestor of ours, which attained early sexual maturity. Here, indeed, is a further instance of anticipation and its dangers--- many of the ailments from which adults suffer is their failure to grow up in all respects: some infantile satisfaction (sexual or other) still holds them, because it is sufficiently like the corresponding adult satisfaction to serve as some kind of substitute for it. Cf. Freud, Introductory Lectures on Psycho-Analysis, p. 261: "Perverted sexuality is nothing else but infantile sexuality, magnified and separated into its component parts."

tion' of development and its indispensable contrary, of ascending and descending process?

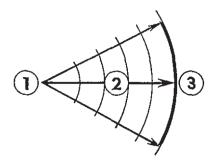
Clearly the causal procedure is different from level to level, and different again for each mode of recapitulation. For instance, visual perspective and the evolution of species (discussed under such headings as mutation, hybridism, natural selection, foetalization, etc.) seem to have little in common. Again, the metabolism of the animal body, and the condensation of nebulae and stars by gravitational instability, would appear to resist any form of description which is valid for both. Certainly the various departments of science have not progressed so far at their respective levels that the overriding laws, which shall unite the levels, are emerging. Indeed it is arguable that specialization is moving away from rather than towards any such rapprochement. I believe that the lack of great inter-level hypotheses is itself one of the main factors which stultify specialist advance --- that there comes a moment when the further elucidation of one level requires that it shall be put in its place, restored to its setting in the hierarchy. It is a question of alteration. The magnificent medieval system was the triumph of shape over content; ours is the triumph of content over shape. My business in this book is to do what I can towards redressing the balance, towards the discovery of world-order in the prevailing chaos, towards the foundation of that new Science which shall do for the hierarchy what each particular science does for its own level. + The suggestion which I have now to make, in this and the following sections, do not advance us much towards this far-flung goal, but at least they make a start.

First of all let me pose the question: what is the secret of my growth or development? The 'explanations' may be reduced to three --- (1) what I become is potential in the original 'matter' (germ-plasm, genes, etc.) out of which I emerge, and the circumstances under which my character is actualized are no more than accessory to its unfolding; (2) the really determining factors are environmental; (3) my progress governed not so much by my starting point or by the circumstances I meet on the way, as by the goal for which I am making: what I shall be rules my becoming. The first 'explanation' refers to the past, the second to the present; the third to the future. In regional terms, the first gives the credit to the Centre, the second to the radius, the third to the circumference. ×

Now the interesting thing about each of these three 'explanations' is its extreme inadequacy, its tendency to point away from itself to the others. Growth is full of mystery: wherever we look for an explanation we are referred to another place. In fact, it is one more example of the great principle of else-whereness. Inspect the original matter, or seed, or egg-cell, and the impossibility of its producing the finished organism seems plain --- ex nihilo nihil fit. We are referred from the Centre to the circumference, or final pattern, but on examination this is obviously powerless to work upon the past: final causes are, in Bacon's celebrated phrase, vestal virgins, dedicated to God and barren. ° We are driven, then, to look to the radius, to the organism actually developing now in commerce with surrounding nature: but here again the difficulties are

For centuries we try to build our house out of too few sticks and stones, arranging them in every possible way to make them do. At last it dawns upon us that we had better collect more materials, but then we become so fascinated by each growing pile that the house is forgotten. On lack of Weltanschauung as due more to lack of intelligence than to excess of it, or as due to moral no less than intellectual deficiency, see Jung, Contributions to Analytical Psychology, pp. 145 ff. In Jung's view "it is always fatal to have no Weltanschauung". Albert Schweitzer (Civilization and Ethics, p. viii) accuses recent philosophy of having "led us into a position where we are devoid of any world-view at all, and, as an inevitable consequence of this of any real civilization."

+ An eminent contemporary scientist writes: "Crammed with masses of often irrelevant, and completely isolated details, we are all in danger of losing sight of what great minds once conceived to be a patent truth: that the cosmos is an ordered entity. It is time that some of us, realizing the loss that thinking youth has suffered, made some attempt to assure them that the loss is not due to the findings of orthodox science: it is due solely to a lack of any adequate synthesis of these findings." Frederic Wood Jones, <u>Design and Purpose</u>, p. 13.



× These three moments are comparable with Aristotle's Matter; Entelechy or completed Form; and the Energeia or process by which that Form is manifested in the Matter. For a brief modern statement of finalism see Viscount Haldane: 'The Function of Metaphysics in Scientific Method', in <u>Contemporary British Philosophy</u>, 1st Series, pp. 131 ff.

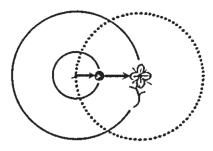
° The Advancement of Learning, II.

immense --- are we to suppose, for example, that light somehow evokes as its response not only the ancestral eye, but the foetal eye that has never seen the light? * Again we are referred back (e.g. to the embryologist's 'organ-forming substances', 'activation centres', and the like) and forward to the functioning of the completed organism.

How very difficult --- and yet, by one of those final twists and paradoxes which are no new thing in this inquiry, the difficulty itself (once it is clearly formulated) contains its own solution. This reference back and forth °, this projection and reflection --- what are they but further instances of the regional activity which I noticed at the very start? 'Not here, but over there; not now, but then' cries each inhabitant of my regions. Non nobis, domine. As the flower is not a flower in itself here, but in others there, so it is not a flower in itself now, but in others then; in particular, it is a flower in the seed, for it is of the seed's essence that it has vacant accommodation for the flower that shall be. Move over till you are contemporary with (and therefore coincident with) the flower, and you will find that it is, after all, seeds, and one seed, and in the end nothing but accommodation for other seeds and flowers. Each stage of growth is, in itself, no more than the very beginning or seed of the developing organism, a nothing in which all other stages have the status to which their remoteness entitles them. Therefore I say that those who (like Hans Driesch \times and so many philosophers) stress the end and the whole, and those who (like Weismann and so many scientists) stress the beginning and the part, and those who (like Bergson +) stress the duration -- the interval of process -- that holds these extremes together and apart, are all in the right; provided only that they combine the three doctrines, perceiving the entire regional system of which these are the aspects. More briefly, seed and embryo and adult form an indivisible whole whose parts, being regionally organized, are mutually immanent.•

If this should seem far-fetched, consider the alternative. Consider, in particular, the immense discrepancy between the two types of cell which science portrays --- between the germ cell and the somatic cell, or between the brain cell and the ordinary cell outside the brain. The former class -- germ cell and brain cell -- are fabulous creatures with suprahuman powers; the latter are simply organisms of very low grade, with the kind of performance one would expect of them. Take the brain cells first. While other cells are capable of learning only a few of the simplest behaviour lessons †, brain cells are credited with the ability to translate myriads of electro-chemical impulses into this astonishing universe of mine, bestowing upon it unity, the utmost vividness and convincingness, and infinite detail within its wholeness; they are credited with the ability to condense this universe into records which are stored away, practically unchanged, for years, and then used to reconstruct the original scene at a moment's notice; ϕ they are credited with such a 'filing system' that they can produce, at lightning speed, just that one record out of millions, which the occasion requires; untutored and unasked, they mix the right ingredients of 'memory' with the right ingredients of 'sense' to produce percepts which (whether veridical or not) have the merit of working out

° Cf. Hegel: "We may say that in teleological activity the end is the beginning, the consequence is the ground, the effect is the cause, a case of becoming is a case of what has become, in it only what is already existing comes into existence, and so forth. Logik, iii. 228.



× The Science and Philosophy of the Organism. Driesch's entelechy is as it were a plan of the whole, controlling the organism's development and functioning; and, at a rather late stage of evolution, purposive behaviour is similarly governed, by a 'psychoid' which is analogous to an entelechy. This doctrine has come in for some ridicule --- I think it was Broad who refused to believe that what is hidden from the wise and the prudent is revealed unto entelechies.

+ See <u>Creative Evolution</u>, pp. 39 ff, where Bergson rejects both 'radical mechanism' and 'radical finalism' in favour of the creative and essentially unpredictable movement of life.

• L. T. Hobhouse (<u>Mind in Evolution</u>, pp. 444 ff) argues very clearly that any one phase in an organism's history is a partial fact, and the total fact is a development in which beginning and end are together in a systematic whole.

† The classic work is H. S. Jennings' <u>The</u> <u>Behavior of the Lower Organisms</u>. Jennings found that certain protozoa, e.g., Stentor, are teachable.

 ϕ On the impossibility of storing memories in the brain cells, see Bergson, <u>Matter</u> and <u>Memory</u>, pp. 8 ff, and H. Wildon Carr, <u>The Philosophy of Change</u>, pp. 157 ff. Nevertheless (p. 172) Carr describes the <u>past</u> of the race as existing in the <u>germ</u> cells --- which is <u>au fond</u> the same kind of absurdity as supposing the <u>present</u> of the race to exist in the <u>brain</u> cells. in practice; indeed they are the real authors of this eulogy and of all our thinking; ---- all this, and very much more, is the work of blind deafmutes, of animals vastly inferior to houseflies and worms. It defies comprehension; and certainly it defies description --- I have only the vaguest notion of what these words 'memory', 'sense', 'percepts', and so on, can mean in such a context.

And this story, wilder than any fairy tale, is matched only by that other 'scientific' story --- of the germ cells, whose amazing abilities put them in the same class as the brain cells. Into less than a millionth of a cubic inch are compressed all the makings of an Aristotle or a Leonardo. The human being, so compact already, is magically imprisoned in a pin-point cell, where he leads an invisible and altogether mysterious existence; and where much of his 'mind', no less than his 'body', is dehydrated and shrunk almost to nothing. Going one better than Blake, the geneticist finds the world in less than a grain of sand, and something like heaven in the seed a wild flower. But such overcrowding is nothing new to this inquiry. In Chapter II, I discussed the way in which our modern mystics -- physicist and oculist and neurologist -- combine to locate the universe I see in the cells of my visual cortex. And I pointed out then, as I must now re-emphasize, the mistake of putting two incompatible things where one should be. Manifestly there is no room in or among the particles of my cortex for the man I am looking at; therefore, I say, either the man or the particles must go somewhere else. Likewise there is no room, in or among the particles of the fertilized ovum's nucleus, for the man it eventually grows into; again, I say, the two stages belong apart and must be kept apart. Brain cells and sex cells are unicellular organisms like the rest, not multicellular organisms deeply disguised.

Suppose there are parents rash enough to ask a geneticist and a neurologist for an 'explanation' of their child. × The first says to them: "He is a product of your sex cells." The second: "He is a product of your brain cells." Together they say: "We are agreed that this smile, this peculiar glint and sheen of hair, this characteristic lip and eye and ear, this shade of complexion and little trick of manner --- these and a host of other features of your child were somehow concentrated in microscopic particles of your bodies. On this we concur, though there remains a minor difference between us as to which end of your bodies contains the remarkable particles in question." ° Now these two scientists are both right and wrong --- right in referring the object to the Centre where it attains its status, wrong in failing to clear the Centre of all obstructions. They are right in finding the child where common sense finds the parent, wrong in failing to find the parent where common sense finds the child; in other words, they make the worst of both worlds, flouting both common sense and reason by refusing to go more than half way with either. They ignore the law of elsewhereness, assuming that child and parent are simply located in time and in space.

The truth is that biological development, whether ontogenetic or phylogenetic, is one of a number of kinds of 'regional' development ---- the process which is one of the main themes of this book. And the three



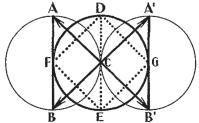
The human spermatozoon as Hartsoeker (1694) thought he saw it, containing the homunculus. (From Dr Charles Singer, <u>A Short History of Biology</u>.) As Hertwig points out (The Biological Problem of Today, p. 11), Weismann's theory of the germ-plasm (which remains unaffected by its deciduous vehicles) is really a disguised version of the box theory of the sperm as a homunculus. The preformationists held that the egg, or the sperm, contains a miniature of the organism into which it will develop, and its growth is simply the expansion or unfolding or evolution of this miniature. Indeed, on this theory, each germ contains, like a nest of boxes, the ever-diminishing replicas of all its descendants; a theory which, known as emboîtement, Leibniz propounds in the preface of the Theodicée, and in Principes de Nature et de la Grâce, 6. Charles Bonnet, extending this doctrine, regarded an organism as consisting (a) of elementary parts, and (b) of matter gained by nutrition; so that, if (b) were removed, the complete organism would become concentrated in a point --- that is, revert to its germinal condition. (Considérations sur les Corps organisés, X.)

× In other words, they ask concerning their child what Traherne asks concerning himself--- concerning the pre-existence of his own members:

"Where have ye been? Behind What curtain were ye from me hid so long?

Where was, in what abyss, my speaking tongue?" 'The Salutation'

° There is a further difference: while it is sometimes claimed that, as soon as conditions permit, matter <u>must</u> evolve and life <u>must</u> appear (e.g., Benjamin Moore, <u>The</u> <u>Origin and Nature of Life</u>, pp. 73, 187), it has yet to be claimed, I think, that the matter of our brains <u>must</u> extrude a universe, and only awaits a favourable environment.



The child is a child (AB, A'B') in his parents, and nothing (C) in himself. The parents, nothing in themselves at F and G, are themselves at DE in their child.

'explanations' of biological development (referring respectively to the organism's heredity and environment and goal, or beginning and middle and end) pick upon one or other of the three elements of the regional schema --- the Centre, or the radius, or the circumference --- to the exclusion, or partial exclusion, of the other two. And this, of course, will not do: the schema is indivisible.

(I do not say that nowadays any one of the three 'explanations' is offered pure and simple, without any admixture of the others. Weismann's theory • -- an extreme kind of biological Calvinism -- that the germplasm remains virtually unaffected by the body-plasm and the environment generally (and implying that all evolutionary advance is predetermined by the composition of the original protoplasm) is now regarded as much too sweeping. On the other hand, those biologists who, like Lysenko and his colleagues, make environmental influence the main factor, cannot ignore heredity and the science of genetics altogether. As for the teleologists, they do not as a rule claim that final causes are the only causes: mechanism is allowed a subordinate place. Plato × and Aristotle, Leibniz and Kant and Lotze, in their different ways allow some validity to both principles. There is much to be said for the view that mechanical causes and final causes are two sides of one medal: look at the creature to find mechanism, with it to find teleology. Or in the words of Leibniz + : "Souls act according to the laws of final causes by appetitions, ends, and means. Bodies act according to the laws of efficient causes by motions. And the two kingdoms... are in harmony with one another.")

5. <u>THE GENERAL THEORY OF HIERARCHICAL PROCESS: (ii) THE</u> <u>MAIN CHARACTERISTICS</u>

The modes of development and recapitulation which I have described are species of one genus, and it is necessary to avoid overestimating either their resemblances or their differences *. They have much in common, and much that is peculiar to one or another. In particular, while all are regionally organized both in space and in time, for some the regions are predominantly spatial while for others they are predominantly temporal. The proportion of space to time in their regional constitution is, in fact, one of the principal differentiae of the various species. Let me give some examples.

The object A is regionally observed. At B, a fraction of an inch from A, it is reported to be a single cell. At C, a foot from A, it is reported to be a pair of leaves attached to a stem. At D, a hundred feet from A, it is reported to be a tree. Here, plainly, is a case of 'development'; but, since only the spatial intervals have been specified, and the temporal intervals are not yet known, the kind of 'development' remains undecided.

(1) Suppose, now, it is further specified that the temporal dimension of BD is some tens or hundreds of millions of years: at once it is clear that phylogenetic development is being observed, and that B, C, and D Page 544

• <u>The Germ Plasm</u>, E.T., 1893.

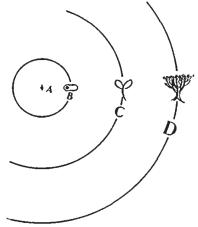
In some respects, Weisnannism is the biological counterpart of Laplace's dictum that the whole future would be certain for an intellect to whom all the forces of nature, and the situations of bodies, at any one instant, were known. Cf. also Du Bois-Reymond's imaginary mathematical formula, from which the behaviour of every atom in the world could be deduced.

× Cf. <u>Timaeus</u>, 46E: "A lover of intelligence and knowledge must necessarily seek first for the causation that belongs to the intelligent nature, and only in the second place for that which belongs to things that are moved by others …"

+ Monadology, 79.

* We have to avoid the too-drastic 'coalescence of time' practised by ancient peoples and primitives, and our own tendency to atomize time. The ancients not only had their own versions of what we may call recapitulation, but overdid them. On the subject of the Egyptian attitude to nature, H. and H. A. Frankfort write: "Each morning the sun defeats darkness and chaos, as he did on the day of creation and does, every year, on New Year's Day. These three moments coalesce; they are felt to be essentially the same. Each sunrise, and each New Year's Day, repeats the first sunrise on the day of creation; and for the mythopoeic mind each repetition coalesces with -- is practically identical with -- the original event."

<u>Before Philosophy</u>, I. Cf. Ernst Cassirer, <u>Philosophie der symbolischen Formen II:</u> <u>Das mythische Denken</u>.

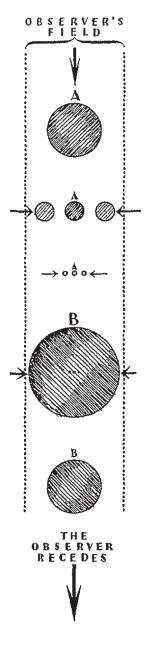


are evolutionary stages. (2) If the temporal dimension of BD is reported to be ten years, then we are no doubt dealing with a case of ontogenetic development or growth, by way of seed and seedling to the mature plant. (3) If BD is a few hours, we may well have a case of physiological process --- the observer is perhaps concerned with the ingestion of a substance by a cell, its effect upon the adjacent parts, and eventually upon the whole vegetable organism. (4) If BD is a few seconds, the probability is that we have an instance, not of ancestral or individual or physiological development, but of 'perspective development': the observer is moving from the region where A is a cell to the region where it is a twig, and then to the region where it is a tree. (5)Finally, if BD is practically timeless, then we are concerned with a case of 'thought development' which is independent of immediate sense experience; and of such a development my present activity -- postulating the series A, B, C, D -- is an example. °

I think it is sufficiently clear, without multiplying examples -- many have already been given in this part of the book -- that the difference between the various species of development is largely a matter of tempo. There are, it is true, several other important differentiae, most of which are too obvious to need particular mention. And there are also a number of common characteristics, which, because they are not nearly so obvious, deserve to be recorded here: --- (A) Development entails the absorption of equals. (B) Development is inseparable from its reverse, which entails the extrusion of equals. (C) Development proceeds by gradual quantitative increments which culminate in sudden qualitative increments. (D) Development entails regional expansion in space and time, such that gains are cumulative, and time is partially transcended. (E) is infected with elsewhereness.

(A) <u>Development entails the absorption of equals</u>. (1) <u>Phylogeneti-</u> cally, my history is of atoms joining atoms, of molecules combining with other molecules, of single cells assimilating single cells to form metazoa, of metazoa taking on others in a society: the individual advances because he refuses to hold at arm's length others like himself. (2) Ontogenetically, the story is much the same --- two cells become one in the fertilized ovum; the resulting colony of undifferentiated cells becomes a closeknit unity in the highly organized embryo; the resulting child, who is a medley of unreconciled tendencies, gradually becomes a whole, a single character --- in so far as he is joined to others. (3) <u>My maintenance</u>, like my evolution and growth, means the ingestion and internal unification of what is first external: my molecules need a constant supply of new molecules from outside to make their own, and for this end my cells need a constant supply of other cells, and for this end my animal body needs a constant supply of other animal bodies. That is to say, I am not so much a unity as a continuous and many-levelled act of unification. (4) My appearance to the receding observer follows the same pattern. In his field of view, a unit shrinks, drawing to itself like units, then disappears and gives place to a unit of the next grade, which in its turn begins to shrink and draw others to itself.... (5) My thought, my intellectual and moral development, requires that I learn increasingly to make others'

° The final mode is thus something like Rilke's idea of the poet's mission in the cosmos, namely, "to render the earth we live on, and by extension the universe, invisible, and thus to transform it into a higher plane of reality". Our task, says Rilke, is "to impress this fragile and transient earth so sufferingly, so passionately upon our hearts that its essence shall rise up again, invisible, in us. We are the bees of the Invisible".... "The work of the perpetual transformation of beloved and tangible things into the invisible vibration and excitability of our nature, which introduces new 'frequencies' into the pulsing fields of the universe" --- this was the work he set himself to do. And the same way "our own destiny becomes unceasingly more present, and at the same time invisible, in us." R. F. C. Hull, Selected Letters of Rainer Maria Rilke, pp. xxiv, 394, 395.



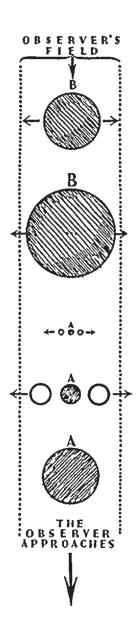
interests my own, adding their view-points to mine: the rule here, as in the other four cases of development, is that growth is not an expansion of the existing unit, but hospitality shown to other units of like status.

(B) <u>Development is inseparable from its reverse, which entails the</u> <u>extrusion of equals</u>.

(1) <u>Phylogenetically</u>, I have advanced by repeated fission, and the rejection of all but a nucleus: there is a sense in which all other human beings, species, geospheres, planets, stars, galaxies, are my cast-offs, lopped branches of my ancestral tree. (2) <u>Ontogenetically</u>, I have advanced by sending out a succession of specialized feelers, which have all failed in turn; the unspecialized nucleus remains, preserved by an ever-renewed catharsis. (3) <u>My maintenance</u> is katabolic no less than anabolic --- as much a matter of breaking down, discrimination, rejection, and elimination, as of absorption and building up. (4) <u>My appearance</u> to the approaching observer follows suit: in his field of view my habit is to divide, and to reject and destroy all but a central portion of myself. (5) <u>My thought</u>, my intellectual and moral life, entails ever-renewed choice, the dismissal at every turn of half-formed possibilities. Only by such continuous ascetic self-limitation and self-pruning is the status quo preserved --- to say nothing of advance.

(C) <u>Development proceeds by gradual quantitative increments</u> which culminate in sudden qualitative increments. (1) Phylogenetically, progress is, so to say, bipedal --- on the one side the slow development and adaptation of the given organism or organ or function, and on the other its transformation, some new departure or mutation. In the course of evolution, these modes of advance alternate, even at the pre-vital levels. (2) Ontogenetically, the story is repeated. Notable new departures have been the supersession of the single cell by the blastula or one-layered cell-colony, the blastula by the gastrula or two-layered sac, the blastula by the segmented metazoon; or again, the change-over from foetal to family life, from family life to life in society at large. And such drastic developments are only possible because each is preceded by a period of unspectacular growth. (3) My maintenance, similarly twosided, requires that, at successive levels, nutritive substances shall first be accumulated in the right places, and then transformed. (4) My appearance to the travelling observer, whether he is approaching or receding, alternates between a gradual change in the dimensions of what is given, and the relatively sudden substitution of a unit of a new order, having new characteristics. (5) My thought, my intellectual and moral life, plainly resolves itself into long periods of plodding, when old ways of thinking and behaving are elaborated, and short periods of inspiration, when new ways emerge. (I think that a case can also be made out for the existence, in each of the five modes of recapitulation, of a period of 'chaos', or 'death' -- a kind of dark night of the soul -- as a prelude to each new departure.)

(D) <u>Development entails regional expansion in space and time, such</u> that gains are cumulative, and time is partially transcended. (1) <u>Phylo-</u>



genetically, advance to new spatio-temporal regions, or growth to new hierarchical levels, does not mean the abolition of the old, but rather its survival, in changed form, as an organic part of the new --- the older the unit in the temporal series the more subordinate it is in the spatial. $^{\circ}(2)$ <u>Ontogenically</u>, also, my earlier stages underlie and support my present stage, so that my whole past may be said to live and act in me now: though the scene has shifted to remoter spatio-temporal levels, the nearer ones are as busy as ever. (3) My maintenance, that is to say, goes on at all my evolutionary levels, atomic and molecular, cellular and metazoan and human. (4) My appearance to the receding observer betrays the fact of accumulation: thus the cellular region exhibits all the main functions of the molecular and others in addition; the metazoan similarly adds to the cellular, and the human to the metazoan. (5) My thought, finally, not only recognizes the necessity of the past for the present in a thousand ways, and the cumulative nature of evolutionary development; but it is able, by making free with time, to transcend the limitations of the travelling observer, and view the contents of all my regions as compresent and contemporary.

(E) Development is infected with elsewhereness. (1) Phylogenetically, no unit, whatever its hierarchical grade, develops on its own. If it progresses by dissociating itself from the more backward parts of the common whole, its development is still theirs, for it is a joint product arising out of social relationships with them: concretely considered, this seemingly restricted and local progress is nothing else than the development of the whole of which all -- advanced and retarded -- are alike members. (2) Ontogenetically, the individual can only realize his phylogenetic heritage by helping others to realize theirs. As a man can only become fully human by working for his fellows, so at all levels his progress is ineluctably social --- however little the implications of sociality are there worked out. (3) My maintenance, then, is not my business but that of others, just as their maintenance is my business. For social existence throughout the hierarchy is deeply infected with elsewhereness: the organic equipment and specialized activities of each individual belong essentially to the others, and not to himself. Moreover this displacement tends to increase as we rise in the hierarchical scale. (4) My appearance furnishes a striking example --- it is my presence in my observer. Unless there are at least two of us, so that each may come to himself in the other, neither can amount to anything at all. This rule applies to all my levels, but it becomes more explicit as I advance. (5) <u>My thought</u> is necessarily of what is other than myself; and it includes the progressive realization of this law of its own elsewhereness. But it is the view of this book that, at every level, each individual of integral status provides accommodation for his fellows, and that hierarchical ascent is in the main a question of offering more and better accommodation.

I have been trying to show that the various modes of vertical process are species of a single genus. Though the detailed evidence, on which the foregoing summary is based, has already been set down in these pages,

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° This remark applies only, of course, to units of the inferior hierarchical series --- the older the <u>superior</u> unit is in the temporal series, the more <u>exalted</u> it is in the spatial. For my past, like my future, is so divided that I get progressively bigger as well as smaller.

When common sense takes for granted the coexistence of my human body, my organs, my cells, and my molecules, it is going far beyond the empirical evidence. However they are viewed, part and whole are held apart by a temporal interval. The observer takes time to get from one to the other; so also do the processes of physiology, of individual growth, and of ancestral evolution. Time may well be called, as Alexander says, the "principle of growth" (Space, Time and Deity, ii. p. 346). To take an example from a somewhat different field, if you stare at the dots of the following pattern, they arrange themselves in a new way -- in rows, or diamonds, or squares -- every few seconds. The emergence of the new arrangement takes its own time, but afterwards you are at liberty to say that, 'in reality', all the arrangements exist at once. But then you have ventured into the time-transcending realm, of the final mode of recapitulation.



Keats, for example, became acutely conscious of this elsewhereness. "As to the poetical Character itself", he writes, "it has no self --- it is every thing and nothing. It has no character.... A poet is the most unpoetic of anything in existence; because he has no Identity --- he is continually in for and filling some other Body.... It is a wretched thing to confess; but it is a very fact that not one word I ever utter can be taken for granted as an opinion growing out of my identical nature --- how can it, when I have no nature? When I am in a room with People.... the identity of every one in the room begins so to press upon me that I am in a very little time annihilated --- not only among Men; it would be the same in a Nursery of children ... " Letters, i. p. 245.

much is still obscure or debatable. Even so, after all the necessary deductions have been made, I think that enough remains to show that hierarchical science can hope for positive results, that level-binding laws are forthcoming, that the kind of order which science now discerns horizontally is also discernible vertically. Quite apart from all other considerations, it seems to me to be unscientific, irrational, and obscurantist, to prefer the present chaos to the order I have attempted to sketch. But this does not mean that I am under any illusions as to the adequacy of my schema. It is intended as no more than a first step in an adventure which, if only because of the immense amount of work to be done, must be a co-operative enterprise. Of this I am sure --- that it <u>is</u> an adventure, an adventure so thrilling, so obviously necessary, so novel, that only sheer cowardice or poverty of spirit could hold us back.

6. <u>THE GENERAL THEORY OF HIERARCHICAL PROCESS: (iii) PUR-</u> <u>POSIVE BEHAVIOUR</u>

Common sense doubts whether the five modes of hierarchical process can be described as species of one genus: four of them -- my evolution, growth, metabolism, and regional appearance -- happen without the aid of 'consciousness', and are consequently very different from the fifth, of which 'consciousness' is the essence.

This distinction is certainly true and important, but it is not permanent. That it exists only to be overcome is apparent from the following considerations. (1) My own purposive behaviour or striving is directly experienced and indubitable: but all other kinds of happening -- unconscious or purposeless or mechanical events -- are speculations to be indulged in only when they are unavoidable. And they are avoidable. (2) I have shown that the fifth or conscious mode observes the same general laws as the others. In that case it would not be surprising to find that all share a common basis, and that the less known are, after all, not unlike the known. (3) I have already recognized all five modes to be mine and no longer external. I have come to know and intend them, and take them over. ° The work of rendering them all conscious -- albeit in barest outline -- is done, and cannot be undone. (4) And this expansion comes naturally to me, seeing that, just as I can find no boundary to my functioning in space, so I can find no boundary to my functioning in time. There are no breaks, no discontinuities, so that I can say that my history is first of one order, and then of another. (5) Moreover I have the gift of elasticity in time no less than in space, so that ancestral deeds become as truly mine as my behaviour of yesterday. (6) All of which is really to say that it is of the essence of the final mode of recapitulation that it goes out to and embraces all the others; for its awareness, if it were of itself alone, would lack all content. In other words, it undoubtedly belongs to a new order, but to an order which exists by taking up the old order into itself.

What we may not do is to think of any or all of the four modes as self-

° According to Huai Nan Hung Lieh, "Although the affairs of the world are not easily administered, they may be directed by a comprehension of the course they naturally take." Schopenhauer taught that the cause and essence of the universe is Will --- a blind force prior to matter and consciousness. This force brings into being, as successive grades of its self-objectification, the material, vegetable, animal, and human orders; and in the last of these it comes to know, as ideas, what, as Will, it has been all along. (But, since time is only a form of man's thinking, it cannot be said that the consciousness comes after the blind Will.) This is very much what I have to say; only I add that consciousness, when at last attained, demonstrates its priority in every way; omega reveals itself as alpha. The beginning is the receptacle of the end.

The fatal mistake is to imagine the awareness now to be separate from the event then. In his novel <u>Out of the Silent Planet</u> (pp. 82-3), C. S. Lewis makes one of the characters say: "A pleasure is full grown only when it is remembered. You are speaking.... as if the pleasure were one thing and the memory another. It is all one thing.... When you and I met... it was nothing. Now it is growing something.... For the most splendid line becomes fully splendid only by means of all the lines after it; if you went back to it, you would kill it. I mean in a good poem." existent, or as anything at all apart from the fifth, which is at once their ground and fulfilment. The five make up a single organism which bursts into full flower here and now, because its roots spread throughout the entire past and future.

"From the pure star-bright souls replenishment is ever coming to the stars of heaven. Outwardly we are ruled by these stars, but our inward nature has become

Outwardly we are ruled by these stars, but our inward nature has become the ruler of the skies.

Therefore, while in form thou art the microcosm, in reality thou art the macrocosm. Externally the branch is the origin of the fruit; intrinsically the

branch came into existence for the sake of the fruit.

Therefore in reality the tree is born of the fruit, though it appears to be produced by the tree." \times

× Jalaluddin Rumi, trans. R. A. Nicholson (<u>Rumi, Poet and Mystic</u>, pp. 124-5).

CHAPTER XXI

AUTOBIOGRAPHICAL --- LIFE BEYOND DEATH

I once had a vision of a funeral service in the other world before I was born, where I was committed to the grave of this body, and the angelic being who presided murmured something about his hopes for a joyful resurrection of their brother who was now buried in matter.

A.E., The Candle of Vision, p. 34.

Year 30, third month of the first season, day 9: the god entered his horizon. The King of Upper and Lower Egypt, Sehetepibre, went up to heaven and was united with the sun-disc, so that the divine body was merged with him who made him. --- Contemporary statement of the death of a pharaoh.

(John A. Wilson, in Before Philosophy, p. 82.)

These small and perishable bodies we now have were given to us as ponies are given to schoolboys. We must learn to manage: not that we may some day be free of horses altogether but that some day we may ride bare-back, confident and rejoicing, those greater mounts, those winged, shining and world-shaking horses which perhaps even now expect us with impatience, pawing and snorting in the King's stables.

C. S. Lewis, Miracles, pp. 194-5.

And he who should live well for his due span of time should journey back to the habitation of his consort star and there live a happy and congenial life.

Plato, Timaeus, 42.

He whose face gives no light, shall never become a star.

Blake, 'The Marriage of Heaven and Hell'.

In comparison with Heaven and Earth, man is like a mayfly. But compared to the Great Meaning, Heaven and Earth, too, are like a bubble and a shadow. Only the primordial spirit and the true essence overcome time and space.

Wilhelm and Jung, The Secret of the Golden Flower, p. 27.

The immortality of religion means: to be united with the infinite in the midst of the finite and to be eternal at every moment of time.

Schleiermacher, Reden über die Religion an die Gebildeten unter ihren Verächtern.

Fear of death, or clinging to life, is fear of, or clinging to, certain fragments of ourselves. If we could 'energize' a great deal more continuously than most of us can, we might experience physical death literally without being aware of it.

P. L. Nettleship, Remains (2nd Ed.), p. 93.

'Lead me from the unreal to the real! Lead me from darkness to light! Lead me from death to immortality!'..... The unreal is death, the real immortaliy The darkness is death, the light immortality.

Brihadaranyaka Upanishad, I iii. 27.

In the last sphere Expect completion of thy lofty aim: For there on each desire completion waits, And there on mine; where every aim is found Perfect, entire, and for fulfilment ripe. There all things are as they have ever been: For space is none to bound; nor pole divides. Our ladder reaches even to that clime;

Paradiso, XXII.

Though earth and man were gone, And suns and universes ceased to be, And Thou wert left alone, Every existence would exist in Thee. There is not room for Death, Nor atom that his might could render void: Thou -- Thou art Being and Breath, And what Thou art may never be destroy'd.

Emily Brontë, Last Lines.

1. <u>THE ALTERNATIVES FOR THE FUTURE: (i) SURVIVAL BY MIGRA-</u> <u>TION AND EXPANSION</u>.

"That man is dead even in this life," says Goethe, "who has no belief in another." But what sort of after-life, what kind of survival, can I honestly believe in? The main alternatives are three --- (1) I may identify myself with an expanding, world-conquering Humanity, in whom I continue to live after my death as an individual man; (2) I may look forward to survival as a disembodied spirit, in a realm more or less detached from the life that is lived 'on this side'; (3) I may conceive my immortality to be bound up with the ultimate unreality of time, or the supersession of time by eternity.

Though the first of these alternatives, offering no hope of personal immortality, makes little appeal to the ordinary man, it is favoured by certain advanced minds, who look upon the craving for personal survival as a childish wish that we should grow out of. ° For such minds, the question 'what is my future?' becomes 'what is Humanity's future?'. And the answer, as I have already urged, is likely to be that (apart from such 'accidents' as racial suicide or racial degeneration) it is a future of cosmic expansion, of something like hierarchical ascent.

It is practically certain that all the vehicles of our life -- terrestrial, and solar, and even galactic -- are bound to break down in turn. And the hope is that we shall develop a technique of survival whereby accumulated gains are shifted from one worn-out conveyance to another that is comparatively new, just in time to save all that is of real value. This hope is strengthened by the reflection that human history, so far, has in large part been a story of dwindling means of life, crisis, migration or expansion, and the conquest of ampler resources. Already it may be said that Humanity only survives and flourishes by a species of selftranscendence -- by expanding to the dimensions of Life and of Earth. From very early times man's effort has been directed upon, and his progress linked with, (a) the domestication of plants and animals, and the control of Life in general, and (b) the exploitation by Life of the planet's mineral wealth; indeed, if he had not virtually transferred his baggage from the merely human to the vital and terrestrial vehicles, the overwhelming probability is that he would still be a near animal --- supposing that he managed to survive at all. If, then, his past may be taken as a guide to his future, is it not possible that he will go on saving himself by expansion or hierarchical ascent, avoiding in turn both planetary and solar death? It is plausibly argued that (again, apart from 'accidents'), in the course of the thousands of millions of years of terrestrial life that lie before him, man will probably develop technical powers past all present imagining --- powers destined to make the more chimerical forecasts of Wells and Aldous Huxley, or Stapledon and J. B. S. Haldane and J. D. Bernal, look peculiarly timid and conservative. * In that case it is only reasonable to suppose that, long before our Earth is due to die, she will have made all the necessary funeral arrangements, and seen to her more glorious reincarnation as the solar system. The steering of existing planets to new orbits is one possibility; another is the formation of entirely artificial planetoids, living as wholes rather than serving as mere space-ships

° 'There is certainly a stage, an early stage, in our development at which the prospect of annihilation for ourselves and our beloveds seems terrible. But the frank acceptance of this prospect should, I believe, turn out to be the way to further growth. It should free the mind from the shackles of egoism. It should lead in the long run to a more secure peace and joy and a greater moral strength than would otherwise have been possible.' Olaf Stapledon, <u>Philosophy</u> and Living. II. 5

St Epiphanius (who is, however, not altogether to be relied upon) records a Manichean doctrine that the souls of good men are carried first on the ship of the moon, and transferred when the moon wanes to the ship of the sun, which carries them to the aeon of life and the place of the blessed. The believer, William James tells us, finds a part of himself "continuous with a more of the same quality which is operative in the universe outside of him and which he can keep in working touch with, and in a fashion get on board of and save himself, when all his lower being has gone to pieces in the wreck". (A Pluralistic Universe, p. 307.) James Elroy Flecker's dying patriot says:

'...out to seas colder than the Hebrides I must go

Where the fleet of stars is anchored and the young star-captains glow.' And St Paul: "For we know that if our earthly house of this tabernacle were dissolved, we have a building of God, an house not made with hands, eternal in the heavens. For in this we groan, earnestly desiring to be clothed upon with our house which is from heaven." II Cor. V. 1-2. And there are countless other instances of the perennial belief, which science now tends to confirm, that our future lies in hierarchical ascent.

* See particularly Olaf Stapledon, <u>Last and</u> <u>First Men</u> and <u>Star Maker</u>, and J.D. Bernal, <u>The World the Flesh and the Devil</u>. Also David Lindsay, <u>A Voyage to Arcturus</u>; Gerald Heard, <u>Narcissus</u>; J.B.S. Haldane, <u>Daedalus</u>.

Already, besides the numerous interplanetary and astro-nautical clubs, there is serious talk of constructing space-platforms some hundreds or thousands of miles above the earth. carrying human passengers. For by this time men will, perhaps, have redesigned themselves beyond all recognition: it may be that individuals will no longer exist at all, except as so many brains maintained by a common blood-system, and permanently linked with one another and with a common system of artificial or quasi-artificial receptor-organs and effector-organs. Such a colonial organism, intelligent beyond our conceiving, with a body designed for space-journeys lasting thousands of years -- or, more likely, hosts of such organisms -- leaving the dying Sun to his fate, may go off to bring younger stars to life, encircling them (as Stapledon ° puts it) with hoops of pearls, perfect though artificial. At least it is not impossible that, in some such manner, we may save ourselves by promoting ourselves from terrestrial to solar rank, from solar to galactic rank, and from galactic to inter-galactic rank.

Non omnis moriar, says Horace ×. I shall not wholly die, perhaps, but I shall certainly be forced to retreat. The question is: shall the retreat be a rout, or what is called an orderly withdrawal to prepared positions? It looks as if the only way to victory is such a withdrawal at every stage, followed by the discovery that the withdrawal is really a notable advance. In other words, it looks as if the price of mere survival is growth, as if the only way not to lose our talents is to multiply them, as if a benevolent necessity, disguised as a succession of cruel and worsening disasters, is bent on driving us to heights we should not dream of attempting except as a last refuge. Science now suggests that this is so, but prophets and poets and divines have all along been saying much the same thing. Walt Whitman discovers that success is only the prelude to more severe trials;* George Herbert finds that Nature is determined that we shall not rest in Nature; + at one stage of our ascent, according to Browning, "earth's ladder drops, its service done"; ϕ Francis Thompson is systematically hounded through the universe and so, in a different manner, is St Augustine, who passed, in his search for God, from earth and earthy creatures to 'the airy universe and its denizens', and to sun and moon and stars. Θ There is, in fact, an immense body of evidence that men find things to be unstable in the direction of that which includes them: † in numberless ways, they experience a nisus towards the Whole. Imperfection dogs every lesser system: it can never realize completely or permanently even its own limited goods. Whether as a matter of practical necessity, or by the dialectic of universal history, or in the effort to trade causes, or in the search for the perfect 'form', peace of mind, rest, health, sanity, integrity, or long life --- I am liable to be driven from the small and brief to the great and lasting. Moreover, looking back, I am liable to recognize that I am not driven out so much as in, from the peripheral pigsty to the central father's house, from the wilderness to the fold, from myself to mySelf. In this context, the failure of solar radiation and the ageing of the galaxies may appear as no more than partial aspects of a universal trend, whose brightest blessings wear the blackest disguises.

"In death man becomes sidereal", says Victor Hugo. \emptyset For, in Sir Thomas Browne's words, "In vain do individuals hope for immortality, or any patent from oblivion, in preservations below the moon." \oplus If there is a belief which is at once universal and remarkable for its <u>un</u>obviousness, its defiance of ordinary common sense, it is that our after-life is in the

° <u>Star Maker</u>, p. 220.

According to Fourier (<u>Théorie de l'Unité</u> <u>Universelle</u>) the soul of the Earth, with her dependent human souls, will live again in other planets and stars: for him, metempsychosis occurs on a cosmic scale.

× <u>Odes</u>, III.xxx.6

The idea that a man is, so to say, the embryo of a celestial body, is expressed in many ways. Charles Bonnet, the great naturalist, taught that all creatures are immortal: we pass into the higher state, taking on a new body of which the germ exists in our present bodies. Perhaps it was some such intuition which led many ancient peoples to bury their dead in the curled-up or 'embryonic' attitude.

* "It is provided in the essence of things that from any fruition of success, no matter what, shall come forth something to make a greater struggle necessary." 'Song of the Open Road'.

+ E.g., '<u>The Pulley</u>'.

φ <u>'A Death in the Desert</u>'.

ө <u>Confessions</u>, X. 6.

In a somewhat different context, Mr J. B. Priestley has said that, by harnessing atomic energy, we are already turning the solar system into our Gas, Light, and Coke Company: 'we are trying to lay on and tap the fury and splendour of the constellations and galaxies; we have placed one halting foot on the stairway of the stars'. (B .B .C. broadcast talk, March 2nd, 1947.) † Cf. McTaggart's "C series", of which the fundamental sense is from the included to the inclusive, and in which the earlierlater relationship (of the "B series") is a mere appearance. <u>The Nature of Existence</u>, 720-4.

"Keep the secret sense celestial Of the starry birth; Though about you call the bestial Voices of the earth. If a thousand ages since Hurled us from the throne: Then a thousand ages wins Back again our own. Sad one, dry away your tears: Mount again anew: In the great ancestral spheres Waits a throne for you." A.E., 'Comfort', <u>Collected Poems</u>, p. 91.

ø lntellectual Autobiography, p. 267.

⊕ <u>Hydriotaphia</u>, V.11. During his conversation with Falk, on the day of Wieland's funeral, Goethe thought it quite possible that the indestructible part of Wieland would display fresh activity as a brilliant star. sky. When Browning died, it was necessary for the Astronomer Royal to certify that a new star had <u>not</u> been discovered; \oplus Juliet's wish for Romeo, when he dies, is "Take him and cut him out in little stars"; Cicero makes true Romans live on as stars. What are the story of Elijah's chariot of fire, and of the Ascension, but variants of the same notion? At the cremation of a Roman emperor, the custom was to hide an eagle in the pyre, in such a way that the fire, by burning the creature's bonds, released it: a witness then swore that he had seen the imperial soul ascending into heaven. The Egyptians buried a small ladder with the dead, to assist the soul in its upward journey --- the region of the circumpolar stars was the place of eternal bliss and deathlessness. Chuang Chou says of one who obtained the Tao that when he died "he mounted this and that constellation and put himself on a level with the stars". × For Origen, the "many mansions" of the Gospel are the spheres which the pure soul climbs, discovering in each its mode of operation, till, in the high heaven of the fixed stars, he learns the reason for the sizes and positions of all the stars; thus instructed, he continues his upward flight to the invisible world. Clement of Alexandria tells much the same story. ° Even today, for innumerable Christians, Heaven is in the heavens --- "above the bright blue sky", as the children's hymn says. Indeed the truth is not that migration from terrestrial to celestial regions may be forced upon an unaware or an unwilling Humanity, but that Humanity has all the while known and longed for and anticipated just that migration. Already man reckons himself sidereal and galactic, and our modern prophets of the future have told him nothing that he did not, in principle, know perfectly well. For with Browne he says: "I have so abject a conceit of this common way of existence, this retaining to the Sun and the Elements, I cannot think this to be a Man, or to live according to the dignity of humanity. In expectation of a better, I can with patience embrace this life." *

As the baby survives by growing up and ceasing to be a baby, so does the man survive by self-transcendence. Meredith declares that

> "we are one With heaven and the stars when it is spent To serve God's aim: else we die with the sun." +

How this ascending hierarchical movement appeals to us, what side it shows, depends upon ourselves, our times, our interests. It may have for us a predominantly religious, or philosophical, or scientific, or poetical significance; it may be something to be grasped and enjoyed now, rather than left to take care of itself in the distant future; it may seem so remote and so problematical as to be of no real interest now, or it may, on the contrary, supply just that hope and spur to action which we feel in need of; it may present itself as a plan of campaign for the conquest of a dead universe, or as a programme for the progressive realization of a superabundant life that already exists; it may suggest a series of lucky escapes from a series of wrecked cosmic vehicles, or appear as a by-product of military necessity --- a kind of unpremeditated cosmic imperialism, arising from the need first to defend ourselves against, and then to take over, hostile nations and races, species, geospheres, planets, and stars. † What I think we cannot do -- in so far as we are alive at all -- is to avoid acquaintance with every aspect of this many-sided movement.

⊕ J. Estlin Carpenter, <u>Comparative Religion</u>, p. 231. In Alexander Blok's play, <u>The Stranger</u>, a mysterious woman appears, and the astronomer notes a missing star; when at length she vanishes, the star shines again.

"And as for those parts (of a man) that came from the earth, they shall return unto the earth again; and these that came from heaven, they also shall return unto those heavenly places." Marcus Aurelius, <u>Meditations</u>, VII. 27.

× Hughes, <u>Chinese Philosophy in Classical</u> <u>Times</u>, p. 194.

The planets, according to the later classical tradition, were not only lordly and powerful, but pitiless, malignant, and (for some writers) more evil than good. The effort of Gnosticism was largely to furnish the adept with a set of watchwords or charms, to be used by the ascending soul as it passes from one planetary sphere to the next.

° R. B. Tollinton, <u>Alexandrine Teaching on</u> <u>the Universe</u>, p. 109.

In <u>Les Tables Tournantes de Jersey</u>, La Mort says to Victor Hugo: "Je t'emporte avec moi; l'éclair, notre pále cheval se cabre dans la nuée, Allons, sus! assez de soleil: Aux étoiles! aux étoiles."

* <u>Religio Medici</u>, I. 38. Browne's intentions, if not his methods, are not unlike those of Monkey (in the novel of that name by Wu Ch'eng-en) who makes such a nuisance of himself on earth that he is granted an official appointment in heaven, where all the stars, high and low, become his cronies.

+ <u>Vittoria</u>, XXI.

Mr Olaf Stapledon suggests that, sooner or later, such circumstances as the planet's loss of air and water will force man to utilize the resources of other planets. Also "we should not rule out the possibility of a community of highly developed worlds in the solar system, and even of communication and mental intercourse with other intelligent beings scattered throughout the galaxy." <u>Saints and Revolutionaries</u>, pp. 154-5.

† I have already suggested that a sufficient degree of unity, at each hierarchical stage, may be unattainable except in the face of a common 'enemy' --- who is, to that extent, a real friend. Significantly, the word <u>syn-</u> <u>cretism</u> (which now means a sinking of the differences between creeds or schools of thought) derives from a Greek verb meaning 'to combine against a common enemy'. (Perhaps I ought to say here that I do not put all these variants of the upward movement on a par. Quite the reverse. I feel much sympathy, for instance, with Mr C. S. Lewis' crusade against cosmic imperialism, against the arrogant assumption that man and Earth alone are the custodians of cosmic mind, an oasis in a desert universe, inhabited (if at all) by monsters. "The tellers of tales in our world", says an earthly visitor to Mars, "make us think that if there is any life beyond our own air, it is evil." ° To say the least, it is equally reasonable to suppose, as Mr Lewis does, that it is <u>we</u> who are inferior, evil, in need of some cosmic work of salvation from ourselves, that it is <u>we</u> who are relatively dead and desperately need to draw upon solar and galactic life-sources. I shall argue later that, of the two quite contrary motives for hierarchical ascent -- the motive of imperialism and self-glorification, and the motive of love and self-transcendence -- only the second is likely to succeed in the end, and the first is 'evil' no less than self-defeating.)

2. <u>THE ALTERNATIVES FOR THE FUTURE: (ii) SURVIVAL AND PSY-</u> <u>CHIC PHENOMENA</u>

Common sense protests that it is \underline{my} future, and not that of the species -- still less of some vaster whole -- which is in question. To which the brief reply is that, as a matter of fact, I cannot help identifying my fate with the fate of Humanity and Life, of Earth and the Sun; × whether common sense likes it or not, I find myself living their life and thinking their thoughts, and making their future my own. But emphatically this is not enough for common sense: nothing less than the survival beyond death of this separate human being, of his 'mind' or 'soul' or 'spirit', will do. And the evidence for such survival is supplied by certain kinds of 'psychic phenomena' --- phenomena which (common sense suspects) are by no means consonant with the doctrines of this book.

What, in the terms of this inquiry, is death? It is a bifurcation ϕ in which the superior and inferior aspects of the personality pull apart: the first merges with what is greater than itself, while the second divides into what is less than itself. Almost death might be described as a peculiarly severe and chronic kind of schizophrenia. Now while there is obviously much well-attested 'paranormal' evidence which is neither for nor against such an interpretation of death, there is much which, I believe, is definitely for it, and little or none which is indubitably against it.

There are, for instance, numerous accounts, by persons who have been near to death, of an experienced division into (a) a confused 'lower consciousness' associated with the disintegrating bodily organs, and (b) a lucid 'higher consciousness' which surveys the scene with calm detachment. * As the patient begins to recover, it seems that these two 'consciousnesses' fuse, and the lucidity goes. "Why," Dr Tyrrell asks, "when the body is nearly dead, and the brain has almost ceased to function, is consciousness bright and clear; and why, as soon as the brain begins to function again, is it reduced to a sluggish glimmer?" The answer I propose is this: death is survival by simultaneous hierarchical ascent and ° Out of the Silent Planet, p. 137.

'Weston and Co', the planet-hopping cosmic imperialists, will (according to one of Mr Lewis' characters) play an important and disastrous part in the events of the next few centuries, unless they are prevented. Hands off the universe! However much one may disagree with their theology and attitude to science, this novel and its companion <u>Perelandra</u> are an important and overdue corrective to the scientific romances of the Wells school.

× I mean these as concrete living wholes, with their 'filling', otherwise one can hardly say with Rilke: "One's gently weaned from terrestrial things as one mildly outgrows the breasts of a mother." (Duino <u>Elegies, I.</u>) We may cease to be <u>merely</u> terrestrial, but never cease to be terrestrial, and human, and our individual selves.

φ The primitive Hebrews sometimes thought of their dead as <u>yidde 'onim</u>, suprahuman 'knowing ones', or even <u>elohim</u>, or 'gods'; and on the other hand as <u>methim</u> -- 'dead ones', ignorant of all things <u>Eccles</u>. IX 5,10; <u>Job</u> XIV 12, 21.) Such inspired inconsistency is perhaps more the rule than the exception, right down to modern times and Leibniz, who, though recognizing death as hierarchical descent, was convinced of the existence of suprahuman genii, into which men are likely to be transformed after death. Cf. Erdmann, <u>History of Philosophy</u>, ii. p. 182; Edward Langton, <u>Good and Evil Spirits</u>, pp. 174-5.

* See, e.g., G. N. M. Tyrrell, <u>The Personal-</u> <u>ity of Man</u>, pp. 195 ff. descent. It is a down-going, but also, in Masefield's words, "Death drives the lovely soul to wander under the sky", + to mount heavenwards. It is at least interesting, then, to find the deceased Conan Doyle announcing, through the famous medium Mrs Eileen Garrettt, † "I would like you to know my location --- that I am in a nebulous belt lying outside the earth's surface and having life and being because it is of the same structure and matter as the earth itself. I am in no doubt as to my geographical position." However much or little this 'message' has to do with Conan Doyle, the belief, the idea itself, finds expression, and remains significant. And it has a strong family likeness to the doctrine of Pietro Pomponazzi, that apparitions, dreams, the prophecies of the 'possessed', and what are ostensibly communications from the dead, are really to be ascribed to the heavenly bodies and the sphere-moving intelligences. °

It is true that most cases of alleged 'intervention by the dead' do not suggest hierarchical ascent. But this is not surprising. There is no reason to suppose that death opens out a new and painless upward path, that it is a magical substitute for the intellectual and moral disciplines which, in this life, are the price of advance. Everything, on the contrary, suggests that we cannot, by the simple expedient of dying, steal a march on the living. It seems that we are unlikely, 'on the other side', to find ourselves without further trouble upon levels which we never gained 'on this side'. What much of the evidence does point to, however, is some breaking down of the barriers between 'individual minds', and the formation (or realization) of 'group minds' of various grades --- group minds which are interpreted as higher levels of the individual's own personality. Dr Tyrrell finds that the facts (and if anyone is acquainted with the data, he is) not only support, but demand, some such hierarchical interpretation. "The communicators uphold the view that there are grades in the personality. It seems to me that the whole of psychical research points this way, and to the view that the personality is a multiplicity in unity of a kind which it is almost impossible to express in words. We find in Mrs. Willett's scripts such phrases as the following: 'He says, Ranges of varying depth.' 'It's One: and an enlightening point of view -- I think it is -- is to conceive of it as allied and distinguishable -- I missed a word -- and then grouped round one nucleus.' 'He says, There are many gradations ... He says, There is an ascending chain.... Again, Gurney speaks of 'the profundities of the subliminal self which grade up and merge into what I have spoken of as the transcendental self, the central unity...' * All very vague and confused, of course, but definitely on the side of the hierarchy.

We may well ask what status should be accorded to such communications, and how far they are the products of the medium's own unconscious and the unconscious of the people who employ her. Are they received through some common group mind (whether Humanity's or that of an inferior mesoform) to which the 'dead' and the medium alike belong, and, if so, how much of the message can really be attributed to the ostensible author? Above all, questions about the temporal relationships between 'this side' and the 'other side' present themselves. Psychic research may one day have the answers. Meantime I think it may be said that the evidence favours the view that the difference between a dead man and a live one is not so fundamental as we are apt to think, and that + 'By a Bier-side' cf. Rupert Brooke's description, in <u>Clouds</u>, of the dead riding the calm mid-heaven.

† See Harry Price, <u>Leaves from a Psychist's</u> <u>Case-book</u>, p. 105.

° C. C. J. Webb, <u>Studies in the History of</u> <u>Natural Theology</u>, p. 328.

Heraclitus believed that "there awaits men when they die such things as they look not for nor dream of". (Burnet, Early Greek Philosophy, p. 141.) But if this were entirely true, Heraclitus would be unable to make such a forecast. St Paul says: "Eye hath not seen, nor ear heard, neither have entered into the heart of man, the things which God hath prepared for them that love him." And he adds: "But God hath revealed them unto us by his Spirit." 1 Cor. II. 9-10. According to Harnack (What is Christianitiy? p. 4) Christianity means "eternal life in the midst of time, by the strength and under the eyes of God". Whichcote says "We must now naturalize ourselves to the Employment of Eternity The State Here, and the State Hereafter, are Homogeneal: Every Man may Estimate his Future State, by his Present; viz. the Like or more of the Same." Aphorisms, 118, 290. Cf. Chhandogya Upanishad, III. 14: "According to what man's will is in this world, so will he be when he has departed this life." In short, we must take Aristotle's advice, and practise immortality now. And, for a start, all we need is to use our eyes: vision is looking ahead, seeing where we are going. And this is so, says tradition, even when we look up at the sky.

* Tyrrell, O<u>p. cit</u>., pp. 158-9.

Some Gnostics divided men into the spiritual, the psychic, and the hylic. Only the first are capable of immortality; the second may attain to some blessedness; the third perish. (Harnack, <u>History of Dogma</u>, i. pp. 253 ff.) I think it is nearer the mark to say that every man is all three of these; only, if he never rehearses his immortality, if he never gets on speaking terms with his undying self, he won't recognize it when he gets it. The result will be "That time is no healer: the patient is no longer here". (T. S. Eliot, <u>East Coker</u>). Life eternal lies in present knowledge of the eternal. (John, XVII).

it is a difference of level -- of which hierarchical levels are being attended to, and which ignored -- rather than of total constitution.

3. <u>THE ALTERNATIVES FOR THE FUTURE: (iii) THE OVERCOMING</u> OF TIME

So far in this chapter, I have discussed two versions of survival --- the kind which identifies short-lived man with an ascending series of suprahuman orders to be realized in the distant future, and the kind which is based upon psychic phenomena. I come now to a third version, which arises out of the doctrine that time is in a sense illusory. ° In effect, this version says: either past and future events are 'unreal', or pastness and futurity are 'unreal', and the latter alternative is the more reasonable. Or, in the language of this book; for the lowest hierarchical units, all events are either past or future, and none is present; for intermediate grades, some are past, some are future, and some are present; for the highest grade, all are present. Survival, on this view, is a matter of entertaining objects of exalted hierarchical station --- objects which endow us with the time they take to come to themselves in us. Our survival is the appreciation of others' survival, and our immortality consists in making room now for the immortal Whole.

But what common sense wants is the survival of this particular man at his own level --- and this is what all three versions seem designed to withold: for, in one way or another, they say that the price of survival is to shift your level. The longer your life, the less it is yours. Is immortality, then, altogether too expensive? Certainly it would be if it were not for the fact that our third version, by nullifying every distinction in the hierarchy, ensures that no distinction, once it is achieved, is ever lost. † The twin processes of ascent and descent, by which the finite particulars are progressively overcome, are just what is needed to preserve them, for the destruction of time is the preservation of all the things of time. The total picture at once conserves and completes each tiny portion of itself. And this is indeed what we want --- to be our sole selves yet rescued from ourselves; to be immortal yet relieved of the intolerable weariness of time that goes on for ever and ever; to be sure that none of the immense labours and agonies and joys of the past is abandoned, or forgotten, or progressively sacrificed upon the altar of a Moloch-future; to be confident that none of our present striving is wasted; and, above all, to enjoy undying life now. No programme of cosmic conquest, no findings of psychical research, no version whatever of survival, can, except as it issues in this version, meet the case. "Know of a truth that only the Timeshadows have perished, or are perishable; that the real Being of whatever was, and whatever is, and whatever will be, is even now and forever." * Man is a cat with nine lives; the ninth, being immortal, makes the others immortal, but he can only discover this by dying eight deaths. Ø

Time is the product of our mutual distrust: we abolish it to the extent that we love. + And to love is to deny the separate self. Yet the paradoxical truth is that to take this denial to the limit is the only way to preThere are, of course, many other alternatives and variations; notably the orthodox Christian view that disembodied spirits are not complete persons till at the resurrection they are united to their bodies. But these bodies are now <u>celestial</u> (cf. St Bernard, <u>De Diligendo Deo</u>, XI), luminous and splendid.

° Hegel thought that philosophy proper began with Parmenides, who taught that Reality is unchanging, "immovable in the bonds of mighty chains, without beginning and without end; since coming into being and passing away have been driven afar, and true belief has cast them away". Cf. Plato, Timaeus, 37; and McTaggart: "Nothing is really present, past, or future. Nothing is really earlier or later than anything else or temporally simultaneous with it. Nothing really changes. And nothing is really in time." The Nature of Existence, 333. For a refutation of the view that an assertion of existence is necessarily confined to the present tense, see John Laird, A Study in Realism, p. 50; also Alexander, Space, Time and Deity, i. p. 71. "There is no change in Brahman though all change is based on it", writes Radhakrishnan. "All proximity in space, succession in time, interdependence of relations rest on it." The Philosophy of the Upanisads, p. 51.

† Cf. Reinhold Niebuhr: "Mere development of what he now is cannot save man, for development will heighten all the contradictions in which he stands. Nor will emancipation from the law of development and the march of time through entrance into a timeless and motionless eternity save him. His hope consequently lies in a forgiveness which will overcome not his finiteness but his sin, and a divine omnipotency which will complete his life without destroying its essential nature." <u>Beyond Tragedy</u>, p. 306.

* Sartor Resartus, III. 8.

Ø Paradoxically, the way not to perish is to realize that, as the Koran teaches, "everything except God perishes" (XXVII.
88); adding with St. Bernard (<u>op. cit.</u>, V): "When He gave Himself, He gave me back myself that I had lost".

+ In his essay 'On the Immortality of the Soul', Hume finds reason to believe that alterations in the body produce alterations proportionately in the soul. To love, I say, is to produce a profound alteration in the body: it is to take on a less ephemeral body-soul. As the hymn says, "he liveth long who liveth well", when living well is loving well, and loving well is recovering from the numbness and paralysis that afflict our extremities. serve inviolate the separate self. Insisting on our 'personal' immortality is the surest way of losing it; it is like an eastern continent which can be reached only by sailing westwards. Mr. Gerald Heard writes: × "It is we who, with our greed and fear, make the illusion of time. When love and understanding wholly replace greed and fear, then the illusion of time is conquered." ° I doubt whether Pliny is wrong when he says: "Everything, after its last day, returns to what it was before its first; and after death, bodies as well as souls have no more sensibility of any kind than they had before birth. Only Man's vanity makes him project himself into the future." × For the only way to survive is to project others into the future, and to assume other and more lasting bodies and souls. The specification of the true time-machine is an open secret: it is self-transcending love and goodness. Ø And the working of the machine is no patent process: to go forward in time we must go back --- back to where we separated ourselves from every other self, in order that now we may go forward with them and in them. Trying to realize the future asymmetrically, apart from the past, is like trying to get a sum right by going on and on, instead of going back to where it went wrong, and only then going forward to the solution.

But if our immortality were solely a question of what we could contrive or deserve, we would be ephemeral indeed. Our task is rather one of appreciating what is already established as the source of all temporal things --- the timeless world, the completed picture in which our own blob of paint is eternally what it is, and eternally 'forgiven' for being what it is. That is to say: our business is more a matter of ceasing to break up this totality than of starting to build it. ϕ Above all it is a matter of realizing that this perfect consummation exists now, at this Centre, for us to enjoy. For immortality is not prolonging this life, but deepening it. Heaven is here and now, "the instant made eternity". * And the only way to make this momentous discovery is to die here and now. For to witness one's death is to survive it --- dead men do not practise self-observation. \oplus To be present at all one's deaths, at every hierarchical level except the highest, is to live on, and become immortal.

4. QUICKENING THE DEAD PAST AND FUTURE

Our survival cannot be separated from the survival and the revival of the universe that we have done our best to murder: it demands a world that has no room for death, or mindless mechanism. In other words, the problem of mortality is, basically, the problem of automatism --- the main difference being that whereas the first asks how we can do without the past and future universe, the second asks how it can do without us. Before her awakening to life and mind, and after they have gone, Earth carries on, and so do the Sun and the Galaxy. † If we say: in us these heavenly bodies happen now to be self-conscious, but this self-consciousness is a brief work of supererogation which their past and future histories prove to be both unnecessary and, in the long run, impracticable, then indeed we must leave these histories alone, and cease thrusting ourselves into places where we are not wanted. Our immortality is superfluous: × The Creed of Christ, p. 185.

° Cf. Aldous Huxley, <u>After Many a Summer</u>, pp. 104 ff. It is not for nothing that Carlyle makes his Devil "the Time-Prince". For, as Windelband says, "The innermost meaning of time is the inalienable difference between what is and what ought to be." <u>Introduction</u> to Philosophy, pp. 358-9.

× Historia Naturalis, VII. 56.

For the time-server, time serves; but not for the honest man. If time is taken at its face value, half the good deeds in the world are sheer foolishness. The man who has no hope of earthly reward announces Heaven; on the other hand, perfect justice on earth and in time would limit us to time.

ø "That in them which makes them so permanent", says the Tao Te Ching, of the heavens, "is that they do not live for themselves. Thus it is that they can live so long." φ As R. G. Collingwood pointed out, if the historian were to deal in events of no more than an hour's duration, he would discover the burning down of a house but not its rebuilding, Caesar's assassination but not the conquest of Gaul. "The shorter our standard time-phase for an historical event, the more our history will consist of destructions, catastrophes, battle, murder, and sudden death." The Idea of Nature, pp. 24-6. History turns one face to the observer whose events are reckoned in hours, an utterly different face to one whose events span centuries and millenniums, and still another to one for whom there is but a single 'event' embracing all time.

* Browning, 'The Last Ride Together'. ⊕ Spencer (First Principles, 19) quite rightly notes the absurdity of being aware of one's own death, but the profound significance of the absurdity was lost on him. If I live my death now, if I am capable of "living now in myself the end of the world" (to quote the first line of one of Kathleen Raine's poems), if I am a life that contains all my deaths, then I do not die. But the successful candidate for immortality does not say "I know that I live, and that I shall see myself in the last day". He is concerned with the immortality of what he loves; he has eternal life in an eternal Object. Cf. Plato, Phaedo, 76-9; L. P. Jacks, A Living Universe.

† For the condensation of a gas, the Galaxy has done well; it is much to the credit of these cosmic sweepings, collected into so many cosmic dustbins, that they should indite this description of themselves. As W. Macneile Dixon writes: "That the universe became aware of itself by accident -- there's a noteworthy accident, there's a mad thought for you!.. Remarkable, indeed, had been her works had she possessed mind, purpose and foresight, but how much more remarkable, how admirably skilful to produce these interesting things without a particle either of intention or sense! Perhaps intelligence, perhaps brains, are a mistake. How much better we might have got on without them!" The Human Situation, pp. 386, 145. Page 557

the cosmos has no use for it. But if we say: this mind of which we are the vehicles contains now the whole of our history at every level; none of which is abandoned to mindlessness and automatism, then we see that our immortality proceeds from the very nature of our mind, and of the cosmos which is its content. Then it is no more a question of entreating the past and future to find room for us, but of realizing that they belong in us, and can no more spare us than we can spare them. Ø

"The slow and steady ages plodding, the unoccupied surface ripening, the rich ores forming beneath; At last the New arriving, assuming, taking possession..." °

the coal measures laid down so long before the steam engine; the ochres and umbers and siennas held in readiness for Rembrandt; the unseeing eye and the unhearing ear growing to perfection in the dark silence of the womb; \times the astronomical performance which long precedes and outlasts Earth's astronomical awareness + --- these, and a million other instances of what looks like beneficent automatism, call for explanation. The question is not whether there is awareness and intention -- this paragraph is itself sufficient demonstration that they exist -- but when they occur. Is design the source or the product? Is it creator or epiphenomenon? Which is in the right: the Ionian naturalism that makes the higher creatures spring from the four elements which exist by chance, or the Pythagorean intuition that the soul comes before the body, and design before nature? ϕ On the one hand we have Sir Charles Sherrington's "Life's story has been an unfolding of germinal powers of the planet bringing emergence of mind... We are, in biological phrase, reactions. The situation creates the life which fits it." * And on the other the Psalmist's "My substance was not hid from thee, when I was made in secret, and curiously wrought in the lowest parts of the earth. Thine eyes did see my substance, yet being unperfect; and in thy book all my members were written, which in continuance were fashioned, when as yet there was none of them." † I say that both are right, that automatism is a fact and is prior to the mind which gives it that name; but this mind, once arrived, has unlimited retrospective and prospective effect, with the result that automatism is abolished; o moreover mind, by reducing all time to a single specious present, deprives automatism of its last weapon --- temporal priority.

To state this problem is to point to its solution. I am my own registrar of births and deaths, my own midwife, coroner, sexton. It is no ordinary corpse that conducts its own autopsy. Here am I concerning myself about the fact that there is no concern about my lifeless extremities! Here am I deeply conscious of unconsciousness! The only valid argument for mindless mechanism is complete absence of argument. It is indeed necessary that we insist on the mindless, applying our minds to it increasingly, but we do not have to remain unaware of the fact that our practice is the progressive disproof of our theory. Suppose I tell the story of how primeval material particles were shuffled till some of them were arranged in the form of cells, and how the machinery of evolution went on to produce the immense procession of my animal ancestors, culminating here and now in this summary of it all. Now the all-important fact is that this, in common with every other such historical description, utterly changes the character of the past of which it treats. ° At every ø "Become the Resurrection and so behold it", exclaims Rumi; to which we may add: assist in the Resurrection, and so enjoy it. ° Walt Whitman, 'Song of the Redwood-Tree'.

× On this see the remarkable chapter 'The Wisdom of the Body', in Sir Charles Sherrington's <u>Man on His Nature</u>.

* "Leaving her the future task: Loving her too well to ask", says Meredith of Earth, in <u>The Woods of</u> <u>Westermain</u>. The question is: <u>can</u> we leave things to her? Meredith's poetry, acutely Earth-conscious, suggests that we cannot. "If we are to believe what we are told, it (the universe) got along for incalculable ages quite comfortably without... life or mind... How this information has been obtained I am ignorant." W. Macneile Dixon, <u>op. cit.</u>, p. 126.

φ Cf. Plato, Laws, X.

* <u>Op. cit</u>., V.

† <u>Ps</u>. CXXXIX; cf. <u>Job</u>, XXXVIII. 4: "Where wast thou when I laid the foundations of the earth?" And Boehme's doctrine that before the beginning of the world God had sport with us, "in our hidden childhood". (<u>Confessions</u>, p. 95.)

Θ Or, at the most, is an abstraction. "The sphere of dead mechanism is set apart by an act of abstraction, and in that abstraction alone it essentially consists." Bradley, <u>Appearance and Reality</u>, p. 499.

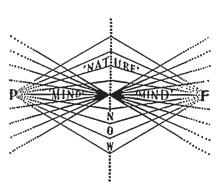
Dr Julian Huxley (<u>Evolution, The Modern</u> <u>Synthesis</u>, p. 576) says that any purpose we find in evolution has been read into it by us. Precisely (I would reply) -- and what we infect with purpose is no longer purposeless; nor is this purpose imposed upon evolution from without; it is the most indigenous and significant of all evolution's manifestations.

"You can never, by thinking about atoms, prove that there is no such thing as thought other than as an ultimate product of atoms. Before you could reach thought or mind as a last result, you must needs eliminate it from the data of the problem with which you start; and that you can never do, any more than you can stand on your own shoulders or outstrip your own shadow." John Caird, Introduction to the Philosophy of Religion, p. 89.

° "We are told", says Samuel Butler, "that the Deity cannot alter the past. But historians can and do; perhaps that is why they are allowed to exist." And, we may add, psychoanalysts can and do; that is why we pay their fees. On the past as always changing, see McTaggart; <u>The Nature of Existence</u>, 311; also Stanley Cook, <u>The</u> <u>Rebirth of Christianity</u>, IV. 4. turn it <u>selects</u> its material, with a view to the present outcome, and in so doing supplies the mind which it cannot find: it cannot help but play the role of presiding genius. Convergent mind transforms divergent nature. In turn, it sets aside other stars, other planets, other species, other men, till this moment and this man remain. It converts an ever-spreading and ever-ramifying system of events, none of which is privileged, into an ever-narrowing system, of which privilege is the rationale, till by judicious selection this point, which at once ends and holds the entire system, is attained. And it does this in the endeavour to demonstrate, not purpose but accident, not mind but mechanism, not cunning but luck! My cosmic history is symmetrical, and can be read only from Now back into the past and forward into the future, so that all my temporal constitution is enlivened and regulated from this Centre. ° But try to tell it as a one-directional tale devoid of mind, working out at each of its myriad crises the chances for and against my survival or eventual emergence, (calculating, for instance, my chances against millions of competing spermatozoa, on millions of occasions), and the result, far from being mere mechanism, would be a fantastically gigantic and quite absurd 'mental' edifice. Ø

It is a matter of empirical observation that the Galaxy carving itself out of the primeval substratum, and the Sun carving itself out of the Galaxy, are alive to their behaviour: for who but they can be responsible for this sentence? The 'time-lag' between the deed and full awareness has to be accepted with natural piety, as something proper to such remarkable individuals; it would be foolish to expect it to resemble the 'time-lag' characteristic of merely human behaviour. No such interval, no action; and (as I have already tried to show) the greater the interval, the more exalted the grade of the action. To put the matter differently, pastness and futurity are relative to the status of the observer, and we have in the hierarchy a system of specious presents capable of covering all those past and future occasions when (as common sense would say) no sufficient contemporary awareness is available. × Descending the hierarchy is excluding more and more of the past and the future from the mind that is <u>now</u>, till it is all mindless; ascending the hierarchy is putting all this content back. But the lower levels of the hierarchy are not to be despised; in their way they are valid, and cannot be spared from the whole. Inevitably, then, mechanism is true for the scientist at low levels, and untrue for the mystic at high levels, and partly true and partly untrue at the level of common sense.

For example, though I conceive myself to be surrounded by objects that are hopelessly inert, I have no difficulty whatever in bringing to life the dead parts of my body, such as the lymph of my blood and the calcareous matter of my bones. This vitalizing ability of mine is, in fact, potentially unlimited. When I realize my Earth-hood I am not Atlas groaning under the deadweight of the barysphere; and when, contemplating my fellow stars, I become this star, the great lifeless masses of Jupiter and Saturn are no embarrassment --- they are lighter than thistledown and clearer than glass, obscured by not so much as a grain of dead dust. I live, it may be said, by the resurrection of the dead. I carry no ballast, no mere passengers, no tare even; and the more inanimate matter I take on board the more lively I become. Now it is no more difficult to quicken those



^o McTaggart, <u>The Nature of Existence</u>, 698, 716, regards as erroneous the "belief that the earlier determines the later in a way in which the later does not determine the earlier." Bertrand Russell has attributed to our ignorance the view "that the past determines the future in some sense other than that in which the future determines the past." <u>ABC of Relativity</u>, p. 215. Ø The universe in space and time is sometimes defined as a <u>product</u> or <u>function of</u> our instruments, which are here and now. Taking this situation seriously. I add that

our instruments, which are here and now. Taking this situation seriously, I add that the <u>conditions</u> of science are as naturaI as its subject matter. × In the ninth heaven, Beatrice explains to

× In the ninth heaven, Beatrice explains to Dante that the angels are "...intent Upon the glorious vision, from the which Nought absent is nor hid: where then no change

Of newness, with succession, interrupts, Remembrance, there, needs none to gather up

Divided thought and images remote." <u>Paradiso</u>, XXIX.

"To bring on the triumph of intellect over mechanism, of responsible morality over irresponsible force, is our mission." F. Adler, <u>Creed and Deed</u>. As Hegel assures us, "The nature of the universe, hidden and shut up in itself as it is at first, has no power which can permanently resist the courageous efforts of the intelligence; it must at last open itself up; it must reveal all its depth and riches to the spirit, and surrender them to be enjoyed by it." Edward Caird, <u>Hegel</u>, p. 195.

For Heidegger (Being and Time), reality subject to time is fallen reality, a nightmare of care and anxiety: we must escape from the power of time. Similarly Berdyaev teaches that eternity, lying in the depths of the present, is the ceasing of that anxiety which gives to existence its temporal form. Even Russell describes time as an "unimportant and superficial" feature of reality; to realize the triviality of time is the beginning of wisdom. Mysticism and Logic, pp. 10 ff; cf. Our Knowledge of the External World, pp. 166 ff. Here Russell aligns himself with the tradition of Parmenides and Plato, Spinoza, Kant, Hegel, and Bradley. As McTaggart says, "Neither philosophy nor religion ever hold themselves apart from mysticism for any long period, and almost all mysticism denies the reality of time." Op. cit, 304.

parts of my body which are dead in time, than those which are dead in space. The only reason I should feel a difficulty is that I have a habit of thinking about mind as if it were butter which, being spread over matter -- over our bun-shaped universe -- to make it palatable, gets thinner the further it goes. But the opposite is true: the further you spread it the thicker it gets, till you find, in the end, all butter and no bread.

In other words, the brevity of the world's 'animating principle' is no more disadvantageous than its smallness; for only as a timeless instant can it become the receptacle of all time.

And in any case what is life but quickening the dead, without whom there is no life? How many gallons of water, how many cubic yards of air, how many tons of chemicals -- dead all of them, as dead as anything can be -- have I not animated? I live, not by having life, but by conferring it, at every hierarchical level. And the vaster the dead wastes that confront me, the more abundant the raw material of my life: giving more life, I am more alive. It is because God is wholly living that none of us can ever die. Yet the materialists and mechanists deserve our gratitude, as they play their part in replenishing those precious stores of dead matter which are life's fuel. ϕ We ought to be thankful even for our own besetting lifelessness, for the hardening sympathies, the ingrowing habits, the loss of freshness and spontaneity, the invading robot: to live is to hold our frontiers against the inroads of mortification, attacking routine and complacency and the taken-for-granted. Only against such resistance can effort be expended. The measure of the world's automatism is the measure of the life which it evokes for its own overcoming. A well populated universe, a cheerfully contrived cosmic boarding establishment run on common-sense lines, without immense strain and danger and bewilderment, could only be a trivial affair. But part of the greatness of the actual universe, with all its terror and magnificence, is that it needs to be so great. Ø

Our immortality, then, is a component of that universal life which is made actual, by hierarchical stages, in the course of its campaign against death. It comes to us as an urgent duty no less than as a free gift, as won yet still to be won. And it is by seeking it for others that we find it for ourselves. As many writers -- writers as diverse as Feødorov and Berdyaev, Renan and R. G. Collingwood × and Gustave Geley + -- have insisted, our task is to bring the dead to life in us. "For Feødorov death is the worst and only evil.... Final victory over death consists... in bestowing resurrection upon the dead ancestors.... Man ought to be a giver of life and affirm life for all eternity." * Our ability -- our anxiety -- to enliven the past and the future is eloquent of our own deathlessness. † Our historical sense, our science, our insatiable hunger after the secrets of time, point unmistakably to the universality of life and mind, and to the active and far-reaching part we play in their operation. Traherne may well ask:

> "Will nothing serve the turn? Nor earth, nor seas, nor skies? Till I what lies In time's beginning find; Must I till then for ever burn?"°°

Obviously it is unrealistic to confine what we call 'Traherne' to the thir-

"O Friend! hope for Him whilst you live, know whilst you live, understand whilst you live: for in life deliverance abides. If your bonds be not broken whilst living, what hope of deliverance in death? It is but an empty dream, that the soul shall have union with Him because it has passed from the body: If He is found now, He is found then,

If not, we do but go to dwell in the City of Death."

Kabir (<u>Kabir's Poems</u>, trans. Tagore and Underhill, pp. 2-3.)

Cf. D. H. Lawrence: "For two thousand years man has been living in a dead or dying cosmos, hoping for a heaven hereafter. And all the religions have been religions of the dead body and the postponed reward.

... Man is only postponedly-divine: when he is dead and gone to glory." <u>Apocalypse,</u> pp. 95, 117. On immortality as more abundant life <u>now</u>, see W. R. Inge, <u>Personal</u> <u>Idealism and Mysticism</u>, p. 15.

 ϕ Because the cosmology is made to the measure of the man, and belongs to the level on which he stands, it is <u>true</u>. "To be carnally minded is death", and death is neither illusory on its own plane nor superfluous to the others. We gravitate to that hierarchical level which presents us with the cosmology we want, and the longevity that goes with it. Cf. Henry Drummond, <u>Natural Law in the Spiritual World</u>, pp. 81 ff, 381 ff. All the same, whether we know it or not, our "immortal part with angels lives" -- as Balthasar says of Juliet.

ø "That must be a vigorous life", says Eckhart, "in which dead things revive, in which even death is changed into life." Evans, i. p. 207.

× 'Human Nature and Human History', in <u>Proceedings of the British Academy</u>, xxii; <u>An Autobiography</u>, X.

+ From the Unconscious to the Conscious, pp. 304 ff.

* Berdayev, <u>The Destiny of Man</u>, p. 330; cf. <u>The Russian Idea</u>, p. 215. Lloyd Morgan (<u>Emergent Evolution</u>, p. 205) refers to the emergent 'More' which "involves the less of all other levels; on the less the more is built; by the more, the less, right down to the least, is transformed."

† That our success is partial is not to be wondered at: as Bradley puts it, only the Absolute is the final synthesis of mind and nature. It is of the essence of the creature, who is partially dead, to live amid the dead and the inert.

° 'Insatiableness'.

ty-seven years or so, which is all the time we generally credit him with. He is demonstrably spread over all time. And this because the universe, by knowing itself <u>now</u> throughout its full spatial and temporal extent, knows its own mind, bringing universal life and immortality to light. Nor is this present recollection the mere registration of time-scattered events: it is their redemption and fulfilment. Here and now they take on full meaning, the last relics of accident and mechanism vanish, and Heaven discloses itself in the midst of time. If I fail to see this ever-present heaven, it is because I suffer from a kind of moral myopia. When for a few instants I live unselfishly, when the egotistical intentions of this narrow self are merged in those of a greater, then it is a matter of first-hand experience that the life and purpose available now are perfectly competent to irradiate the whole of space and time, and that the deadness of the world was only the shadow of my own temporary deadness. To the living all things live. The ideally healthy person is one whose spatio-temporal extremities have recovered from rigor mortis, and who ceases to repress or deny any portion of his total life. † Till we are immortal, till we are big enough and brave enough to stand our immortality, we are somewhat insane.

5. BEYOND HISTORY: THE EXCLUSION OF TIME

But this is only half the story. There are two ways of getting the better of time --- the way of ascent and inclusion which I have just discussed, and the way of descent and exclusion which is its inevitable counterpart. Both aim not so much at the conquest of time as at the realization that time itself implies that it is already overcome at the ultimate levels, or in reality.

When all is said on the subject of my history, it remains a fact that I am an extreme case of arrested development, for I remain at the timeless Centre which is incapable of change. ° The immense surge and sweep of evolution is powerless to shake my hold on the rock of timelessness --- the timelessness which is submerged below time, not that other timelessness which is raised far above its surface. What is dated, what has a history, what is or was or will be something, is not myself but my object: I have never begun to evolve. Everything else has some achievement to show, but I have none. The histories enacted here allow me no history. Strictly speaking, this book is biographical, not autobiographical.

Nor is this barren theory. The practical consequences are important.× To find myself I must learn, not only to concern myself with the past and future till all time is present, but also to dismiss them till all time is absent, and I come to that bone-dry Moment from which no further drop of pastness or futurity can be squeezed. Thus Christ preached everlasting life <u>and</u> taking no thought for the morrow: the extremes are united. "As the youth lives in the future," says Grillparzer the Austrian poet, "so the man lives in the past; no one knows how to live in the present." Chesterton, writing about Benjamin Kidd's theory that men will become increasingly concerned with future events, has a delightful passage deOn increasing self-consciousness as involving increasing grasp of time, see L. T. Hobhouse, <u>Mind in Evolution</u>, pp. 373 ff.

According to Santayana (<u>The Life of</u> <u>Reason</u>), the good life is marked by piety towards the past (a reverent attachment to the sources of our being), charity towards our contemporaries, and spirituality towards the future.

"When thou didst not, savage, Know thine own meaning... I endow'd thy purposes With words that made them known." <u>The</u> <u>Tempest</u>, I. 2

See Archbishop Otto, <u>The Idea of the</u> <u>Holy</u>, p. 91, on the progressive discovery that our past life was not, after all, chaotic, but guided by "an eternal gracious purpose." For Mr. C.S. Lewis (e.g., <u>The</u> <u>Great Divorce</u>, pp. 62 ff.) Heaven means a retrospective goodness, that transmutes the evil of our earthly past: Heaven works backwards, turning agony into glory. And this alchemy begins now: forgiven sins and remembered sorrows are no longer misfortunes or accidents.

† From this point of view, our body is our task: a universe of opaque and unorganized material has to be worked upon and won over to the side of the living. To the extent that we have progressed in this work, we are embodied. Thus Rumi: "The body came into being from us, not we from it. We are as bees, and bodies as the honeycomb: we have made the body, cell by cell, like wax." (Nicholson, <u>Rumi, Poet</u> and <u>Mystic</u>, p. 141).

° Cf. Leibniz, <u>Monadology</u>, 4-5; Ward, <u>Realm of Ends</u>, pp 204, 304, 470; N.O. Lossky, <u>The World as an Organic Whole</u>, p. 38; C.A. Richardson, <u>Spiritual Plural-</u> <u>ism</u>, p. 171; J.M.E. McTaggart, The <u>Nature</u> <u>of Existence</u>, 501.

× C.S. Lewis (<u>Screwtape Letters</u>, p. 76) says that God wants us "to attend chiefly to two things, to eternity itself, and to that point of time which they call the Present. For the Present is the point at which time touches eternity." The devil Screwtape, on the other hand, wants us to live in the past and the future -- particularly in the future, where nearly all our vices are rooted. "Strangely and mysteriously," says Aldous Huxley, on the subject of the vision of children or convalescents, of artists or lovers, "<u>sub</u> <u>specie momenti</u> is somehow <u>sub specie</u> <u>aeternitatis." Texts and Pretexts</u>, p. 22. scribing "men in future ages weeping by the graves of their descendants, and tourists being shown over the scene of the historic battle which was to take place some centuries afterwards." * In principle, the danger is a perfectly real one. Living in the past or the future is death; dying to them is life. The child's innocence is the innocence of the present moment. "He arrives not at the mischief of being wise, nor endures evils to come, by foreseeing them," John Earle says of him. + "The elder he grows, he is a stair lower from God; and, like his first father, much worse in his breeches." For more and more he learns to neglect present goods for absent ones. The man who looks upon the present moment as mere means, lacking all intrinsic good, he for whom reality is always there and then but never here and now, is as good as dead already. For death is just this kind of absent-mindedness. As the Quaker Thomas R. Kelly wrote, ° "the past matters less and the future matters less, for the Now contains all that is needed for the absolute satisfaction of our deepest cravings... Instead of anxiety lest our past, our past defects, our long-standing deficiencies blight our well-intentioned future efforts, all our past sense of weakness falls away and we stand erect, in this holy Now, joyous, serene, assured, unafraid. Between the relinquished past and the untrodden future stands this holy Now, whose bulk has swelled to cosmic size, for within the Now is the dwelling place of God Himself. In the Now we are at home at last... We have found in this holy immediacy of the Now the root and source of time itself." This moment is our inexhaustible treasure-house, and all our poverty is only ignorance of our wealth. The accepted time, the entirely opportune moment for Heaven to occur, is now.

Does refusal to take time seriously lead to fatalism, inaction, complacency? More often, I think, it makes for astonishing energy and persistence. × Surely the Marxist owes much of his effectiveness to his burning conviction that the "expropriation of the expropriators" is inevitable anyhow; and the dynamic of a Hitler or a Napoleon is plainly consistent with (even if it does not actually spring from) unbounded confidence in destiny. It is true, of course, that the effects of seeing through time just so far as suits a single man, or nation, or class, are apt in the long run to be more disastrous than the effects of failing to do so: nevertheless the force that accrues cannot be denied. Time is like money --- the more you respect it the less good it does you. It is designed to be got rid of. The lives of the great mystics suggest that the best use of time is to call time's bluff. Who but the man that already lives in the realm where goodness is triumphant over all the world's wickedness, beauty over all its squalor, truth over all its lies, does most to bring that realm to pass? Who but such a man has the heart to devote his life to service of which the only visible outcome may be to give the forces of evil their chance? Who but the one that is already at the goal is in a position to reject all the specious short cuts to it, or can afford to take his time -- namely, all time -- without any time-serving? Or, to put the same question differently, who but immortals know how to live well this mortal life? Who but the deathless know how to die? Ultimately, the most practical man is one who, like Thomas A'Beckett in T.S. Eliot's play, makes his decision 'out of time,' and does not argue by temporal results. *

Indeed it is the alternative belief -- that perfection is not now, but in

* The Napoleon of Notting Hill, I.

+ Microcosmography.

Examples of extraordinary experience of the present are to be found in the <u>Book of</u> <u>James</u> (one of the apochryphal gospels), where Joseph has a vision of all things standing still, in Browning's 'The Last Ride Together,' and Rupert Brooke's 'Diningroom Tea.'

We pass, the Queen tells Hamlet, "through nature to eternity." But in fact, as Gerald Heard says, "Eternity is not approaching us across the days and years. It is about us, within us, and is attained the moment we turn to it, as soon as we shift focus and look through the illusion of time." <u>The</u> <u>Creed of Christ</u>, p. 188.

° "A Testament of Devotion, p. 81.

Time arises out of the repression of time. Admit all of it, and it abolishes itself. "Thus it is," says Chuang Chou, "that a sage wanders freely in the fact that things cannot be lost but are all preserved." (Hughes, <u>Chinese Philosophy in Ancient</u> <u>Times</u>, p. 193.) As to the quality of this experience, Eckhart assures us: "He rejoices all the time who rejoices above time and free from time."

On the degree to which the idea of the timeless has been rejected by the modern mind, and the consequences, see Rosalind Murray, <u>Time and the Timeless</u>. For a spirited attack on the time-ridden philosophies of Bergson and Alexander, see Wyndham Lewis, <u>Time and Western Man</u>.

× To mention only one instance, McTaggart was convinced that the final state of the universe (one of love so intense that the finest mystical rapture is only a poor fragment of it) does not come <u>after</u> the other stages, though from their point of view it seems to do so. But this conviction of his, so far from disposing him to a restful attitude, inspired its own setting forth with immense labour in <u>The Nature of Existence</u>.

"Faith is practical," says F.H. Bradley, "and it is, in short, a making believe; but, because it is practical, it is at the same time a making, none the less, as if one did not believe. Its maxim is, Be sure that opposition to the good is overcome, and nevertheless act as if it were there; or, Because it is not really there, have more courage to attack it." Appearance and Reality, p. 443. We must go out "to overcome the world because it is overcome, and to conquer evil because it is already conquered." "Religion is release from evil, but it is so only because the faith that there is no evil is also the will to abolish evil." A.C. Bradley, Ideals of Religion, pp. 145, 270.

* Murder in the Cathedral.

the inaccessible future -- which disheartens. For such a perfection, no matter how we spend ourselves for it, is no good to us: coolly it leaves us, with all the men of the past, to our fate. "Both from the religious and ethical points of view this positivist conception of progress is inadmissible, because by its very nature it excludes a solution to the tragic torments, conflicts and contradictions of life valid for all mankind, for all those generations who have lived and suffered. For it deliberately asserts that nothing but death and the grave awaits the vast majority of mankind... But somewhere on the peaks of historical destiny, on the ruins of preceding generations, there shall appear the fortunate race of men reserved for the bliss and perfection of integral life." \times

Hegel says: "The consummation of the infinite End, therefore, consists merely in removing the illusion which makes it seem yet unaccomplished. The Good.... needs not wait upon us, but is already by implication, as well as in full actuality, accomplished.... Its action consists in getting rid of the illusion which it has created." ° These words must necessarily remain nonsense at the time-ridden levels of the hierarchy. "And I could not live, were I not a seer of that which is to come... And how could I endure to be man if man were not poet and riddle-reader and redeemer of the accidental! To redeem the men of the past... this alone I call redemption! Nietzsche, <u>Thus Spake Zarathustra</u>, 'Of Redemption.'

× Berdyaev, <u>The Meaning of History</u>, pp. 168-9. Cf. <u>The Destiny of Man</u>. 333, Berdyaev identifies the "bad infinity" which is merely future with Hell; and p.319: 'The meaning of death is that there can be no eternity in time and that an endless temporal series would be meaningless."

° <u>Logic</u>, (trans. Wallace, 1892) pp. 351-2. (Encyclopaedia, 212)

PART VI

Who, if I cried, would hear me among the angelic orders? And even if one of them suddenly pressed me against his heart, I should fade in the strength of his stronger existence......

Early successes, favourites of fond Creation, ranges, summits, dawn-red ridges of all beginning, --- pollen of blossoming godhead, hinges of light, corridors, stairways, thrones, spaces of being, shields of felicity, tumults of stormily-rapturous feeling, and suddenly, separate, mirrors, drawing up their own outstreamed beauty into their faces again.

Rilke, Duino Elegies, I, II (trans. Leishman and Spender).

The great control of the life of earth from the living and intertwining heavens was an idea which had far greater hold of the minds of men before the Christian era than we realize.... The old cosmic vision remained, and men believed, perhaps, more radically in the rule of the stars than in any of the gods. Man's consciousness has many layers, and the lowest layers continue to be crudely active, especially down among the common people, for centuries after the cultured consciousness of the nation has passed to higher planes. And the consciousness of man always tends to revert to the original levels; though there are two modes of reversion: by degeneration and decadence; and by deliberate return in order to get back to the roots again, for a new start.

D.H. Lawrence, Apocalypse, pp. 194-5.

You conceive then of cosmic mind shaping world history, acting by its intellectual energy on us through a hierarchy of powers and intelligences.

A.E., The Interpreters, p. 79.

To the intent that now unto the principalities and the powers in the heavenly places might be made known through the church the manifold wisdom of God.

<u>Eph</u>. III. 10.

Ye are come unto mount Zion, and unto the city of the living God, the heavenly Jerusalem, and to innumerable hosts, the general assembly of angels, and the church of the firstborn who are enrolled in heaven.

<u>Heb</u>. XII. 22-3.

If we stop pretending for a moment that we were born fully dressed in a service flat, and remember that we were born stark-naked into a pandemonium of most unnatural phenomena, then we know how out-of-place, how lost, how amazed, how miraculous we are...... Poetry is the language in which man explores his own amazement. It is the language in which he says heaven and earth in one word.

Christopher Fry, 'A Playwright Speaks', Listener, Feb. 23, 1950.

CHAPTER XXII

THE NEW ANGELOLOGY

And it came to pass after this that my spirit was translated And it ascended into the heavens: And I saw the holy sons of God. They were stepping on flames of fire: Their garments were white and their raiment, And their faces shone like snow.

And the angel Michael (one of the archangels) seized me by my right hand, And lifted me up and led me forth into all the secrets. And he showed me all the secrets of righteousness. And he showed me all the secrets of the ends of the heaven, And all the chambers of all the stars, and all the luminaries, whence they proceed before the face of the holy ones.

And round about were Seraphin, Cherubin, and Ophannin: And these are they who sleep not, And guard the throne of His glory. And I saw angels who could not be counted, A thousand thousands, and ten thousand times ten thousand....

I Enoch, LXXI (trans. R. H. Charles).

Now there are many ravishing views and opening paths within the bounds of heaven, whereon the family of the blessed gods go to and fro, each in performance of his own proper work; and they are followed by all who from time to time possess both will and power; for envy has no place in the celestial choir.

Plato, Phaedrus, 247.

Man is so created as to be at the same time in the spiritual and the natural world. The spiritual world is where angels are, and the natural world is where men are.

Swedenborg, True Christian Religion, 401.

It would not accord with the passionateness of the angels to be spectators, they excel us in action to exactly the same degree that God is more active above them; I regard them as the aggressors <u>par excellence</u>, --- and here you must give way to me, I have paid the price: for when I, coming deep down from things and beasts, longed to be instructed in mankind, behold, the next stage, the Angelic was infused into me, and that is why I have overleapt people and now look back at them with compassion.

Rilke, Selected Letters (trans. R. F. C. Hull), p. 230.

How long shall men deny the flower Because its roots are in the earth?

But fools shall feel like fools to find (Too late inform'd) that angels' mirth Is one in cause, and mode, and kind With that which they profaned on earth.

Coventry Patmore, 'Heaven and Earth'.

O sons of men, the firmament's beloved, The Golden Ones of heaven have us in care ---With planetary wisdom, changeless laws, Ripening our lives and ruling hearts and rhythms.

Edith Sitwell, 'An Old Woman'.

I considered them (the angels) as the real causes of motion, light, and life, and of those elementary principles of the physical universe, which, when offered in their developments to our senses, suggest to us the notion of cause and effect, and of what are called the laws of nature..... I say of the angels, 'Every breath of air and ray of light and heat, every beautiful prospect is, as it were, the skirts of their garments, the waving of the robes of those whose faces see God.'

Newman, Apologia Pro Vita Sua, III.

1. FROM THEORY TO PRACTICE: THE FOUR APPROACHES TO A NEW ANGELOLOGY

It is a rare but unforgettable experience to glimpse that august and terrible being whom we call man. He who finds himself credible is not yet himself. He is thinking of something else --- certainly not of one who can find room for the hosts of heaven, and in whom the indescribable variety of this world is lodged, not only in miniature and microcosmically, but also in original fulness. A cosmic Christopher Shy, man is the unsuspecting victim of the most remarkable practical joke ever played. Certified lunatics who believe they are pieces of glass, or Jesus Christ, or buttered toast, at least have the wit (which their keepers sadly lack) to see that man is by no means what he seems. × But here is a Star mad enough to mistake itself for a little food-tube set on end; here is a Galaxy of hundreds of thousands of millions of suns living under the delusion that it is only a featherless biped; here, also, are megalomaniac protons and electrons convinced of their manhood, and molecules giving themselves the airs of a professor of chemistry. Or rather, here are all these aberrations concentrated in a single case. In a number of ways man is out of his mind. His common sense is common nonsense.

The theory of man which has emerged from this inquiry is wildly at variance with our ordinary assumptions; and only by living with it, practising it, continually confronting common sense with it, can the theory cease to be mere theory, and come true. But is the quest of selfknowledge, after all, so important? common sense asks. The answer seems to be that for a handful of men it is an instinct, a natural necessity like taking exercise; others are forced by personal failure, by miseries without and within, to consider the nature of man. But of all those who, for one reason or another, are driven to self-examination, how few are not content to find and cultivate a single aspect --- infrahuman or suprahuman. Such unbalance is the main cause of our troubles. We are one-sided, asymmetrical, victims at once of obsession and repression. Our upper and lower halves need putting together again. + We must, by realizing what we are, become what we are. Then, once having caught sight of the mystery and the nothingness and the immensity of man, we can never again be frightened into quite the same extremities of selfalienation. Of course self-knowledge must continually come and go, but when it goes it leaves behind a token, and when it comes it comes a little more easily than last time. And if the "horrible contrast" (as Nettleship called it °) between the moment of vision and the moment of no-vision becomes more horrible still, that is evidence of increasing depth: the vertical dimension of the personality is revealing itself. The strata of our nature have many surprises for us, as new shafts of experience are driven through them.

My intention, then, in this the last part of the book, is mainly practical. If this is what man is, what is he fit to do, what must he do? Indeed we do not need to invent riders to test our grasp of the principles of human nature. A superabundance of urgent problems is forced upon us. If ever there was a time when philosophy had an opportunity and a duty to speak plainly to man's condition, to lend a helping hand, and tell him unambiguously what to do, now is the moment. * Here is philosophy's opportunity to exchange the dust of the library for the dust of the street (or at any rate to mingle them), to speak the language of ordinary men, to be simple without being shallow. Is it too much to expect that philosophy, after so many centuries of research and debate, should at this

× A frog whose cerebral hemispheres have been removed behaves very much as before, except that he lacks spontaneity. By applying stimuli we provoke the correct responses, but there seem to be no actions unprovoked by these present stimuli. (A somewhat similar effect follows the operation of frontal lobotomy on human beings.) In much the same way, a man whose connexion with the higher suprahuman 'centres' has been partially severed (and this lesion is now the rule rather than the exception) seems on casual inspection to behave in a fully human fashion. Actually, however, he is, like the frog, acting under compulsions, not freely. Supply the appropriate stimulus (violence, sexual object, food, etc.) and the result is more or less predictable. But let the connexion with the higher centres be restored, and the oddest responses are likely to follow: violence may now provoke non-violent reactions, and so on. In brief, the whole multi-level man is a person: the lower half of him is a robot.

+ This is one of the principal themes of <u>The New Man</u>, by Maurice Nicoll. On our behalf, writes Mr Nicoll, Jesus had to reestablish the connection between Heaven and Earth in himself, to open up a way for influences from the higher level to reach man, to restore in his own personality the broken links between the human order and the divine.

° <u>Remains</u>, i. p. 94.

* John Laird, concluding his survey of Recent Philosophy, (p. 233) asked some pertinent questions: "How could philosophy have a greater opportunity? But, given the opportunity, what have philosophers done? Has philosophy become most elusive just when there was a disposition to give her a public welcome? Have different bands of philosophers deliberately cultivated different 'languages' that resemble secret codes rather than the vehicles of general communication? Is there a superfluity of puerile pedantry? Has there been too intensive cultivation of special areas with slender regard for the general needs of the philosophical community?" Cf. R. G. Collingwood, Speculum Mentis, pp. 278 ff; A. N. Whitehead, Process and Reality, p. 218; Gore, The Philosophy of the Good Life, p. 7.

crisis of human history commit itself to a pronouncement upon human nature, as definite in its own way as the pronouncements of religion and science are in theirs?

I am convinced that a great re-synthesis is now possible, reconciling modern science with traditional teaching about the universe, our heads with our hearts, the crudest popular beliefs with the most refined philosophical speculation. ° More particularly, in what may be called the new angelology, we can already see the shape of this re-synthesis. Four different lines of thought, four approaches, converge here: ---

(i) <u>The approach from tradition</u>. Men everywhere have believed, since the earliest times, in suprahuman and infrahuman beings whose nature human beings are capable of sharing to some degree.

(ii) <u>The approach from present intuition</u>. There is an 'underground' and unreasoned conviction that such beings exist --- a conviction revealed, for example, in popular cults and modern poetry.

(iii) <u>The theoretical approach</u>. There are important reasons, both scientific and philosophical, for holding the belief.

(iv) The practical approach. It may be shown that certain practical advantages follow from holding the belief, and disadvantages from failing to hold . \times

2. THE APPROACH FROM TRADITION

Though tradition, on the whole, is in favour of a hierarchy of beings similar to those described in this book, certain provisoes must be made. (1) Belief in the hierarchy, and more particularly in the suprahuman half of it, has often been rejected by individuals and groups, and at times driven underground. (2) Pre-scientific hierarchies take many forms, some of which are exceedingly fantastic; any close resemblance between them and the hierarchy of this book is exceptional. (3) Concerning the degree to which the remoter levels of the hierarchy are accessible to man, and the degree to which he shares their nature, there is great divergence of doctrine; as a rule, however, man is not excluded from these realms even in this life, and in the life to come they are his proper place. * (4) As to the function and office of the various grades, and their stations in the cosmos, there is no one consistent story; but there is a remarkably persistent tendency to equate physical height with hierarchical status, and to string out the hierarchy along a vertical line stretching from the nether parts of the earth to the remotest heavens. The suprahuman orders exercise power over earthly things from their places in the sky, and they are either the donors or the companions of human immortality; they tend also to take on lofty moral attributes, and to mark the ascending stages of the mystic's journey. And, counterbalancing these luminous orders, is the nether realm of dark and often subterranean powers --- erratic or dangerous, stupid or malignant or definitely evil. But here we find a curious contradiction: sometimes the highest powers are superlatively evil,

^o This book might be described as my own version of Whichcote's saying: "That preaching has most commanded my heart which has most illuminated my head"; and as a defence of his dictum: "There is nothing so intrinsically Rational, as Religion is." <u>Aphorisms</u>, 457.

Henry Drummond insisted, not (like Paracelsus and his school) that the physical world is full of 'signatures' of the spiritual, but that there is one world, which is spiritual throughout, and one law that unites its levels. "The position", he says, "is not that the Spiritual Laws are analogous to the Natural Laws, but that they are the same laws. It is not a question of analogy but of Identity." Natural Law in the Spiritual World, p. 11. Bishop Butler also, though having less evidence than Drummond, realized that "the natural and moral constitution and government of the world are so connected as to make up together but one scheme." Analogy of Religion, VII.

× <u>Die Drei Motive und Gründe des</u> <u>Glaubens</u>(1863), Fechner argued for his panpsychist universe along three lines: ---- (1) <u>Historical</u>: we believe what we have been told, and what was believed before us. (2) <u>Practical</u>: we believe what is serviceable to us. (3) <u>Theoretical</u>: we believe what we find grounds in experience and reason for believing. All three 'motives' converge upon Fechner's 'daylight universe', but none of the three is complete or self-supporting. Together they furnish the needful 'proof'. I proceed along similar lines, but for convenience divide Fechner's first 'motive' into past and present aspects.

* At the end of the <u>Purgatorio</u>, Dante is "Pure and made apt for mounting to the stars". And even Kant, in his <u>Theory of the</u> <u>Heavens</u>, writes: "May it not be written that the immortal soul shall one day become closer acquainted with those distant orbs of the universe, and behold the excellence of that plan which so arouses curiosity even here? May there not be globes in the planetary region even now forming, destined, after the time appointed for our sojourn here has ended, to prepare for us new mansions in other skies?"

"The tree Igdrasil, which has its head in heaven and its roots in hell, is the image of the true man," says Coventry Patmore. "In proportion to the divine heights to which it ascends must be the obscure depths in which the tree is rooted, and from which it draws the mystic sap of its spiritual life." and the lowest are altogether beneficent. In this respect at least, there is a tendency towards what, in an earlier chapter, I have called the reversal of regions.

Subject to these qualifications, it may be said that it has ever been the habit of man to project upon the universe the multifarious and conflicting tendencies he finds in himself, distributing then in order of merit along a radius of which he or his earth is the Centre. The interior hierarchy is first revealed as an exterior cosmic order, in which man occupies a very humble position, but is sometimes gifted with the power of ascent and descent. That is to say, man distributes the life that is in him, so that it becomes a universal life. Withdrawal and shrinkage may and do follow; man becomes 'the dwarf of himself', yet he never quite loses his vision of a cosmos are somehow gradations of his own nature.

I propose now to illustrate these remarks by reference to some outstanding types of belief --- primitive, oriental, Semitic, Greek and Hellenistic, and Christian.

(i) Primitive

The attitude of primitives to the surrounding world is generally known as animatism, or as animism. The former, which is presumed to be the earlier stage, denotes the experience of a life or potency in all things, manifesting itself with different degrees of efficacy and terrorstriking force in all objects from stones to stars. This vague monism is supposed to give place gradually to a pluralism in which objects are separately animated, and to animism proper, in which the spirits of objects are distinguishable from their material abodes, and can sometimes leave them to live a separate and disembodied life. ° But this description is misleadingly 'intellectual'. Primitive man does not entertain theories about bodies and souls and their relations; and his attitude to the world around him is probably best described, in Martin Buber's language, as the attitude of an "I" to a "Thou". For us, objects, with a few exceptions, are it-objects: for him they are, so to say, fellow creatures, live presences with whom he has to do directly, in an atmosphere charged with emotion. \times He does not people a dead world with spirits, any more than we suppose our neighbours to be corpses kept fresh, and pushed around, by ghosts. Man and society are so thoroughly dovetailed into nature that the distinction between them, like the distinction between the living and the non-living, hardly exists at all.

It is likely that out of some such original living matrix, as yet scarcely divisible into the suprahuman and the infrahuman, the cosmic hierarchies of the higher cultures have gradually become differentiated. * The hierarchy is the clue to the man: its scope and nobility show us what he is. A savage with a developed pantheon and cosmology is no longer a savage. The Zunis of Mexico, for example, may be taken to represent a fairly advanced stage. According to this people, the sun and moon and stars, the sky, sea and earth and all terrestrial objects, participate in a single conscious life called <u>Ahai</u> or "The Beings", who include certain great "Finishers or Makers of the Paths of life", and the supreme "Holder of the Paths of our Lives". + In Annam also, life was regarded, after much the same fashion, as embracing stars, earth, stones, wind, fire, as well

The stages of mind-body bifurcation are well represented in our own 'regional' constitution, as popularly interpreted. (1) Our cells live but are not credited with minds as distinct from their bodies; (2) as men we think of ourselves as minds dwelling in bodies; (3) our machinery and the world it manipulates are dead things made to go by us --- the mind is so detached from the body that it is reckoned non-existent. Our stars have passed through the same stages: beginning as live things, they became lumps of matter steered by angels, and now they are machinery; the last drop of their intelligence has been drained off into the astronomer's head, leaving them absolutely imbecile. Even amongst primitives the beginnings of this ghost-in-themachine dualism can be found. Cf. Gilbert Ryle, The Concept of Mind, pp. 11 ff.

° For an example of the passage of animatism into animism see Frazer, <u>The Golden</u> <u>Bough</u>, i. p. 62; Tylor, <u>Primitive Culture</u>, ii. p. 215.

× Cf. H. and H. A. Frankfort, <u>Before</u> <u>Philosophy</u>, I.

Blake was not very far from the truth when he wrote: "The ancient Poets animated all sensible objects with Gods or Geniuses, calling them by the names and adorning them with the properties of woods, rivers, mountains, lakes, cities, nations, Till a system was formed, which some took advantage of, and enslav'd the vulgar by attempting to realize or abstract the mental deities from their objects." 'The Marriage of Heaven and Hell'.

* On <u>Mana</u> (or the similar <u>Manitou, or</u> <u>Wakanda</u>, or <u>Orenda</u>, of certain tribes of North American Indians) as the primitive stuff out of which individual spirits came to be differentiated, see C. R. Aldrich, <u>The</u> <u>Primitive Mind and Modern Civilization</u>, pp. 41 ff; and R. Karsten, <u>The Origins of</u> <u>Religion</u>, for a contrary view.

+ J. Estlin Carpenter, <u>Comparative Religion</u>, pp. 81 ff; R. R. Marett, <u>Head, Heart</u> and Hands in Human Evolution, pp. 94 ff.

as animals and plants, but it resides in groups or kinds of objects rather than in individuals. Nature and society, heavenly and terrestrial and human bodies, are all of a piece. Thus the Blackfoot Chief at the ceremony of the Sundance implores the Sun to give health and abundance, Mother Earth to give rain and grass and berries, the Morning Star to give peace and refreshing sleep, the Great Spirit to give long life and happiness.° Man and suprahuman guardians live on intimate terms, members of 'the whole family in heaven and earth'. And sometimes a chief, or even common men, are translated to the heavenly branch of the family. The Kasias of Bengal believed that certain men climbed a tree to heaven; the tree was cut down, and the men remained as stars suspended in the sky.× And when man begins consciously to rely upon earth and sun and stars, he begins also to realize that they rely upon him: the relationship tends to become reciprocal. Not very long ago the priest-king at Ife, the sacred city of Yorubaland, said that to abolish certain sacrifices there might endanger the course of nature in general. + There are innumerable examples of rites whose object is to stimulate and sustain the beneficent processes of heaven and earth.

(ii) Oriental

The gods, growing more godlike, withdraw to exalted regions in the heavens: they become the high gods. But between heaven and earth, however far physically and morally they may pull apart, the ascending and descending currents of the life-stream must continually flow. Hierarchies are needed, systems of mediators, * or at least a single divinehuman mediator; otherwise the upward stream of sacrifice and prayer, and the downward response of material and spiritual blessings, cannot continue. Religion, on the one hand insisting upon the breadth of the gulf that parts the human from the divine, must on the other hand reveal the bridge which spans it; ø and the wider the gulf the more splendid the bridge is likely to be. Its traffic is curiously and significantly mixed: it is registered, so to say, in both worlds. Thus many of the gods of the Vedic pantheon had been men. Buddha himself is regarded as coming down from "the heavens of the thirty-three gods" † to save mankind; and, as the enlightened one, he stands above the gods. Osiris the divine-human king, having been killed and cut in pieces, arose from the dead, ascended to heaven, and became "Chief of the Powers", giver of immortality and divine judge of men. There is a Chinese saying: "The gods (shin) of today are the men of ancient times." "This sky is, as it were, without a staircase," says Yajnavalkya in the Upanishads; 6 "By what approach does the sacrificer approach the Svarga world?" The answer comes back: "By the Brahman priest." He knows how to pitch a Jacob's ladder between the earth-bound worshipper and the highest heaven. Sometimes the emphasis is on the rungs -- the hierarchy of gods or spirits -- and sometimes on the magical energies or techniques by virtue of which they are mounted, and the officiating priest's sacred learning and expertness. ϕ The Chinese shin were traditionally divided into three great orders --- celestial (sun, moon, stars, winds, clouds), terrestrial (mountains, rivers, plains, seas, fields), and human; the whole is held together and maintained as a living whole by the Tao or Way, the daily and yearly course of the universe, in harmony with which a man ought consciously to live. ° In this elabo° Carpenter, Op cit., pp 35-6.

× Robert Eisler, <u>The Royal Art of Astrology</u>, p. 57.

+ H. Ward Price, <u>Land Tenure in the</u> <u>Yoruba Province</u>, p. 4; quoted by Christopher Dawson, <u>Religion and Culture</u>, p. 125. On the early development of India's religious culture, Mr Dawson writes: "It is the sacrifice that makes the sun rise and controls the course of the seasons. It is by the sacrifice that the gods live, and it is for the sacrifice that men exist...." <u>Op. cit.</u>, p. 92.

* The Sanyasi, says the <u>Mundaka Upani-</u> <u>shad</u>, I. ii. 11, "departs free from passion <u>through the sun</u> to where that immortal Person dwells whose nature is imperishable." One is reminded of Traherne's "the Earth did undertake the office of a priest" in his poem 'Dumbness'.

Ø In Mesopotamia, man existed to serve the gods on their earthly estates, and by doing their menial tasks to set them free. Here is organic unity of the human and the divine, with due subordination. See Thorkild Jacobsen, in <u>Before Philosophy</u>, pp. 197, 201, 207, 213.

+ Hastings' <u>E.R.E.</u>, iv. pp. 571 ff. Buddhist spirits have been classified as (1) celestial <u>Bodhisattvas</u>, (2) <u>Nagas</u> and <u>Mahoragas</u>
-- snake- and dragon-like beings in the sky or water, (3) <u>Yaksas</u>, or genii, often friendly, (4) <u>Asuras</u>, <u>Raksas</u>, etc., or demons and fiends, often connected with the soil.

θ Brihadaranyaka Upanishad, III. i. 6.

 ϕ For instance, the great school of Karma Mimamsa was a kind of ritualistic atheism, whose gods have no existence apart from the sacrifices which are offered to them: the sacrifice itself is sufficiently potent, as it tends to be even in the Brahmanas.

° "Man models himself on the earth, the earth on Heaven, Heaven on the Tao." <u>Tao</u> <u>Te Ching</u>, XXV.

A Chinese schoolmaster told Dr Edkins (<u>Religion in China</u> (1878), p. 109) that the Pole Star is Lord of heaven and earth. Much of the later Taoist literature deals with the rule of the stars. rate hierarchy, everything from Heaven to the meanest plant, and everybody from the Emperor to the beggar, had proper rank and function. The life of the individual and of society, assisted by ritual, is thoroughly co-ordinated with the life of Heaven and earth and the divine ancestors: disharmony at any level disturbs the whole.

The celestial powers are regarded, particularly by the uninitiated, as wholly transcendent: they remain external to man, though in the afterlife he may share their rank and place. But alongside this tradition there runs a tradition of immanence, which finds the celestial hierarchy reflected in the depths of a man's being, so that he may identify himself with any or all of its orders. ° Consider, for example, the Japanese kami ("that which is above") --- spirits of mountains, winds, trees, rivers, sea, sun, moon, stars, and so on indefinitely. To these Hirata × prayed every morning: "Reverently adoring the great God of the two palaces of Ise (the Sun-goddess) in the first place, the 800 myriads of celestial kami, the 800 myriads of ancestral kami, all the 1500 myriads to whom are concentrated the great and small temples..... I pray with awe that they will deign to correct the unwitting faults which, heard and seen by them, I have committed, and, blessing and favouring me according to the powers which they severally wield, cause me to follow the divine example, and to perform good works in the way." Here there is no hint of immanence. But Munetada, + Hirata's contemporary, believed that he could, by contemplation, obtain insight into the real relation of kami and man, and that he could himself become one of them. And Bunjiro ϕ claimed to be god-possessed. There is, indeed, an important distinction between the type which invites and suffers invasion by higher powers, and the type which actively seeks identification. The Buddhist monk repeating Aum mani padme hum is an example of the latter kind: the six syllables represent the six classes of sentient beings -- gods, demi-gods, men, animals, intermediate beings, inhabitants of purgatory -- with which he identifies himself in turn, till he contains them all.

(iii) Semitic

Among the early Semites, demons or jinn were far more in evidence than angels or gods, and the elaboration of an angelology distinct from and counterbalancing the realm of the jinn was a somewhat late development. Three stages have been discerned in the angel-doctrine of the Old Testament. * (1) The 'sons of God' are supernatural beings attending upon Jahwe in heaven, his counsellors and courtiers: sometimes they are identified with the stars. Θ (2) The 'theophanic angel' is Jahwe's special messenger, who is scarcely distinguished from an aspect or appearance of Jahwe himself. \emptyset (3) 'God's messengers' differ from the theophanic angel in that they are clearly distinct from the Deity: their function is to glorify God, see to the carrying out of the divine will on earth, protect good men, † and execute judgement on the unrighteous.

D. H. Lawrence's caustic comment that the Jewish angels were policemen and postmen has a good deal of justification. \oplus Lacking omnipresence, they possess superlative powers of flight between heaven and earth, where they wield great though delegated authority. Though they are supremely good and wise, their shape is generally human. Cherubim ° It was the Hindu genius which most emphatically asserted the ultimate identity of all the selves in heaven and earth with the Self that is in man. See, e.g., <u>Brihadaranyaka Upanishad</u>, III. vii. 3-11.

× The Japanese Shinto teacher (1776-1843). His rule was: "Act so that you shall not be ashamed before the <u>kami</u>." See Carpenter, <u>Comparative Religion</u>, pp. 93, 135.

+ Munetada (born 1780) founded the sect <u>Kurozumi kyo</u>, and taught a kind of solar pantheism, subordinated to the Great Spirit of the Universe.

 ϕ Bunjiro (1814-1883) founded the <u>Konko</u> <u>kyo</u>, a more definitely monotheistic Shinto sect.

The demons of later Judaism and of Christianity were to some extent recruited from the gods of the heathen. See Robertson Smith, <u>The Religion of the Semites</u>, p. 121. * See Edward Langton, <u>The Ministries of</u> <u>the Angelic Powers</u>, and <u>Good and Evil</u> <u>Spirits</u>; W. O. E. Oesterley, <u>Immortality</u> <u>and the Unseen world</u>, pp. 47 ff.

θ <u>Gen</u>. VI. 2-4; <u>Job</u>, I. 6; II.1; XXXVIII. 7.

Cf. Judges, V. 20: "The stars in their courses fought against Sisera." Also <u>Deut</u>. IV. 19; <u>Ps</u>. CXLVIII. 3; <u>Is</u>. XLV. 12; XL. 26; <u>Jer</u>. VIII. 2; <u>Neh</u>. IX. 6; <u>Dan</u>. VIII. 10; <u>Zeph</u>. I. 5.

ø <u>Gen</u>. XVI. 7; XXII. 11.

† <u>Ps</u>. XCI. 11.

⊕ <u>Apocalypse</u>, p. 156. But at least policemen and postmen have the merit of belonging to the community. W. Robertson Smith, <u>Op. cit.</u>, pp. 30 ff, points out that in the ancient religions "the social body was not made up of men only, but of gods and men." (p. 30) It is difficult for us, whose religion is so much a separate activity, to realize this. On angels as remnants of polytheism, see pp. 445-6 of the same book.

and Seraphim are exceptional. The former seem to have affinities with the griffin and with storm clouds, and they make up the wheels of God's chariot-throne in Ezekiel's vision. \otimes Seraphim appear to be serpent-demons promoted to angelic rank, where they tend to retain their serpent shape: an instance, perhaps, of 'region-reversal'.

But for well-developed hierarchical orders we have to go to later Jewish sources, and particularly to the Rabbinical and Kabbalistic writings. Already around the beginning of the Christian era, Philo Judaeus had said that "God, being one, has about Him an unspeakable number of powers", who share in the task of creation, guide the processes of nature, and enjoy relative independence and initiative. ° In such works as The Book of Jubilees and I Enoch, the angels begin to resemble a grand cosmic administration, wisely regulating all non-human processes, from the procession of the stars to fog and hail and every caprice of earthly weather. In external nature there is no mere machinery, no automatism.* And the internal nature of man himself tends to be interpreted along similar hierarchical lines --- the Testaments of the Twelve Patriarchs, for instance, make spirits of man's immoral tendencies: thus the spirit of insatiableness lives in his belly. Of course fantasy and contradiction abound, but it is often the ambiguities in the doctrine which are especially significant. The heavenly Watchers of **I Enoch** are stars,ø yet they are human enough to desire and cohabit with women, and beget sons. × Again, the angels are clearly man's superior in rank, yet he may become their equal and share their nature, or even surpass them. According to the Midrash, the body of the sleeping man tells the day's doings to his soul, the soul recounts them to his spirit, the spirit to the angel, the angel to the cherub, and the cherub to the seraph, who brings them before God. Here man 'knows his place', but the Slavonic Enoch describes myriads of angels accompanying the sun on his course, and Enoch himself, after a period of purification and glorification, becomes one of the angels whose ranks he enumerates. + The Syriac Apocalypse of Baruch ϕ has an account of the transformation of the righteous, after death, into the splendour of angels; many wonders appear to them; time does not age them; they dwell in the heights o like angels and are equal to the stars, being changed from beauty into loveliness. All these doctrines reach their final stage of complexity in the Kabbala, which owes much to Neoplatonism. A series of descending emanations (Sephiroth) from the Divine Source lead to the Metatron, who captains all the angels. These are ordered in ten ranks or levels, each of which is concerned with a portion or aspect of the universe, down to the world of matter. Only on the lower planes are the divine ideas and the astral soul visibly bodied forth. And man, though enmeshed in this natural order, mysteriously unites in himself all the worlds.

The angelology of Islam is not only closely related to the earlier Hebrew belief: in some respects it developed along similar lines. Angels and demons appear in the Koran as well as in much later Mahomedan literature. The four great angels -- called throne-bearers -- intercede for men and animals; the cherubim, who live in the sky, contemplate the holiness of Allah; Michael controls nature and is the patron of knowledge; certain lesser angels preside over bodily functions, such as digestion. † \otimes I have already suggested that the wreathed dragons, aerial serpents and spirals and swastikas, are racial archetypes of what we call spiral nebulae.

° R. B. Tollinton, <u>Alexandrine Teaching on</u> <u>the Universe</u>, pp. 55 ff.

* Nevertheless all degrees of the dissociation of matter and spirit may be found. Sometimes there is no distinction between the heavenly body and the angel: in other places the distinction is sharply drawn. See, e.g., I <u>Enoch</u>, XLI. 3-9; LXIX. 22; LXXIV. 2; LXXV. 1.

Ø Enoch, coming to a place at the end of heaven and earth, is told that this is a prison "for the stars and the host of heaven" who transgressed. He sees the wicked stars "roll over the fire". The angel Raguel is appointed to take "vengeance on the world of luminaries" for revealing heavenly secrets to men. See I <u>Enoch</u>, XVIII, XX, LXXXVI, etc.

× I Enoch, VI-XI; Gen. VI. 2-4.

+ II <u>Enoch</u>, XXII; XXXVI. 2; XXXVII. 1; XXXVIII. 1. <u>The Ascension of Moses</u> prophesies that the Jews will be taken to heaven on an eagle's wings and will remain there as stars.

φLI. 1-12.

 Θ Seven heavens, having seven degrees of blessedness, came to be distinguished. See <u>Testaments of the Twelve Patriarchs</u>: The Testament of Levi, II, III; II <u>Enoch</u>, I-XIX.

Two tendencies are discernible: to differentiate the angels into static individuals and ranks, and to merge them in a single dynamic process uniting all the levels. Thus Philo's angels are not enough: the effective intermediary between God and man is the Logos --- a less personal and divided agency, but suffering from abstractness. The writer of the Fourth Gospel, however, identifies the Logos with Christ, the Power and Wisdom of God. He becomes the cosmic principle, the agent in creation, the sustainer of the world. Cf. Gore, The Reconstruction of Belief, pp. 378 ff; and Inge, God and the Astronomers, p. 267.

† <u>E. R. E</u>., iv. pp. 615 ff.

That there is no impassable gulf between the human and the angelic orders is illustrated by the ancient legend of Harat and Marut; these angels (somewhat like the Watchers of Enoch) came down to earth and were seduced by the woman Zahara, who extracted from them the password which enabled them to go back to heaven; making use of this password, Zahara rose into the skies, where she is now visible as the planet Venus. Gradually there appears an extraordinary difference of constitution between man and angels: he survives in every cosmic climate; they do not. In the seven-tiered Mahomedan heaven, each angel, engaged in adoring Allah, has his proper rank and place; whereas man, so seemingly earthbound, is at once angelic and human and demonic --- an amphibian at home in all the worlds. "Some of thy attributes are those of animals, some of devils, and some of angels", says Al Ghazzali, ° and goes on to explain that the occupation of animals is eating and sleeping and fighting, the occupation of devils guile and deceit and mischief-making, the occupation of angels the contemplation of the beauty of God. Man is vertically distributed, and it is for him to decide which level he shall make his home. "The cultivation of demonic, animal, or angelic qualities results in the production of corresponding characters, which in the Day of Judgement will be manifested in visible shapes, the sensual appearing as swine, the ferocious as dogs and wolves, and the pure as angels.... The highest faculty in him (man) is reason, which fits him for the contemplation of God. If this predominates in him, when he dies he leaves behind him all tendencies to passion and resentment, and becomes capable of association with angels." To the extent that a man exhibits angelic qualities he is angelic and at home with the angels; thus "there are some things in the world which are not of it, such as knowledge and good deeds". Or, in more familiar words, "Every good and every perfect gift is from above." o

(iv) Greek and Hellenistic

Al Ghazzali's system has one root in the primitive Semitic tradition and another in the Greek. Like all their neighbours, the early Greeks believed in multitudes of good, bad, and indifferent demons, + who came eventually to serve as intermediaries between the gods -- particularly the star-gods -- and men. * And it was not only the common people, but also philosophers like Pythagoras and Plato × and Aristotle † who regarded the heavenly bodies as alive and divine; the lonian's early attempt to explain the sun and stars as lumps of dead matter did not seriously disturb the tradition of their divinity, ϕ a tradition that persisted from the earliest civilizations of Mesopotamia and Egypt, through Greece and Rome, well on into the Christian era. Certainly Aristotle did not, with pious credulity, go on repeating the traditional formulas. But neither was his aim (as ours would be) the reduction of the divine dance to so much cosmic clockwork, by attributing to man alone -- to the knowing subject -all sidereal intelligence, so that the intelligence in the heavens becomes merely intelligence about the heavens; on the contrary, he found in each planetary sphere its own intelligent Mover, who is to his own planet what God is to the cosmos. And this scheme of Aristotle's is very much a part of our own tradition, for the Aristotelians of the Middle Ages identified the sphere-moving intelligences with the angelic orders. \oplus

lbn 'Abbas gives the seven ranks of angels -- each in its own heaven -- the forms of cows, eagles, vultures, horses, houris, young boys, and men respectively: beyond the veil are innumerable angels praising Allah "in different languages which resound like crashing thunder". (E. R. E., iv. p. 618.) Cf. the Mithraic system of zoomorphic heavens, and the symbols of our own Four Evangelists. The Greeks, and later the Romans, thought of the ascending soul as a bird, and the Holy Ghost of the Gospels takes the form of a dove. Cf. Jane Harrison, Prolegomena to the Study of Greek Religion, p. 43; Denis Saurat, Gods of the People, p. 99.

° <u>The Alchemy of Happiness (trans. Claude</u> Field), pp. 20 ff, 49; cf. A. J. Wensinck, <u>La</u> <u>Pensée de Ghazzali</u>, and Margaret Smith, <u>Al Ghazzali the Mystic</u>. Somewhat similar hierarchical doctrines appear in other Mahomedan philosophers. Ibn Khaldun, for instance, placed man midway between the lower animal regions and the higher regions of spirits. Downwards through the body and the senses he mingles with the former regions; upwards through the mind he has access to the latter regions. These men who can pass for a time into the upper world and then return are true prophets.

ө <u>James</u>, I. 17.

+ "All the air so crowded with them that there is not one empty chink into which you could push the spike of a blade of corn", says an unknown early poet. (Gilbert Murray, <u>Five Stages of Greek Religion</u>, I.)

* <u>Epinomis</u>, 984.

× Laws, 820 ff; Phaedrus, 246-7.

† <u>Metaphysics, XII. 8.</u>

 ϕ How completely the Ionian view has now triumphed (so far as educated opinion is concerned) is illustrated by Burnet's comment on the theory that the heavenly bodies are ignited clouds: "But even that is better than to regard the sun, moon, and stars as having a different nature from the earth ... " Early Greek Philosophy, pp. 27-8. And C. C. J. Webb (Studies in the History of Natural Theology, pp. 102,142,153, 320) repeatedly describes the doctrine of the superhuman nature of the stars as a damnosa hereditas from the Academy and the Lyceum to the science and theology of later days. But are the present results of disowning this inheritance not ten times more damnable?

 \oplus See, e.g., Dante, <u>Convivio</u>, I, and <u>Para-</u> <u>diso</u> VIII, on the angels who, by understanding, move the third heaven.

For the Greeks as for the Hebrews there was, to begin with, no life worth the name after death. In the Shades, as in Sheol, there is at best a dim, ghostly, futile existence. But already in the fifth century B.C. Parmenides of Elea taught --- "There is decree of Necessity, an old ordinance of the gods, everlasting, sealed with broad oaths, that whenever one of the daemons, whose portion is length of days, has sinfully stained his hand with murder, or followed strife and committed perjury, he must wander away from the blessed gods for thirty thousand seasons, being born throughout that time in all manner of mortal forms, passing from one to another of the painful paths of life.... Of these I myself am now one, an exile from God and a wanderer, because I put my trust in raging strife." Here godlike immortality is taken to be our natural condition, from which we have fallen and to which we may, on certain conditions, revert. Great sins, says Plato, sink the soul into Hades or a yet more terrible region, while virtue lifts it into the holy place, the heavens. ϕ But dogged virtue is leaden-footed and wingless: inspiration is demanded, and the mystery religions supplied it. The worshippers -- the true Bacchoi -- merge with one another and with the dying and resurrected god, the communion of whose flesh and blood is "the medicine of immortality". "Dionysius is the god of ecstasy," writes Jane Harrison, × "but it is the ecstasy of the group, not the individual. Euripedes said of the Bacchic initiate: 'His soul is congregationalized'..... All the Olympians are projections of the desires, imaginations, of the worshipper; but only in the case of Dionysius do we catch the god at the moment when the ecstasy of the group projects him..... By becoming one with the god he had projected, the worshipper of Dionysius attained immortality. That is the doctrine of each and every mystery religion."

There were among the ancient Greeks a number of more or less distinct beliefs concerning immortality. Sometimes it is the concomitant of philosophical communion with the changeless; ° sometimes it is the reward of virtuous behaviour --- the good man is reborn at a higher, more godlike level; \times sometimes it is a consequence of the indestructibility of the soul --- being invisible and uncompounded, it cannot decay, but goes to the unseen world; sometimes it is a matter of self-transcendence --- of mystical identification with the company of initiates and the god; sometimes a matter of ascent into the heavens to join the sun or the stars. + Now these diverse threads are gathered together by Plato, and woven into a single splendid pattern by Plotinus, in whom the cosmological and the ethical, the mystical and the psychological, come near to a perfect unity. For him the heavenly bodies are not only alive and divine and responsive to our prayers, but "our personality is bound up with the stars". † First there are "the gods of the spiritual world" of whom Plotinus says they "are all one, or rather one is all"; in the second rank are the sun and stars, and this world is "the third god"; demons are spirits whose power is confined to regions below the moon. ϕ Man may become actually what already he is potentially, a denizen of the spiritual world and a partaker of the divine nature; that is to say, he may return along the path by which he has descended from Deity, realizing progressively that "all souls are one". "Let us fly to our bright country; there is the father, and there is all." o The cosmos is pictured as single concentric Organism, fed continually by the divine life that flows from the Centre to the outerHeraclitus, who was more or less contemporary with Parmenides, taught the unity of gods and men: they live each others' life and die each others' death. God, the 'one wise' is identified with Fire, whose region is connected with the lower regions of Water and Earth by 'the upward and downward path'. Men who die the fiery death become immortal. (Burnet, <u>Early</u> <u>Greek Philosophy</u>, pp. 153-4, 167.)

φ <u>Laws</u>, 903.

× Myths of Greece and Rome, p. 76.

° Plato, <u>Phaedo</u>, 79; × 82; * 80. Cf. <u>Repub-</u> <u>lic</u>, 608 ff.

+ Even Epicurus, anti-religious though he was, taught that at death the soul rises to join the stars, and is, like them, kept in position by exhalations from the earth.

† See Tollinton, <u>Alexandrine Teaching on</u> <u>the Universe</u>, p. 113.

 ϕ W. R. Inge, <u>The Philosophy of Plotinus</u>, i. p. 107; ii, p. 196.

Θ This saying of Plotinus is quoted by St Augustine (<u>The City of God</u>, IX. 16), who is discussing the doctrine of some Platonists that "those visible gods, the world's bright eyes, and the other stars", have no direct dealings with men, but only through the mediation of aerial spirits. most circumference of matter and back again, manifesting itself in and maintaining every type of creature in its proper region; moreover the system is cumulative --- the nearer or higher grade contains the further or lower. $^\circ$

A question which profoundly exercised the Western mind during the early centuries of our era was how the Heavens, perfect, divine, and immutable, could without loss or contamination have dealings with the sublunary world. The problem was to bridge the gulf without destroying it. × Various solutions, some of which contributed to Christian angelology, were forthcoming. One of them had already been sketched by Plato --- spirits "are the envoys and interpreters that ply between heaven and earth, flying upwards with our worship and our prayers, and descending with the heavenly answers and commandments; and since they are between the two estates they weld both sides together and merge them into one great whole. They form the medium of the prophetic arts, of the priestly rites of sacrifice, initiation, and incantation, of divination and of sorcery; for the divine will not mingle directly with the human, and it is only through the mediation of the spirit-world that man can have any intercourse, whether waking or sleeping, with the gods." • The names change; aerial spirits become angel messengers; the blessed gods of Plato and Plotinus are christianized as the celestial hierarchy of the Areopagite; but the functions remain much the same. Heaven and earth, God and man, are conjoined; ϕ yet emphatically they are poles apart, and must ever remain so. Jacob's ladder has a double work to do: it is the strut or pillar which keeps the distance between the two platforms, no less than the staircase which makes each accessible from the other.

An alternative to this 'sociological' universe co-ordinated by messengers, is the 'physiological' universe co-ordinated by processes. Thus Varro, according to St Augustine, * distinguishes three orders: first, stones, wood, earth, and so on, which are as it were the world's bones and nails; second, the sun, moon, and stars, which are its senses; third, the ether which is its mind, and penetrates the stars, descending through them to the earth. St Augustine naturally has nothing but contempt for this somewhat fanciful scheme, but it is not altogether unlike his own description elsewhere of the Church, in which "the angels of God ascend and descend upon the Son of Man, because the Son of Man to whom they ascend in heart is above, namely the Head, and below is the Son of Man, namely the Body. His members are here; the Head is above. They ascend to the Head, they descend to the members." +

(v) Christian

Our knack of quietly dropping a belief without drawing our own or anyone else's attention to the fact, while we go on repeating the phrases of that belief without being aware of any insincerity, is wonderfully illustrated by the attitude of millions of Christians to the angel-teaching of the New Testament. † Alike in the Gospels and the Acts and the Epistles there are abundant references to angels of various ranks, and their power and importance in the scheme of things are not left to conjecture. Clearly for Jesus and the Apostles the suprahuman realm is as real and as populous as the human. We know better, but crude denials are unneces-

× In The God of Socrates, Apuleius puts the situation very clearly: "You have then.... two kinds of animated beings, gods entirely differing from men, in the sublimity of their abode, in the eternity of their existence, in the perfection of their nature, and having no proximate communication with them; since those that are supreme are separated from the lowest habitations by such a vast interval of distance; and life is there eternal and never-failing, but here decaying and interrupted, and the natures are there sublimated to beatitude, while those below are depressed to wretchedness. What then? Has nature connected itself by no bond, but allowed itself to be separated into the divine and human parts, and to be thus split and crippled, as it were?"

• <u>Symposium</u>, 202-3. For St Augustine's refutation of this doctrine see <u>The City of</u> <u>God</u>, VIII. 14 ff; IX, 16 ff. But Gregory the Great taught that evil spirits wander in the aerial heaven trying to hinder men's souls from mounting to God, and kindling lust in men's hearts. (F. Homes Duddon, <u>Gregory the Great</u>, ii, p. 365)

 ϕ Reason, says Robert Bridges in <u>Testa-</u> <u>ment of Beauty</u>, "took thought to adjust theology, peopling the inane that vex'd her between God and man with a hierarchy of angels."

* <u>Op. cit.</u>, VII. 23.

+ See <u>E. R. E.</u>, iv. p. 579.

† And also of the Creed and Prayer Book of the Church of England. It is possible, even common, without believing in angels at all, to pray with the utmost piety: "O everlasting God, Who hast ordained and constituted the services of Angels and men in a wonderful order; Mercifully grant, that as Thy holy Angels always do Thee service in Heaven, so by Thy appointment they may succour and defend us on earth..." sary. It is so much easier (and in far better taste) to preserve the angelic hosts, along with the Star of Bethlehem, in the tiny self-contained world of Christmas carols and greeting cards and stained-glass windows, like celestial bees in amber. Dead angels are harmless and pretty, and we can always solemnly play the game of make-believe with them.

The fusion of Hebrew and Greek traditions in the angelology of the early Christians was largely accomplished in Alexandria, where the Ante-Nicene Fathers Origen and Clement taught that the stars, the planets, the sun, and the earth are all living beings. Origen describes the cosmos as a vast animal, and the heavenly bodies as rational and moral creatures who, endowed with will and desire, are capable of sin; the sun, though desiring to be freed from the body, is content to run his course in the spirit of service. But living stars were far from being enough. Insisting on the transcendent otherness of God, the Alexandrines found it necessary to provide a "host of lesser divinities, ranging from guardian Angels to the co-eternal Logos, who all have their separate ministries and by whose constant activity it comes that the universe is kept in touch with God." ° Uniting all is the Logos, the Mediator who originates and regulates the stars and all the principalities and powers: unto Him, says Clement, "is made subject the host of angels and of gods". And these hosts are organized into successive grades, the lower agencies undertaking tasks that would defile the higher. Man has fallen to the very base of the hierarchy, but he may mount again to his true home. Thus Basilides the Gnostic taught that the soul, dwelling in the uppermost heaven, yearns for a less immaterial existence and so descends through the planetary spheres, losing in each something of its spirituality (but gaining in the sphere of Saturn intelligence, in Jupiter activity, in Mars courage, in Venus desire, in Mercury speech, in the Moon growth) till it reaches earth. At death the process is reversed, and the soul returns to the Source from which desire had separated it.

The Church condemned the wilder speculations of the Alexandrines, nevertheless (as the writings of Athenagoras and Irenaeus, of Tertullian and Ambrose and Jerome show) the realm of suprahuman beings remained of the greatest possible interest and importance. The various ranks of angels were credited with the maintenance of nature θ the care of each church and nation and individual, the inspiration of good works, the recording of such sins as attendance at the theatre, and the execution of special duties. Justin Martyr ϕ encouraged a cult of angels, and the Second Council of Nicaea, in the year 787, sanctioned it. Nor are the saints very carefully distinguished from the angel hosts. Early martyrs were described as "no longer men, but already angels"; * with them, Augustine tells us, we are one city of God; × and Gregory the Great supposes that the purpose of redemption is to recruit the ranks of the angels, which have been depleted by the fall of Lucifer and his confederates.+ As for their hierarchical order, the system of the Pseudo-Dionysius remained authoratative throughout mediaeval times. In The Celestial Hierarchy, he divides the nine choirs into three trines:

> 1. Seraphim, Cherubim, Thrones 2. Dominions, Virtues, Powers 3. Principalities, Archangels, Angels. †

But their several functions remain somewhat vague. Seraphim excel in



The Angel at the Sepulchre: from a capital at the Abbey of Mozac:- c. 1130 ° Tollinton, <u>Alexandrine Teaching on the</u> <u>Universe</u>, p. 48. See also pp. 89 ff, 106, 133 ff.

The systems of Origen and Clement had something in common with Gnostic speculation, which was a curious mixture of Persian, Babylonian, Hebrew, and Greek elements --- between the Pleroma or unknowable Godhead and the visible universe is a descending hierarchy of spiritual beings called Aeons; the world of matter, which is wholly evil, marks the extreme limit of this falling away. (See Harnack, History of Dogma, i. 253 ff.) Irenaeus_(Adversus Haereses, I. xi. 4) has a delightful parody of Gnostic cosmogonies: "There is a certain Pre-Source, royal, pre-inconceivable, a pre-existent power, a Pre-Free-Rambler; along with it is a power which I call Cucurbita: and along with this Cucurbita is a power which I call Utter-Vacancy. This Cucurbita and Utter-Vacancy, since they are one, projected, but without projecting, a fruit in every respect visible, edible, and delicious; a fruit which language entitles Cucumber. Along with this Cucumber is a power of the same potency as itself, which again I call Melon. These powers, Cucurbita and Utter-Vacancy and Cucumber and Melon, projected the remaining host of the delirious Melons of Valentinus."

θ Cf. <u>The Shepherd of Hermas</u>, Vis.III. iv. 1.

φ According to Justin, "God committed the care of men and all things under heaven to angels whom he set over these."
2. <u>Apol</u>. 5. Ambrose also recommends their invocation.

* <u>Martyrdom of Polycarp</u>, II. 3; cf <u>Hermas</u>, Vis. II. ii. 7 and Sim. IX. xxv. 2. × <u>The City of God</u>, X. 7. Elsewhere be speaks of angels as offering our prayers to God, but he does not favour a cult of angels.

+ <u>Morals</u>, XXXI. 99: see F. Homes Duddon, <u>Gregory the Great</u>, ii. pp. 358 ff. † Gregory the Great's angelology reverses the positions of the Virtues and the Principalities; but the Areopagite's scheme was generally accepted, since he was supposed to have got it from St Paul, "an eyewitness to Heaven's mysteries". See Dante's <u>Parad-</u> iso, XXVIII. their love of God, Cherubim in their knowledge; Thrones are the agents of His judgement. Angels and Archangels are messengers. The intermediate orders are variously engaged in controlling the stars and elements and protecting earthly kingdoms. "Now all the angels are interpreters of those above them," says Dionysius, "the most reverend, indeed, of God who moves then, and the rest in due degree of those who are moved by God." ° The celestial hierarchy is the "function which comprises all sacred things", and each grade is "a sacred order and science and activity, assimilated as far as possible to the godlike, and elevated to the imitation of God proportionately to the divine illuminations conceded to it. The Seraphim are directly illumined; they "participate in the One Himself, and have the feast of the beatific vision, which makes divine all who strain aloft to behold it." The divine energy is transmitted by the Seraphim to the Cherubim, and so on downwards till "every existing thing participates in the Beautiful". And this work of mediation is necessary because "it is impossible that the beams of the Divine Source can shine upon us, unless they are shrouded in the manifold texture of sacred veils". Nor is earth without a similar hierarchy. Corresponding to and continuing downwards the heavenly hierarchy is the ecclesiastical, with its nine ranks. In this way a many-runged Jacob's ladder is pitched between the humblest child and the ineffable majesty in the Heavens --- a ladder whose traffic ascends and descends unceasingly, and reaches down even to irrational creatures. The entire creation from the Seraphim to the worm, to the dust itself, is held together organically, in the Good.× Hence "the providences of the Superiors, the interdependence of the Co-ordinates, the responses of the Inferiors, the states of permanence wherein all keep their own identity. And hence again the intercommunication of all things according to the power of each; their harmonies and sympathies (which do not merge them) and the co-ordinations of the whole universe." + Most important of all --- the nine celestial orders are not only the vehicle by which the divine light is shed upon the lower world: they are also the vehicle by which man may rise, through every grade of purification and illumination, to the beatific vision which the Seraphim enjoy.

Angels are incorporeal substances, but as to the possibility of their natural union with bodies, whether temporarily or more permanently, opinion was divided. Many doctors and some Fathers of the Church admit the possibility of such embodiments, or confess, as St Bernard does, his ignorance, * The angels of St Thomas, though capable of assuming aerial bodies and of taking up positions in space, are pure minds, without sensitive or nutritive faculties: their cognition is non-sensory. St Augustine had not definitely ruled out the possibility that the sun and stars are angels, ϕ and St Thomas allows that to believe that celestial bodies have souls is not inconsistent with orthodoxy. His own view, however, sharply distinguishes between the bodiless star-moving Intelligences on the one hand, and the mindless stars and spheres on the other. The bifurcation is practically complete. Nevertheless he attributes much influence over earthly affairs to the heavenly bodies, whose motions mediate between the divine nature which is the final cause of all things, and the processes of sublunary nature: in particular they cause the 'generation' of things -- sequences of evolution and dissolution -- while leaving man

° The Celestial Hierarchy, X. 2.

The Dionysian scheme is thoroughly organic: his angelic orders extend man up to God, and God down to man, and the whole is knit together in a continuous process which does not abolish the necessary distinctions. But this splendid vision is gradually lost. Angels tend increasingly to become a separate branch of creation, and then inevitably decline into cosmic ornamentation. Their nature is cut off from-ours, inaccessible. (See Gilson, The Philosophy of St Bonaventure, p. 255) Though the struggle against Averroism left the hierarchy seemingly intact, it was really a mummy that remained. Even so, tradition dies hard: in his own lifetime St Thomas was known as the angelic doctor; and St Bonaventure makes suppliants correspond to the order of the Thrones, speculative mystics to the Cherubim, and ecstatics to the Seraphim --- for men, like the angels, have for their end the enjoyment of God. Similarly Ruysbrook, in The Seven Steps of the Ladder of Spiritual Love, assimilates the contemplative life, the inner life, and the active life, of the religious, with the three angelic choirs.

× The Divine Names, IV. 2.

+ <u>The Divine Names</u>, IV. 7.

Men, says Dionysius, derive their being from the Super-Excellent Goodness. "So do they possess intelligence; so do they preserve their living being immortal; so is it they exist at all, and can, by straining towards the living angelic powers, through their good guidance mount towards the Bounteous Origin of all things; so can they (according to their measure) participate in the illuminations which stream from above . . ." <u>Op. cit.</u>, IV. 2. But note that St Paul reverses these roles, and makes the church enlighten "the principalities and the powers in the heavenly places". <u>Eph</u>. III. 10.

* Cf. Gilson, <u>The Philosophy of St Bo-</u> naventure, p. 239.

φ Enchiridion, C. 58.

The link between hierarchical status and incorporeality is well illustrated by the conventions of art. Angels are shown fulllength; the higher ranks tend to lose their bodies from the waist down; Cherubim are mere heads; Seraphim are often mere flames. Cf. the celebrated remark about Lamb's schoolmaster: "May he be wafted to bliss by little cherub boys, all head and wings, with no bottoms to reproach his sublunary infirmities." (Essays of Elia, 'Christ's Hospital'.)

his free will. $\boldsymbol{\Theta}$

It was Dante who identified in full detail the ninefold Dionysian hierarchy with the sphere-moving Intelligences derived from Aristotle, thus uniting physics and metaphysics and theology, and assimilating the physical order to the spiritual. The universe is completely organized as a regional system, one half reaching from man to the highest heaven, and the other from man to the Earth's centre; each region has value in proportion to its remoteness from that centre, and man (potentially at least) belongs in all of them. Everything in him, good and bad, finds its own level; fortified by discipline and guided by love, he may mount to the divine. Here indeed is a cosmos, and the contrast between it and our cosmic funeral parlour, or soap-bubble expanding in accordance with the equation $d^2r/ds^2 = 1/3\lambda r$, cannot be exaggerated.

So far from destroying this magnificent world-picture, the Renaissance at first tended to correct some of its deficiencies. Pomponazzi, for instance, found no reason for parting the heavenly bodies and their effects from their angelic guardians -- the duplication seemed to him unnecessary ° -- and Bruno's stars were fully alive, not footballs kicked about by indefatigable teams of angels. But the renascent stars could not survive the progress of an experimental science which is successful in so far as it is lethal. In a machine-run universe the angelic hosts must play the part of an unemployed and effete aristocracy, soon to be liquidated; for every scientific advance puts an angel out of work, or forces it to wear the workmanlike disguise of a Law of Nature. Spirit and matter part company, so that we have on the one hand a ghost, on the other a corpse: the useless and the inane, each decomposing for lack of the other. On the one hand we have a realm in which space and time are abstract and uniform, and range has nothing to do with value, and all regions are assimilated to the meanest region; on the other we have an unconvincing Heaven and Hell crowded out of space into no-space, or into some transcendent and mystical locality right off the starmap. * Even so, the implications of physical science are slow to reveal themselves fully; and poets, mystics, alchemists, astrologers, and popular traditions continue to bear witness, in their very different ways, to the reality of suprahuman orders. It is a question how far the angels of poets like Dunbar \times and Spenser +, Shakespeare and Milton \oplus are for them vitally objective, but there certainly existed an earnest and many-sided interest in what Browne calls the "Stair, or manifest Scale of creatures, rising not disorderly, or in confusion, but with a comely method and proportion" --- inanimate, living, human, and angelic beings. ϕ Of the last he says: "These are certainly the Magisterial and masterpieces of the Creator, the Flower, or (as we may say,) the best part of nothing; actually existing, what we are but in hopes and probability." Man is an "amphibious piece" and " 'tis no bad method of the Schools, whatsoever perfection we find obscurely in ourselves, in a more complete and absolute way to ascribe unto them" --- the angels. For, as Boehme puts it, "man is made out of all the powers of God, out of all the seven spirits of God, as the angels also are." "I knew and saw in myself all the three worlds", he says, " --- (1) the Divine, Angelical, or Paradisaical World; (2) the dark world, the origin of fire; and (3) the external, visible world as an outbreathing or expression of the internal

θ Summa Contra Gentiles, II, III.



<u>Angel bearing the Moon</u> --- Greek, 12th century. In many early pictures of the Crucifixion two angels are shown, one supporting the sun, the other the moon. Cf. Jameson, <u>Sacred and Legendary Art</u>, i. p. 73.

° C. C. J. Webb, Studies in the History of Natural Theology, pp. 336-7. Writing of the determination of earthly events by the influences of heavenly bodies, Dr Webb comments: "This belief is to us so strange, and is apt to seen so fantastic and superstitious, that it is not without an effort that we realize that it was the very soul of mediaeval naturalism." (p. 320) There is a world of difference between Lady Julian's giving thanks for "all the help that we have of all the blessed Company of Heaven, the dear-worthy love and endless friendship that we have of them", or Thomas à Kempis' desiring "to be familiar only with God and the angels, and fly the acquaintance of men", and Donne resting content with second-hand authority: "When we have travelled as far as we can, with safety, that is, as far as ancient, or modern expositors lead us, in the discovery of these new Heavens, and new Earth, yet we must say at last, that it is a country inhabited with Angels, and Archangels, with Cherubins, and Seraphins, and that we can look no further into it, with these eves." See Julian.of Norwich, Revelations of Divine Love, I; and the Nonesuch Donne, p. 567

× E.g., 'On the Nativity of Christ'.
+ E.g., Faerie Queene, II. viii. 1; 'The Tears of the Muses', 505 ff; 'Hymn of Beauty', 197 ff; 'Hymn of Heavenly Love', 50 ff; 'Hymn of Heavenly Beauty', 85 ff.
⊕ Notably his description of the great staircase, "Ascending by degrees magnificant Up to the wall of Heaven, a structure high." Paradise Lost, III. 501 ff.

φ <u>Religio Medici</u>, I. 33-4.

Dr Robert Eisler has pointed out that as late as the end of the 16th century, Digges, in his diagram of the Copernican system, calls the sphere of the fixed stars the palace of felicity. It is not so long ago that Heaven was finally outlawed from the familiar universe.

Chapter 22: The New Angelology

and spiritual worlds." † And the intuition of the suprahuman could burn brightly in men who were no strangers to the spirit of scientific inquiry; it was Swedenborg ° who wrote: "If angels and spirits were removed from man, he would instantly fall down dead, and they, on the other hand, could not subsist, if men were withdrawn from them."

But, apart from scattered individuals, the Protestant Churches have been less and less inclined to take their own official angel-doctrine seriously. It is true that, at the beginning of the 19th century, there occurred a minor revival × of Protestant angelology "in a philosophical and idealizing sense" under Schelling's influence, and later on such ecclesiastics as Bishop Westcott + and Dean Randall came out strongly on the side of the angels, but in general the subject has ceased to exercise the modern religious mind. Nevertheless belief in angels still has full liturgical recognition in the Roman and Anglican Churches; our churches are still dedicated to them; the Feast of St Michael and All Angels is still noted in our diaries (though it is the landlord and not the Archangel who gets his due on the 29th of September); hymns loudly sung every Sunday announce our unshaken conviction that in or above the firmament dwell innumerable intelligent beings whose concern is our spiritual welfare. And this is neither ridiculous nor surprising if, beneath the surface, we still believe, along with our countless Pagan and Christian ancestors, in the hierarchy of heaven. Possibly it is the form of this conviction, and not its substance, which has worn out. Possibly it is not so much that we "have no angels left", ϕ as that we have mislaid them. We may agree with Keats Θ that Milton's hierarchies are a dream, but I think we are waking to their successors.

3. THE APPROACH FROM PRESENT INTUITION

Human nature and human needs are not transformed overnight. The terminology changes; the imagery is recast; the social class perpetuating the tradition shifts; but the substance of the tradition goes on unbroken.• These vanishing-tricks are no new thing, and we have little excuse for allowing ourselves to be taken in. For example there is St Augustine, who, having devoted his intellectual and moral powers, and nine books of his great work, to demolishing the pagan gods, goes on in the tenth enthusiastically to build up his doctrine of angels. A millennium later, science, demolishing the angels in their turn, unobtrusively restores them as Forces and Principles and Laws -- vague powers which (noone knows how) compel the obedience of insensate matter, while a host of Faculties and Instincts and Propensities, and other thinly disguised demons, rule the living. And when a more sophisticated science exorcizes these, is that the end of the suprahuman? Not at all. Not everybody is taken in by the apathetic fallacy. Imitating the conjuror who directs our attention to the hand which is not doing the trick, the tradition of the suprahuman orders survives, and even flourishes, in the least expected places. Its custodians are no longer intellectually respectable; its presentation is full of fantasy and often mixed with downright silliness; it is quite unable to defend itself against the precision-weapons of the Page 578

† Second Epistle.

° True Christian Religion, 118.

× Hagenbach, <u>History of Doctrines</u>, iii. pp. 193, 334 ff.

+ Westcott (1825-1901) stressed the "ministration of Angels in nature, which brings both them and the world closer to men... 'I can see,' writes one who was himself a distinguished physiologist, 'nothing in all nature but the loving acts of spiritual beings.' However strange the conception may be, it contains, I believe, truths which we have not yet mastered." <u>Historic Faith</u>.

Schleiermacher sums up the doctrine of angels with the remark that their possible existence should not influence our conduct, and that we can no longer expect any revelations of their being. In our own day, C. C. J. Webb goes further, and considers it a merit of Christianity that it has curbed the belief in "finite non-human wills operating in the world". <u>Natural Theology</u>, p. 102. By way of contrast see Newman's <u>Apologia</u>, III, on angels.

φ Francis Thompson, 'A Carrier Song'; cf. Wordsworth, <u>Ecclesiastical Sonnets</u>, 24, on the passing of the angels.

θ Letter to Reynolds, August 25th, 1819.

• Ancient culture has collapsed and seemingly died. But in fact it continues to live in us as a deep stratum in our being." Berdayev, <u>The Meaning of History</u>, p. 221. And that stratum lies nearer the surface in the uneducated man than in the educated. Jung writes: "The Philistine believed until recently that astrology had been disposed of long since, and was something that could be safely laughed at. But today, rising out of the social deeps, it knocks at the doors of the universities.... Great innovations never come from above; they come invariably from below." <u>Modern Man in</u> <u>Search of a Soul</u>, p. 243. enemies of the suprahuman. The wise have committed judicial murder upon the universe, and the simple are left to revive the body as best they can, using the most unorthodox of medicines. * For them, the world still lives: it may take a Mons, or a Marathon or a Lake Regillus, to bring out its angels from their hiding, but they are surely there.

That the popular imagination should run riot is not to be wondered at: the bare whitewashed expanses of the scientific universe are compensated or offset by the rococo falderals of astrology, spiritualism, theosophy, anthroposophy, and the innumerable cults of the Old World and the New. The plainer the scientific picture the more outrageously ornate the unscientific; and the inhumanity of the first is not unconnected with the all-too-human extravagance of the second. Of course it is easy to show that, taken in detail and at their face value, these modern mythologies are nothing else than pretentious childishness. But what remains, what is indestructible and alive and valuable, what is held in trust for humanity, is the general drift of their insistence upon a living, sacramental universe, which is much more wildly magnificent than our wildest imaginings. ×

"First of all must be healed", writes Professor Saurat •, "the cleavage among men between high and low. Thinking in our world is divided: we have a high educated class that cultivates science, and a low uneducated mass that cultivates primitive magic in all its forms." Science has cleared and disinfected a wide sanitary cordon between God and man --- a sterile no-man's-land and no-angel's-land which the common man is quietly determined to cross by all manner of improper means. The gap, as Saurat says, "is too large for him to span as a man. Therefore he calls in spirits of many kinds, angels and fairies, to fill the heavens above him, which separate the stars and the mountains." And so there begins to emerge "a picture of reintegration, as seen in the masses today, among the dreamers, among the poets --- and the poets have always known."

The curious sects and religious communities founded in America during the 19th century furnish examples. Cyrus R. Teed, the prophet of the sect of Koreshans, believed in an elaborate 'Cellular Cosmogony', and practised a ritual based upon the motions of the stars and planets. Thomas Lake Harris, notorious high-priest of the Brotherhood of the New Life, announced that "angels were at work changing the chosen ones into the arch-natural state ready for the Second Coming. They clean out the inside and leave only a husk of humanity, and unload all the grosser parts upon the damned." ° Joseph Smith was vouchsafed visions of angels good and bad, and his Book of Mormon has many descriptions of them. + Some of these sects ϕ were founded by unread persons, whose 'inspired' teachings have no overt link with ancient tradition: their continuity with that tradition is all the more significant. Others are aware of their lineage, and use the language of the past while ministering to the contemporary need. † One of these is Annie Besant, the theosophist seer, who writes: "On the mental plane, in both its great divisions, exist numberless Intelligences.... Shining Ones who guide the processes of natural order, overlooking the hosts of lower entities.... and yielding submission in their several hierarchies to their great overlords of the seven Elements. They are, as may readily be imagined, beings of vast knowledge, of great power, and most splendid in appearance, radiant, flashing

* It is one of the distinctive features of Wundt's epistemology (in his System of Philosophy) that important thought-processes are to be found amongst the people long before they are taken up into science. William James (The Will to Believe, pp. 301 ff.) held a similar opinion: "He who will pay attention to facts of the sort dear to mystics (James is writing about popular 'mysticism'), while reflecting upon them in academic-scientific ways, will be in the best possible position to help philosophy." Albert Schweitzer (The Decay and Restoration of Civilization, pp. 11 ff) makes the value of a philosophy proportional to its capacity for becoming a living philosophy of the people, providing "food with which to appease the spiritual hunger of the present." Philosophers who despise or ridicule popular superstitions would do well to ask whether these superstitions have not rushed in to fill the vacuum so painstakingly prepared by philosophy. × To put the matter crudely, the cosmos is not likely to be inferior in inventiveness to that portion of itself known as Helena Petrovna Blavatsky. "Let us then think imperially," says W. Macneile Dixon, "for the more magnificent our thoughts the nearer the truth." The Human Situation, p. 323. • The Gods of the People, pp. 7 ff. In this book, Professor Saurat includes, under the title 'XXth Century Texts', a quantity of fascinating material supplied to him by Dr M. Joycey Fisher and Mr Sidney Arnold, editor of the Psychic Times. This important record of a living oral tradition abounds in references to living planets and stars ("you are right in identifying spirits with stars"), fairies, angels, and spirits; above all it is a statement of man's ability to travel throughout a cosmos abounding with life and meaning. A picture more at odds with the universe of the scientifically educated man is hard to imagine. Pure monotheism, as Renan virtually said, is sterilizing. So is pure atheism. Together they may prove, says Aldous Huxley, "to be the introduction, by the way of almost desperate reaction, to a new and more perfect polytheism, itself the symbolical expression of a new and affirmative attitude towards those divinely mysterious forces of Life against which we now so ungratefully blaspheme." Do What You Will, 'One and Many'.

° Cf. <u>Henry V</u>, I. 1. (29-32).+ E.g., 1 <u>Nephi</u>, I. 8; 2. <u>Nephi</u>, IV. 24; XXXII. 3<u>Helaman</u>, XIII. 28. φ See, for further examples, Ray Strachey, <u>Group Movements of the Past</u>. † E.g., P. D. Ouspensky, <u>Tertium Organum</u>, XVII.

For a remarkable christianized version of the theosophical cosmology see Sadhu Sundar Singh's <u>Visions of the Spiritual</u> <u>World</u>. Here are "innumerable planes of existence" inhabited by angels and evil spirits --- planes through which the soul passes after death, till it finds its own level. Page 579 creatures, myriad-hued, like rainbows of changing supernal colours, of stateliest imperial mien, calm energy incarnate, embodiments of resistless strength." $^{\circ}$ Robert Roberts the Christadelphian has a doctrine of angels, who are deathless and perfect, and traverse space at will on God's business. At death, the believer joins them. God is physically present both in the sun, and in the greater Sun which is the hidden centre of the cosmos: His light creates and sustains all things. That extraordinary visionary Rudolph Steiner \times claims that through meditation and the training of the will one may leave the body and enter the "soul-spiritual world", and all manner of supersensible realms. And so on, indefinitely.

Such cults, flourishing most among the slightly educated, leave great masses of the population unaffected. These have other ways of feeding their hunger for the suprahuman --- astrology, for example. * Evidently neither popular science, nor such careful exposures as Dr Eisler's, nor the revealing ambiguity and vagueness of the forecasts of Sunday-newspaper astrologists, nor their confident prediction of peace instead of war in 1939, are sufficient to shake the common belief that somehow the details of human existence are bound up with cosmic events, that human hopes and destinies are in some fashion written across the sky, that in some sense man is stellar and the stars are human. † But the patent absurdities and failure of astrology are in one respect its strong point: what so thrives on refutation is indeed deep-rooted, and worth taking more seriously. You may show that astrological prediction is a fake, and moreover such an incompetent fake that intelligent guesswork can do better, and a man will agree with you --- with, as likely as not, the secret reservation that there is probably something in it all the same. I suggest that it is better to respect this perennial intuition, and to show in what deeper sense it is true, than to spend your time detecting the all-tooobvious flaws which craze its surface.

"Occasionally", writes Denis Saurat, "a great man establishes a connection with the people." + Prophecy and poetry (originally one, and attributed to contact with supernatural powers ϕ) make articulate the confused beliefs of the masses, and prefigure, it may be, the intellectual discoveries of tomorrow. Schiller defined genius as the unconsciousconscious --- "Poets", he says, "are the hierophants of an unapprehended inspiration, the mirrors of the gigantic shadows which futurity casts upon the present." If that is so, it seems likely that we shall before very long officially rediscover the many-levelled suprahuman world, the cosmos that is not less but more alive than man is. For its prophets include Wordsworth e and Shelley, Tennyson + and Browning ° and Elizabeth Barrett Browning \otimes and Coventry Patmore •, and Christina Rosetti ø, Hugo and Meredith and Francis Thompson \oplus and Rilke, A.E. and. Yeats and James Stephens, Edith Sitwell.... but it would be easier to pick out, from modern poets, those few who do not, in one way or another, bear witness, those who are not priests celebrating the remarriage of the heavenly and the earthly, which common sense has divorced.

The poets remind us that deep down, in our bones, we believe in the hierarchies, and are of the angels' party without knowing it; and John Cowper Powys's complaint ^ that there is a universal "denial of the existence of Supernatural Beings which is not only naive and stupid, but ma-

° The Ancient Wisdom, p. 114. × An Outline of Occult Science, Knowledge of the Higher Worlds and its Attainment, etc. The defects of Steiner's Anthroposophy are its obscurity, its arbitrariness, and its overinsistence upon human subordination to the cosmic hierarchy, which is for the most part regarded as external to man. Its merits are a burning realization of higher planes, and of the need for discipline if man is to mount to them. * See Dr Robert Eisler, The Royal Art of Astrology. For a defence of astrology, see Rupert Gleadow, <u>Astrology in Everyday</u> Life. He certainly would not endorse John Webster's:

"We are merely the stars' tennis-balls, struck and bandied

Which way please them."

<u>The Duchess of Malfi</u>, V. 4. This extreme view is matched by Swedenborg's: "Man's will and understanding are ruled by the Lord by means of angels and spirits, and... man cannot stir a single step without the influx of power from heaven." <u>Heaven and</u> <u>Hell</u>, 228.

† In <u>Mad Shepherds</u>, Dr L. P. Jacks makes Snarley Bob say: "But when it comes to the stars, you want to be a bit of a <u>medium</u> before you can get at 'em... What's wanted is to get right on to the edge of the world and then look back. That's what the stars teaches you to do; and when you've done it -- my word! it turns you clean inside out!" Cf. Dr Jacks' <u>A Living Universe</u>, p. 39. According to Coleridge, "No man was ever yet a great poet without being at the same time a profound philosopher. For poetry is the blossom and fragrancy of all human knowledge."

+ <u>Op. cit</u>., p. 19.

 ϕ See N. Kershaw Chadwick, <u>Poetry and</u> <u>Prophecy</u>, p. 14. Cf. Jung: "When conscious life is characterized by one-sidedness and by a false attitude, then they (the primordial images) are activated -- one might say 'instinctively' -- and come to light in the dreams of individuals and the visions of artists and seers, thus restoring the psychic equilibrium of the epoch. In this way the work of the poet comes to meet the spiritual need of the society in which he lives." <u>Modern Man in Search of</u> <u>a Soul</u>, pp. 197-8.

E.g., ø 'Expostulation and Reply'; + <u>In Memoriam</u>, 85; ° 'Saul', 19; ⊗ 'A Child Asleep';
Heaven and Earth'; ø 'The Face of the Deep'; ⊕ 'The Kingdom of God'; and others already quoted. See, on the hierarchies, the Golden ones in the sky who care for us, and the fire that is in us and in the heavens, the poems 'Invocation'; 'An Old Woman', I & II; 'A Young Girl'; 'Holiday'; 'Tears'; 'The Two Loves'; in <u>Green Song</u> and Other Poems, Street Songs, The Song of the Cold, by Edith Sitwell. See also the poetry of Kathleen Raine.

^ <u>A Philosophy of Solitude</u>, p. 73.

licious, arrogant, bigoted", is far from stating the whole case. Some of us, indeed, find ourselves in the perplexed condition of Franz Kafka's philosophical dog \times for whom supra-canine beings are as incomprehensible as supra-human beings are to us. (In the experience of this dog, men are invisible and inaudible and scentless, and in fact absent altogether, they are the one hypothesis he cannot quite bring himself to make. "For what is there actually except our own species?" he asks. "To whom else can one appeal in the wide and empty world? All knowledge, the totality of all questions and answers, is contained in the dog." Yet dogs do the most baffling things, such as hover in mid-air, and obtain food out of the air by means of chants and incantations, and even walk, agonizingly and unnaturally, on their hind legs. No doubt (this philosophical animal speculates) it is because dogs water the ground at short intervals that the ground produces food, which finds its way into the air and then down to the dog. But how?......) It is just as possible to be tortured, as Kafka was, by our failure to understand the intentions of the transcendent and mysterious arbiters of our destinies, as to be fortified by the reflection that we are not alone and uncared-for in the universe. Kafka's life-work revolves about this problem: how to live our lives in harmony with the will of supra-human beings. His genius lay more in his peculiar sensitiveness to their existence, than in any discoveries he made as to their nature. +

4. THE THEORETICAL APPROACH

Angelology is a neglected but promising science.

Consider the main stages of our estimation of the sun. (1) It confronts primitive man as an undivided "Thou"; (2) but is gradually split into animated body and animating spirit. (3) The wedge is driven deeper, till we have on the one hand a kind of luminous balloon, and on the other its angelic navigator appointed by God. (4) In due time we feel we can spare the balloonist: God's supervision is enough. (5) This too becomes superfluous once we suppose that He has created the physical universe as a self-running device. (6) And the last step is now easy: we have only to dispense with the useless hypothesis (useless, because it sets more problems than it solves) of a creator God, and to say that the sun 'just happened', as the fortuitous product of blind natural law.

There is more to come. Not content with murder, we go on to dismember the corpse. That is to say, we find that all the sensible qualities which we had naively located over there in the sun are really here in us, and even its apparent motion is our own. In the end we take away its last miserable possession --- its bare matter is dissolved in the acid-bath of modern physics.

We have killed our sun by inches, and conveniently disposed of the body. But, as so often in these cases, there is a sequel. The victim turns up in the most unlikely place --- in ourselves. Like the savage warrior who eats his enemy's heart to acquire his courage, we have taken upon ourselves all that we have removed our object. ° The "I" now claims the

× Investigations of a Dog', (included in the collection entitled The Great Wall of China, translated by W. and E. Muir) is a little masterpiece in modern 'angelology'. The same book contains other relevant pieces, such as 'The Problem of our Laws', in which suprahuman Powers appear as a nobility, administering society by means of equally mysterious laws. These Powers again dominate his unfinished novel The Castle, whose hero is seemingly the victim of their incomprehensible bureaucracy; but there is always for Kafka the possibility that what looks like unfeeling inefficiency or malice is really part of some deep-laid and infinitely wise plan. The theme of The Trial is similar. One is reminded of William James' remark that we are probably in the universe as our pets are in our libraries --- incapable of guessing the meaning of it all. (A Pluralistic Universe, p. 309). And of the Red King's alarming experience at the beginning of Through the Looking-Glass.

+ Kafka is, of course, only one of a number of prose writers who have in recent times declared for something like angels. There are, for instance, General Younghusband (Life in the Stars), J. E. Boodin (Cosmic Evolution), James Ward (The Realm of Ends, p. 185); cf. C. A. Richardson, Happiness, Freedom and God, p.182, Bishop Gore, The Religion of the Church, pp. 35-6. Dr Inge, always suspicious of anything that smells of the occult, nevertheless asserts: "The ancient opinion that 'there are many things in the universe more Divine than man' seems to me entirely reasonable and probable. The apotheosis of the stars in Plotinus is at any rate a doctrine far more respectable than the denial of a plurality of worlds containing intelligent beings, which we find in Hegel", who compared the stars to a -rash on the face of the heavens. The Philosophy of Plotinus, i. pp. 107, 211.) And even Alexander found it necessary for purposes of exposition to postulate angels at first playfully, and then more seriously. (Space, Time and Deity, i. pp. 19-20; ii. p. 346.) As seriously meant, but in a different fashion, were the angels of Mallarme, Stephan George (Der Teppich des Leben, Das neue Reich). Paul Valery ('Palme', 'La Pythie'), and other symbolist poets -- angels which had not yet broken loose, it is true, from the poet's subjectivity. In Valery's 'Ode Secrete'; it is the poet who projects the starry heavens, so that his work is made visible in the constellations of the Bull and the Dog and the Bear. Yeats, on the other hand, regarded himself as the instrument rather than the source of nonhuman orders of being.

motion, the warmth and brightness and colour, the awareness, the astronomical intelligence, the science of sidereal navigation, which formerly belonged to the "Thou". Indeed nothing is lost: it is only transferred. <u>Nor</u> <u>is it transferred beyond the Sun</u>. For, in the course of the shift from the object-pole to the subject-pole, one of the things we have learned is that Humanity and Life and Earth are not invading paratroops or parasites infesting the solar system, but the most vital of all solar organs. The "I" is after all the agent of the "Thou", not its rival: its growth at the other's expense is only the other's way of growing all the more luxuriantly.

So we are back where we started --- the "I" confronts a solar "Thou"; with the difference that the latter, by reason of its lingering death and dismemberment at our hands, is now much more alive than ever. And this story is true of the supra-human in general --- of Life and Earth and Sun, of the stars and the cosmos itself; all our gods are done to death, to rise again in us, and our social heritage is at once the lethal instrument and the vital outcome of this dying. Mr. Christopher Dawson × and others have so rightly drawn our attention to the religious origins of secular culture; but the positivists have, with equal justification, for long insisted that science expands by annexations of the territory held by faith. If the origin of culture is bound up with the living gods of a living religion, so also its development is bound up with their slow death. Man cannot do without gods, for he lives by deicide. His progress is their retrogression.¢ He expands by absorbing the object, by withdrawing his projections, by exchanging the transcendent for the immanent. At last the surrounding universe is almost empty, and he is full to bursting. This is the perilously explosive condition to which we have now come. All or nearly all that could be gained by the temporary shifting of the divine from heavenly to earthly and human tabernacles has now been won, and the time has come for the rehabilitation of the divine object. We have now to recognize that we are possessed, † that what we thought was merely our science is in fact the science of angels -- not all of them good ones -- who have made their abode in us. To repress them any longer is damaging. Projection has become a necessity: that is the lesson of the new angelology. "Heaven and Earth, Angels and Men, God and all things must be contained in our souls; that we may become glorious personages", says Traherne; * the trouble is, however, that when they are so confined they become a trouble to us, and tend to appear more devilish than divine, till we get rid of them. o

The fact is that the body-mind dualism, which had been operative centuries before Descartes made it explicit, was immensely more farreaching than he ever suspected: it tore the universe apart from star to worm. An impenetrable and knife-edged iron curtain descended, leaving on the far side a dead physical world, the many-levelled graveyard of the gods, and on the near side the many-levelled mind that is in man. And then, some three centuries later, as if man were not yet sufficiently insulated from nature, a second safety curtain came down: Freud completed the distinction between the manifest objective content of the mind -- its 'overt ideas of external reality' -- on the one hand, and its hidden operations, its subjective mechanisms and meanings, on the other. Beyond this second curtain lies the conscious mind; on this side lies the ° In effect, modern man sings the ancient Egyptian 'Cannibal Hymn': 'The sky is overcast, the stars are beclouded... the (very) bones of the earth-god tremble... when they see (this dead man) appear animated as a god.... (He) is the one who eats men and lives on gods... (He) is the one who eats their magic and devours their glory. The biggest of them are for his breakfast; their middle-sized are for his dinner; and the smallest of them are for his supper.'

In Mr. C. S. Lewis's novel <u>Perelandra</u>, the Archon of the planet Venus hands over to its pair of inhabitants the control of that planet's navigation and internal management; but they ask the Archon to help them still (pp. 236-8). An excellent arrangement! No "Thou-devouring', cannibalistic "I" here.

× Mr. Dawson writes: 'It is in connection with the solar religion, the solar monarchy, and the celestial hereafter, that we find the first clear conception of a law of justice which is at once social and divine. Maat -- Justice -- is the first abstract divinity and she is both the daughter of the Sun-god and the power which inspires and gives validity to the king's command' (<u>Religion</u> <u>and Culture</u>, p. 120.) But the development of jurisprudence means its secularization, the solar becomes the human.

φ But much depends on <u>how</u> we lose our religion and kill our gods. As Sir William Mitchell Ramsay pointed out, the decreasing fertility and population of Asia Minor was closely linked with declining piety towards the Earth-mother.

† Primitives, Jung points out, take their gods to be purely external. 'Their character as projections was never realized. In the era of enlightenment people first found that the gods did not exist but were only projections. Thereby, though, they were annihilated. The psychological functions corresponding to them were, nevertheless, not annihilated at all, but fell to the unconscious and thereby poisoned people with an excess of libido previously devoted to the service of the divine image.' <u>Two Essays on Analytical Psychology</u>, p. 99.

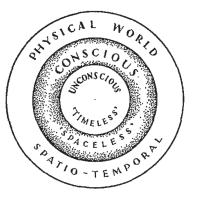
* Centuries of Meditations, II. 84.

Jung has pointed out that, on the other hand, where the archetypal figures are completely externalized and projected, they remain unconscious as a psychic factor, and their creative power is largely lost. (Psycologie und Alchemie, p. 23) What we need is neither primitive total projection nor modern total withdrawal, but their union. Neither Kirilov's "If there is no God, then I can be God' in <u>The Possessed</u>, nor Thales' 'All things are full of gods', will do.

unconscious. And so we have not one world but three pseudo-worlds --- the outer realm of nature, the city of mind, and the inmost citadel of concealed psychical process.

We have, indeed, a trinity of hierarchies. First, a mindless hierarchy in space; second, a bodiless hierarchy which, though it reflects in the departments of its science the first hierarchy, is itself out of space; third, a hierarchy that is both bodiless and mindless in the ordinary sense, an individual and racial unconscious which, it would seem, reflects a part (if not the whole) of the first and second hierarchies, but is itself not only out of space but in some fashion out of time also. × Now it is not surprising to find that, having thus trifurcated the universe, we are left with three abstractions, mere souvenirs or relics of the totality. Roughly speaking, the first is all matter and no consciousness, the second all consciousness and no matter, the third neither matter nor consciousness. All three, in so far as they are separated, are phantoms and absurdities. Doubtless the guillotine had to fall, and to fall twice, but it is even more necessary that the wounds it made should now heal. For there is one hierarchy, at once "I" and "Thou", subjective and objective, here and there, mind and body, unconscious and conscious, according to how it is viewed. To make a proper universe the three hierarchies have to be superimposed. And this means a Copernican revolution of unmatched scope and thoroughness. Firstly, each department of science must be recognized as the mind of its own subject matter, so that astronomy becomes in very truth the science of the stars, biology the science of Life, and so on. Secondly, our art must break out of its human prison into the world at large, so that beauty and cosmic status are once more assimilated; so that we can again hear in our loveliest music the voices of angels, ° the sons of God shouting for joy, the harmony of the spheres; so that every true artist is reverenced as literally and not metaphorically the instrument of a divine inspiration. Thirdly, the structure of religious experience must again be joined, to the structure of the cosmos, uniting Heaven and the heavens, the angelic choirs and the sidereal systems, the moral order and the scientific; so that the starry haloes of the saints become something more than charming ornaments, and the Ascension something more than a myth, and the Jacob's ladder of the mystics something more than a fire-escape in a Freudian dream.

Two things filled Kant with wonder --- the star-strewn vault above, and the moral law within. It was his tragedy and ours to part them. * Yet it was the only way. The order of the conscious mind is the order of nature, but neither can be realized till this fact is forgotten, till they draw apart, and nature is studied as if it were wholly foreign to mind. Again, the order of the unconscious is the order of the conscious mind, but unless they are sharply distinguished all is obscure. The sidereal intellect does not unfold by self-inspection, but in the study of mindless stars; angelic art is not realized in its own interior imaginings, but in commerce with an obdurate physical datum; the moral law within dissociates itself from the night skies in order to become more heavenly. The natural history of angels shows that they are made that way.



× The collective unconscious is for Jung the deposit of our whole ancestral past, active in us now. It is "the all-controlling deposit of ancestral experience from untold millions of years, the echo of pre-historic world-events.... a sort of timeless worldimage, with a certain aspect of eternity opposed to our momentary, conscious image of the world. It means nothing less than another world, a mirror-world if you will." Contributions to Analytical Psychology, p. 162. (Cf. Seelenprobleme der Gegenwart, p. 175.) Moreover, within the unconscious "those powers are still active which men have always projected into space as gods, and there worshipped them with sacrifices.... The manifold practices and convictions, which from the remotest times have played so great a part in human history, do not rest upon arbitrary discoveries and opinions of individual men, but owe their origin far more to the existence of strong, unconscious powers which we cannot neglect without disturbing the psychic balance." C. A. P., p. 161.

° "Or is music the inarticulate Speech of the angels on earth?" wrote Frederick William Faber, the hymnist. Cf. Henry V, 1. 1: "Consideration like an angel came, And whipp'd the offending Adam out of him,

Leaving his body as a paradise, To envelop and contain celestial spirits." On the work of art as essentially suprapersonal, see Jung, <u>op. cit.</u>, pp. 233 ff. The paradox, as Jung points out, is that the artist is seized and made to create, yet the creation is his own. In his University Sermons, Newman says that our "mysterious stirrings of heart, and keen emotions" and inspirations proceed from a higher sphere: "they are the voice of Angels". Cf. Swedenborg, <u>True Christian Religion</u>, 235.

* For Plotinus, writes Dr Inge, "it is a matter of faith that the hierarchies of existence and of value must ultimately be found to correspond. His whole philosophy is based on this assumption." The contrary belief, that values and existence form independent series, is much less reasonable, though it forms the basis of Ritschlian theology. <u>The Philosophy of Plotinus</u>, i. p. 132.

5. THE THEORETICAL APPROACH: THE SCIENCE OF ANGELS

Since we gave up thinking about angels our angelology has made great progress. Take for example what Fechner called their comparative anatomy. "Philosophy will clip an Angel's wings" Keats tells us; × and (it must be added) his arms and legs. For the angelic hosts of natural philosophy are shining but limbless spheres and discs and spirals. They are all the more fascinating, however, on this account, and their empirical study is in nearly every way more rewarding than the splendid but sterile constructions of the Pseudo-Areopagite. The anatomy of the principalities and powers in the heavens, their physiology, their girths and weights, their complexions and body-temperatures, their age-groups and expectation of life, their taxonomy and races, their entire natural history --all these are the concern of a science that entertains angels unawares, on condition they sham dead. As for the psychology of these creatures, we have a strictly Watsonian science, a celestial behaviourism so thorough that even the temptation to attribute 'mind' or 'consciousness' or 'life' to the subject never arises. Whoever (outside of Fechner and this book) would think of applying the introspective method of psychology to stars? °

In an important sense, all science, whatever its hierarchical level, is psychological science. It is both behaviourist and introspective, according to how it is viewed. ϕ When attention is directed upon the object, and the activity of the scientific observer (which conforms to the object's status) is overlooked, then it is the behaviourist psychology of the level concerned; when attention is directed upon the scientific activity itself, it is the introspective psychology of that level. But to be the second effectively it regards itself as only the first. And this method of unselfconscious objectivity has assuredly worked. We have, by surreptitiously carrying away every vestige of life and mind and value from the object there to the subject here, + and at the same time depressing or raising all these accumulated goods to our own merely human plane, built up here a huge (if combustible) stock-pile which is the content of the new angelology. The pressing problem is no longer one of production, but of distribution. Distribution vertically and horizontally, in space and in time. * We have to spread this material vertically, restoring it to its proper hierarchical levels; we have to spread it horizontally, restoring it from subject to object; we have to spread it in space, from the Centre here to every regional There; we have to spread it in time, from the Centre now to every regional Then. Or, to be more precise, we have to acknowledge its double location: in the vertical plane, it is at once human and infrahuman, or human and suprahuman, man-from-angel and angel-fromman; in the horizontal plane, it is at once objective and subjective, joint property, polarized, self-from-another and another-from-self; in space it is neither simply here nor simply there, but here-from-there and therefrom-here; in time it is neither simply now nor simply then, but nowfrom-then and then-from-now. In terms of Chapter III, the problem of our angels is the problem of their projection † --- but projection most complex and manifold; they must fly to every corner of the universe, yet without ever leaving us. For the Legion that possesses us is so immense that nothing short of all nature in space and time will serve for its em-



× 'Lamia', II. 234. And certainly they needed clipping: six wings are far too many, especially when there is no body, but only a head, to fix them to. Inevitably angels became on the one hand too fantastic (in Auxerre Cathedral, for instance, they appear on horseback) or on the other hand too commonplace (in some 17th century pictures they become nursemaids, busy washing the clothes of the infant Jesus). Worst of all are the anaemic Victorian hermaphrodites of T. Gambier Parry, in ankle-length nightgowns, and mouthing instruments that look like pea-shooters.

° Sometimes Fechner speaks of the higher souls as if they were inaccessible to man, but at other times he takes the opposite view: "In a certain sense the psychology of the spirit above us can be conceived as an empirical science, just as well as the psychology of our own spirit, inasmuch as our own spirits are partial exponents of the higher spirit." (Lowrie, p. 154.)

φ Following Leibniz (<u>Monadology</u>, 72), I think that there probably are, God excepted, no "superhuman spirits without bodies".

+ For instance, Richard Bentley, the 18th century divine, announces in his Boyle Lectures "that the soul of one virtuous and religious man is of greater worth and excellency than the sun and his planets and all the stars in the world". As if that soul were nothing to do with the sun and the planets and the stars!

* "The world of culture has grown, until it has subjugated the world of nature and pushed back the frontiers of the superhuman spiritual world beyond the boundaries of consciousness. And since man had become all in all, it was natural to believe that religion also was a purely human phenomenon that belonged to the world of man and had no relation with any external reality." Christopher Dawson, <u>Religion and</u> <u>Culture</u>, p. 27.

† And projection means reflection. Thus Hugo: "Les rêves sont les projectiles des étoiles; les millions de soleils percent ton plafond et se mettent à éclairer ta chambre." <u>Les Tables Tournantes de Jersey</u>, .p 378.

bodiment.

Our congested pandemonium of <u>déclassé</u>(or vertically undistributed[†]) and disembodied spirits is not slow to make itself felt: it has become an embarrassment in a variety of ways, and a fertile source of evasions and absurdities. Examine, for instance, that central and almost hallowed concept of our time, the unconscious. What could rest upon firmer empirical foundations, yet (as it stands) confront us with a more flagrant self-contradiction, than this superstructure of unconscious motives, unconscious mental content, unconscious emotion? ° And unconscious psychical processes are often (we are assured) more intelligent than the conscious: thinking without a thinker --- there's a miracle for us who believe we don't believe in miracles! What we all do believe in are the operations which are called unconscious: the facts are not in question, but their interpretation. And the interpretation which they cry out for, which is implicit (and indeed partially explicit) in them, is hierarchical. My thesis is that only by distributing what is called the unconscious (1) throughout the levels of the hierarchy, (2) throughout time, and (3) throughout space, can we make sense of the impressive mass of data furnished by modern psychology. ×

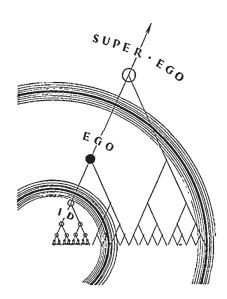
(1) I have excellent reasons for saying that, associated with my conscious mind, is mind of which I am unconscious. But if I go on to say that, because I am unconscious of its content, therefore no-one can be, that it does not belong in any system of overt experience, then I am guilty first of a contradiction in terms, and second of a piece of silly self-flattery. But (it may be asked) to what other minds, sufficiently in touch with this conscious mind of mine, can I attribute my unconscious processes? This book at once supplies the answer --- to the hierarchy of my infrahuman subordinates, and of my suprahuman superiors. + Here are vehicles in abundance, fitted in every way to carry all my unconscious psychic content. Moreover what they want I have too much of: my ghosts fly to their corpses, and the universe comes alive again. To speak more generally, there is now no unattached or runaway consciousness -- and <u>a fortiori</u> no unattached or runaway unconscious mind -- in the world; neither, on the other hand, are there hierarchical units of whatever grade which are altogether blind. * Subject to certain qualifications discussed in Chapter XII, every soul is embodied and every body is besouled. All the angels and demons of the analyst, all his mysterious phantom machinery -- the conscious and preconscious and unconscious, the Ego and Id and Super-Ego, the collective unconscious with its archetypes, autonomous complexes, the Censor, libido, rationalization and regression and displacement and sublimation, and much more -- now drifting in midair, needs to be brought to earth; this merely psychical series needs to be tied down securely at every point to the merely physical series disclosed by the physical and biological sciences. Of course the two orders had to be isolated to be studied at all, and of course their resynthesis will be a long (and indeed endless) task, but it is one that becomes every day more necessary.

Already the hierarchical shape of the analyst's psychical constructions is fairly plain --- witness the Id, Ego, Super-Ego series. The Id is the unconscious realm of infantile, primitive, animal tendencies, and † Goethe distributes. True religion, he says, is the product of a threefold awe --awe of what is above us, awe of what is below us, awe of what is our equal. <u>Wilhelm</u> <u>Meister's Wanderjahre</u>, II. I.

° The defect of the psychology of consciousness, Freud points out, is that the conscious processes it describes do not form an unbroken series, but are full of lacunae, and are obviously dependent upon something else; and that something else is mental but unconscious. Consciousness is, in fact, more like an accident of mentality than its essence; in Ernest Jones' words, it is "one attribute of mentality and not an indispensible one". See, e.g., Feud, An Outline of Psycho-Analysis, pp. 16-8; Ernest Jones, Psycho-Analysis, p. 121. × The floating, unattached 'universal consciousness' of some writers is no more satisfactory than the 'unconscious mentality' of modern psychology. Dr H. D. Oakeley has observed (Philosophy, April, 1945) that the question is not (as some think) how individual consciousness arose from the universal, but how the idea of non-individual consciousness can arise, and what it can possibly mean. Universal consciousness apart from a self or selves, Dr Oakley justly remarks, is a monstrosity. + It is not enough, in the light of the evidence now available, to say with Höffding (Outlines of Psychogy, p. 82) that what we call unconsciousness is another degree of consciousness; this is one of its attributes --- the other is that it shall not at present be available to our consciousness: for us now it is quite unconscious. * In Jung's Analytical Psychology the concept of unconscious mentality becomes even more self-contradictory than in Freud's theory. For Jung's unconscious assists and complements the conscious in ways that are "intelligible and purposive". He finds evidence for "a conscious in the unconscious", which implies an ego there. He adds: "It is obvious that the centre of a transcendental consciousness cannot be the human ego, since the ego has neither a hand in producing such experiences (experiences that give plausibility to the hypothesis of an ego in the unconscious) nor the necessary intelligence to understand them. It can only be their victim -- or the receiver of divine grace." But the evidence for the "concealed personalities" of the unconscious "belongs to the intricacies and subtleties of psychological analysis". The Integration of the Personality, pp. 15-17. Cf. Psychology and Religion, pp.24, 45ff; and Contributions to Analytical Psychology, pp. 264, 267: "Complexes behave just like independent beings, so that the primitive theory of spirits seems an excellent formulation for them... As souls are parts of the individual psyche, so spirits are part of the collective psyche."

notably of the sexual instinct; it is dominated by the 'pleasure principle', a-moral, and illogical.

The Ego is the mainly conscious realm of present objective reality, more or less logical, subject to moral standards, the scene where the instinctive drives of the Id come to some kind of compromise with the inhibitions of the Super-Ego. The Super-Ego is the mainly unconscious realm of that 'higher authority' which stands to the Ego as the severe parent stands to the erring child, of a moral criticism or conscience which is far more exacting than the familiar sort; from this 'higher nature' in us all religions have evolved. Now this threefold division (subject to some minor qualifications) is nothing else than our threefold division into infrahuman, and human, and suprahuman levels, of the total personality. Of course it is a particular aspect of these three divisions which the psychologist selects for investigation, while other aspects of them are the concern of art and mysticism and physical science; yet the hierarchical levels themselves are common to all such enterprises, the aim of which is, in their several ways, to bring to consciousness the content of the nonhuman orders, and unite it to the human. ° And of course it is true that, for all its quantity and elaboration, the Freudian and Jungian furniture is as yet quite insufficient to equip every floor of the hierarchical structure; nevertheless the work has begun: Earth and Sun are important figures of the Jungian collective unconscious × and Freud himself sought to explain the relation between our death instincts and procreative instincts in terms of the instincts of our cells. * Moreover Freud emphatically insisted upon the strength of the links that bind the Super-Ego and the Id: what I call the doctrine of Symmetrical Pairs is for him fundamental, and the regions are, in some degree, reversible. In its control of the Id, the Super-Ego by-passes the Ego; or, as I put it, our subordinates are in direct touch with our superiors, and even reach identity with them. That belongs to the lowest depths in the minds of each one of us is changed, Freud + tells us, "through this formation of the ideal (the Ego-ideal or Super-Ego), into what we value as the highest in the human soul." As for the complex rules or mechanisms by which the analyst's hierarchy is regulated, these are either entirely in keeping with the hierarchy of this book, or have already been discussed here under other names. For instance --- the analyst's lurid tale of complexes and hidden conflicts and psychic dynamism is just what we should expect of a hierarchy that is essentially a social organization; the double determination of the conscious, by an underlying and a dominating unconscious, aptly describes the condition of the hierarchical functionary of Chapter XIV; ascending 'life-instincts' and descending 'death-instincts' are only different titles for the basic vertical processes of the hierarchy, its essential 'metabolism'; the sublimation of animal drives, the repression directed against both the Id and the Super-Ego, the rationalization (in terms acceptable to consciousness) of the results of intervention from other regions, the miscellaneous apparatus of symbolism and myth, of dramatization and condensation and secondary elaboration, and so forth --- all this is precisely the sort of technique which the hierarchical functionary naturally employs, as he draws fully upon his subordinates and his superiors, yet without losing his own identity. Freud or no Freud, the hierarchy of this book demands, for the elucidation of its procedure,

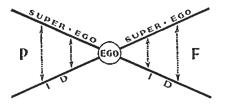


° <u>Cf. Wilhelm Windelband, Introduction</u> <u>to Philosophy</u>, p. 322: "The self-realizing of the genius is, (precisely because in it the conscious reaches into the sub- or super-conscious, the personal into the super-individual, the human into the metaphysical) the redemptive power which men have always felt and prized as the divine in art." Jung also describes the work of art as super-individual: something seizes and uses its creator regardless of his welfare as an individual. "At such moments we are no longer individuals, but the race." <u>Contributions to Analytical Psychology</u>, pp. 233 ff, 247.

× <u>The Integration of the Personality</u>, pp. 45 ff, 122, 108; cf. Joanna Field, <u>Experiment</u> <u>in Leisure</u>, pp. 175 ff.

* Beyond the Pleasure Principle.

+ The Ego and the Id, p. 48. In <u>An Outline</u> of Psycho-Analysis, Freud says that "the Id and the Super-Ego often make common cause against the hard-pressed Ego" (p. 35-6; cf. p. 79). Jung writes: "I am unable to separate an unconscious below from an unconscious above, since I find intelligence and purposiveness below as well as above." <u>The Integration of the Personality</u>, pp. 15-16. Cf. <u>Paracelsica</u>, p.171, where Jung points out that the unconscious is just as truly a 'superconscious' as a 'subconscious'.



some such set of concepts as these. The physical hierarchy needs the psychical just as much as the psychical needs the physical. †

(2) The one-level, pre-Freudian psychology of consciousness has been superseded by depth-psychology, which has begun the work of distributing throughout the hierarchy the mind that is in man. But this vertical distribution is not enough. Innumerable facts point to the need for a lateral distribution in time, so that the mind which is in man <u>now</u> is spread over other times, and (ultimately or in principle) over all time. The commonplaces of memory and anticipation and historical research gave the clue; and now analysis shows that our mental apparatus covers, not only our earliest childhood, but also our entire racial history. The analyst cannot begin to understand his patient's present condition till he looks upon him as one of the immortals, whose life is the life of remote ages. ϕ Now this temporal distribution or projection is fourfold --- directed upon the past and the future, the inferior and the superior series. Thus Freud, looking into the past, links the Id with 'organic' and sub-individual history, and the Super-Ego with 'cultural' and super-individual history; and points out that these two are closely associated. ° And thus Jung, looking into the future, regards middle life as the time of preparation for death --- and not merely death downwards into the realm of matter, but also upwards into "the collective psyche, out of which as a child he once with great effort emerged". × As this inquiry has made abundantly clear, we have practically no history at this level: all the roads that lead out of the present, slope up to the apex of the hierarchy or down to its base. Psycho-analysis and its derivatives have only begun to explore them.

(3) The ultimate effect of the two kinds of distribution or projection which I have just described -- projection upon other levels, and other times -- is to universalize the mind in man, till he (or that which is in him) is seen as ubiquitous and immortal. But even this is not enough. There must occur a third kind of projection at each level --- projection from this Centre on to others, which are credited with full objective reality. * Like a solipsistic man, a solipsistic angel (even if he contrives to belong to all the nine choirs) is a contradiction in terms. Angels are found in hosts, and are ineluctably social. Their attention is turned outwards upon their comrades, in whom alone they can find themselves. The time comes of course (as I have shown) when this "I-Thou" relationship degenerates into an "I-it" relationship, when the angelic mind and body are isolated and held apart; but this 'antisocial' phase was a necessary corrective of the fear and superstition of the earlier phase, and makes an immensely valuable contribution to the fully social phase which is now dawning. In this phase we pass from subjectivity to objectivity. "The archetypes come to independent life and serve as spiritual guides", says Jung. "To the patient it is nothing less than a revelation when, from the hidden depths of the psyche, something arises to confront him -- something strange that is not 'I' and this marks the beginning of the cure."+ In other word, the patient is beginning to regain his religious outlook --that faith in the independent and supra-human "Thou" without which we are all 'patients', all more or less unhinged. All his patients over the age of 35, Jung tells us, had fallen ill because they had lost a religious

† And, of course, many Freudians and Jungians are dissatisfied with the disembodied state of the agencies they study. Thus Dr H. Crichton-Miller: "His (Freud's) elaborate scheme of the conscious and unconscious, of the Id and the Ego must one day stand or fall by the possibility or impossibility of co-ordinating it with the structure of the central nervous system." <u>Psycho-Analysis and its Derivatives</u>, p.128. Cf. Dr H. Devine's address to the Psychiatry Section, Royal Society of Medicine, Nov. 8th, 1932.

"The sky of angels is alive, and I have lived it

Before memory began, or I was a child." Kathleen Rains, 'The Sky of Angels', in <u>The</u> <u>Pythoness and Other Poems</u>.

--- To say the very least, it is a significant natural fact concerning the human mind -- a persistent peculiarity of the Nature which the psychologist studies -- that it has for thousands of years gone on making statements like this.

 φ Jung likens the unconscious to an almost immortal collective human being, having at his command the experience of millions of years, and without whose purposive functioning we could not live. <u>Modern</u> <u>Man in Search of a Soul</u>, pp 117, 215-6.
 ° See, e.g., <u>An Outline of Psycho-Analysis</u>, p. 79.

× Jolan Jacobi, <u>The Psychology of C.G.</u> Jung, p. 141. Cf. Jung's <u>Modern Man in</u> <u>Search of a Soul</u>, 128-131 --- "It sometimes happens that I must say to an older patient: 'Your picture of God or your idea of immortality is atrophied; consequently your psychic metabolism is out of gear.' The ancient <u>athanasias pharmakon</u>, the medicament of immortality, is more profound and meaningful than we had supposed."

* As Jung has pointed out in a number of recent works, alchemy furnishes a remarkable instance of the shift from the subjective to the objective, and from concern for the self to concern for the not-self. What from Jung's point of view as analyst were psychical events in the experimenter, were for the alchemist himself features of the experiment, of the chemical process itself. Moreover his aim was not his own salvation or psychic healing, but the liberation of the divine soul that is hidden in matter. The effect upon himself is powerful because it is only a secondary effect: the method works because it is indirect. See The Integration of the Personality, V; Paracelsica; Psychologie und Alchemie. I would say that the principle is still more important for us, whose soul's health consists in the discovery and unveiling and service of the divine soul that is beyond our own.

+ <u>Modern Man in Search of a Soul,pp</u>. 264-7; 278-280; cf <u>Contributions to</u> <u>Analytical Psychology</u>, p. 116. Jung as psychologist, while noting the healing effects Page 587 attitude to the universe, and none was healed who did not find it again.

To sum up, then, our modern science of angels is, in fact, immensely more thorough and productive than any of the angelologies of the past; but it is so distributed throughout the departments of our science, and so undistributed throughout the regions of our universe, that its existence as a whole is scarcely suspected. ° What may be called the comparative anatomy and physiology and behaviourist psychology of angels (shared out between astronomy and physics and astrophysics, geology and chemistry, and all the rest), and their introspective psychology (which psycho-analysis and its analogues have begun), and their psychological history (as studied in comparative religion and mythology, and the history of science), remain almost entirely unconnected. We have, indeed, by means of these multifarious and painstaking researches, done much to lower the threshold and raise the lintel of consciousness, and the doorway that we have thus opened frames all the makings of a new and more imposing and illustrious host of angels; but our sight is confused: we fail to discriminate the hierarchical ordering of what we see, and to project it appropriately into space and time. A true science of angels -alias a cosmology adequate to our time -- would take all this more or less central and unorganized material, and so distribute it in regional depth as to reveal a universe that is through and through organic and besouled.

Angelology asks for equal rights with the other sciences. It has designs on none of them; it claims its own realm, not theirs. The study of the larger organisms will not for ever remain neglected. Our present indifference is a temporary phase, and there are signs of its passing. A new and very wonderful world is about to disclose itself to us --- a world that is all the fresher and more beautiful for having been so long hidden. After the long winter of the world's death, we are ready for the spring. An astonishment and a revelation are in store for us, as the Americas and the solar system were for an earlier century. We are about to rediscover the visible giants and angels and gods which we were too clever to see, because they had worn that perfect camouflage or protective colouring --- their own obviousness. × We find what we have to look for diligently, and lose that for which there is no need to seek. To speak truly, one of the reasons why we are not enthusiastic angelologists is that angels do not sufficiently try our faith, or demand to be taken on trust. Because they are credible, we are incredulous; because they are not absurd, we doubt. If only they would wrap themselves in sevenfold veils of mathematical formulae, which only a handful of high priests were permitted to draw aside; if only they became the sacred objects of obscure and very costly laboratory rites, and assumed all manner of unthinkable dimensions and physiognomies (their parallel lines meeting, their space curving, and the like), and claimed to be able to travel from one spot to another without crossing the intervening space, and demanded worship in a peculiar and almost unknown tongue --- then indeed they could count on our most devoted faith. + Credo quia absurdum. But no: they do not ask us to believe so much as one impossible thing before breakfast --- and so they are a superstition, a fallacy, nonsense! Except, of course, in the eyes of poets and the people.

of externally directed religious belief, is careful not to pronounce upon the ontological status of its objects; but he remarks that his approach, so far from encouraging skepticism, shows the immense importance of faith.

° The unitary science which I am here proposing is sketched, from a different angle, by Jung in the following passage: "I attribute a positive value to all religions. In their symbolism I recognize those figures which I have met with in the dreams and fantasies of my patients. In their moral teachings I see efforts that are the same as or similar to those made by my patients, when, guided by their own insight or inspiration, they seek the right way of dealing with the forces of the inner life. Ceremonial, ritual, initiation rites and ascetic practices, in all their forms and variations, interest me profoundly as so many techniques for bringing about a proper relation to these forces. I likewise attribute a positive value to biology, and to the empiricism of natural science in general, in which I see a herculean attempt to understand the human psyche by approaching it from the outer world. I regard the gnostic religions as an equally prodigious undertaking in the opposite direction: as an attempt to draw knowledge of the cosmos from within." Modern Man in Search of a Soul, p. 137: the italics are mine. Cf. Pascal: "Man's true nature, his true good, true virtue, and true religion, are things of which the knowledge is inseparable... The more light we have, the more greatness and the more baseness we discover in man... This religion taught to her children what men have only been able to discover by their greatest knowledge." Pensées, 442-4.

× As an instance of how angelic or sidereal influences direct attention away from themselves, observe that persons who are most anxious to expose astrology, by disproving the influence of the stars, are the very ones who are most anxious to prove that influence. They show us how our destinies are moulded by a Hitler who acts this way rather than that, on this day instead of the next, because the stars are in such and such positions. They show us that our fate is governed by the stars! Of course the government is quite different from that which the dictator's astrologers supposed, but it is government all the same. For, as at the human so at sidereal levels, amongst the most veridical and powerful effects of an object are those which arise from 'mistaken' views of it. And it must be remembered that the thing is what it does, and none of its effects can be in every sense mistaken. + For a reminder of the fact that the founders of modern science made many unwarrantable assumptions (the actual

evidence was against rather than for the

6. THE PRACTICAL APPROACH

Prodigious practical benefits have flowed and still flow from belief in suprahuman beings. I have mentioned, for example, the view that agriculture and the domestication of animals were a by-product of religious rites; ° that a principal source of our science was astrology and the veneration of the star-gods; × that, in general, a culture is the outcome (and, in a sense, the working out) of a religious impulse and vision; that it lives on its gods, energizing itself by consuming them little by little; that there are now signs of this centripetal movement approaching a natural climax, after which benefit lies in re-projection rather than in further absorption --- if, indeed, there remains any further objective divinity for man to claim. There is, of course, a good deal of vague guesswork here, and nothing can be proved; nevertheless a vast quantity of evidence supports the belief that culture exists and thrives only by virtue of man's commerce with suprahuman orders, though that commerce is necessarily two-way, negative as well as positive. Needing angels to destroy is still needing angels. Our need of food and fuel is all the greater because we are only concerned to get rid of it.

But it will not do to say: this belief works, or is required to hold society together, or is aesthetically justified; therefore let us adopt it. + The trouble with this kind of pragmatism is that it is unpragmatic; it will not work. "Beware of the man whose god is in the skies," Shaw says; * he has no need to warn us concerning the man who only finds it advisable to suppose his god is there. The first question must be: is this right or true? Only afterwards, after the truth has been sufficiently shown, can I safely admit as secondary and supporting evidence considerations of expediency, and show that to recognize this truth is in accordance with our nature, health-giving, life-promoting, entirely practical. On the other hand, it would be foolish not to give this evidence its proper weight in its proper place. Put first, it throws suspicion on all that follows --- this ought to be true; this must be true; by heavens, this shall be true! Put last, it clinches the argument; this is a fact, moreover it works: therefore I shall act on it. It is true there is a small but vocal class of thinkers who believe that man, though in all things the work of the universe, is yet essentially at odds with it, so that his deepest needs and aspirations run contrary to nature; I think the burden of proof rests with them --- and not only of proof: there is first the problem of showing what can possibly be meant by the assertion that the part (it is the most important part, of which we have immediate and indubitable knowledge) is irrelevant to the whole, or has somehow worked loose or come adrift from it.

I have said that belief in the suprahuman works out in practice; but this statement requires some qualification. It is true that the present relatively godless condition of Western man is an anomaly and unlikely to last; † the human cannot survive in the absence of the suprahuman. But the price of survival may be all too high. In the end, our choice is not between gods and no gods, but between reasonable and unreasonable gods. If scientists and religious teachers and philosophers, in an unholy if unconscious alliance, combine to cheat man of his good angels, he is terribly liable to turn to bad ones, for angels of some kind he will have. Copernican theory) see E. A. Burtt's <u>The</u> <u>Metaphysical Foundations of Modern Sci-</u> <u>ence</u>. Science was not only, as Whitehead urged, anti-rational; often it flew in the face of the empirical evidence.

° Religion, says Durkheim, is like the womb from which come all the germs of human civilization. <u>The Elementary Forms</u> <u>of the Religious Life</u>, pp. 223, 237. E. Hahn and Sir William Mitchell Ramsay suppose that cultivation rose out of the ritual imitation of the processes of nature, rather than as a practical venture; and similar beginnings are found for the domestication of animals.

× Cf. Bertrand Russell, <u>The Listener</u>, December 8th, 1949: "Traditionally, the European outlook may be said to be derived from astronomy."

+ "Society becomes possible by religion", Carlyle tells us (Sartor Resartus, III. 2); but it is not enough that a society disintegrating for lack of religion should realize this cardinal truth: it must have religion for the sake of its divine Objects, not for the sake of the blessings that flow from it. On this see C. S. Lewis, Screwtape Letters, p. 120. Santayana and other philosophers with pragmatist tendencies have argued from the aesthetic qualities and ethical consequences of religious belief to its quasi-validity: religion is a beneficial imaginative function. "By their fruits ye shall know them" is an invaluable maxim; but it doesn't mean that a tree grows apples by thinking of them, instead of enjoying the sun and the air.

* <u>Man and Superman</u>, 'The Revolutionist's Handbook'.

In <u>Die Drie Motive</u>, Fechner argues that, while self interest blinds us to the highest truth, this is only because we do not push that interest far enough; our real selfinterest coincides with reality. (Lowrie, p. 111) But it is important to realize that if we could see clearly just how the true belief is always the most practical, and how honesty is always the best policy, and crime never pays, we should say good-bye to morals. Cf. F. H. Bradley, <u>Ethical Studies</u>, p. 62.

† As Christopher Dawson points out, our conception of a universe "hermetically sealed against the intrusion of any higher order of reality is an extremely rare phenomenon in human thought." <u>Religion</u> <u>and Culture</u>, 37.

If our intellectual élite do not soon decide for something like the model of the universe which I am defending here, the masses may well forestall them by deciding for something like the New Mythology of Rosenberg and Goebbels; if man is not allowed a celestial hierarchy whose function is to join him in glorifying God, he may try to make do with a terrestrial hierarchy whose function is to deify the Leader, or Party, or State, or Race, or Ism. What may perhaps be called the law of the conservation of Mana ensures that when the gods die their potency does not die with them, but passes to man himself or to baser gods. "I must follow the bright angels" ° --- even if it is only to avoid following the dark ones. Jung \times has said that the reason why the unconscious with its archetypal images remained undiscovered till the modern age is that religion covered the field with a wealth of satisfying and beautiful formulae. And indeed it must be admitted that, in the course of their flight from the nine heavens to the depths of the human psyche, our angels have not changed for the better: there is a faint smell of brimstone, and a glimpse of the cloven hoof. The power and the glory which have come down from the skies to settle upon man -- upon his science and politics and psychology -- are strangely inglorious, and though the power cannot be doubted neither can the awful dangers which go with it. Mana has left religion for politics and science, + the church for the discussion group and the laboratory, the divine science of theology for current affairs and the science of matter.

> "Men have left GOD not for other gods, they say, but for no god; and this has never happened before That men both deny gods and worship gods, professing first Reason,

And then Money, and Power, and what they call Life, or Race, or Dialectic." * What are the results? "Wretched is he who has a dim opinion of the gods in his heart" was the opinion of Empedocles 24 centuries ago † and on the whole I think our experience bears him out. As our perspectives widen they deteriorate. The more our universe expands physically the more it contracts psychically: its mind is centripetal, its body centrifugal. ϕ And, now their separation in the great centrifuge of our civilization is nearly complete, the necessity for setting the machine in reverse becomes daily more evident. We have to put the space back into psychic happenings, to read into them their full depth. In Traherne's language, we need "a clear eye able to see afar off, a great and generous heart, apt to enjoy at any distance: a good and liberal Soul.... for there is a great difference between a Worm and a Cherubim." o Such differences are lost on us cosmic sansculottes, with our passion for levelling down the universe to a classless society. Modern man, says Berdyaev, "gives himself up to a surface existence and lives in two dimensions as if he occupied exactly the surface of the Earth, ignorant of what is above or below him." ° The law (Berdyaev goes on) is that human personality is strong and fruitful only so long as it recognizes suprahuman and supra-individual realities and submits to them. In denying his higher sources man injures himself, and the power and zest are drained from his life. "Why", Marcus Aurelius, "should I desire to live in a world void of gods?" \otimes No wonder life falls flat in our levelled world. Deep men need a deep universe. According to Tzu Ssu, the grandson of Confucius, it is only a real man "who can understand the nourishing processes of heaven and earth.... His depths how unfathomable! His superhumanness how overwhelming! Who is

A number of writers have linked our declining faith with our rising superstition. Sir S. Radhakrishnan for instance (<u>The World's Unborn Soul</u>, pp. 15-23) says that the naturalism of intellectuals on the one hand, and the crude fundamentalism, state-worship, etc. of the masses on the other, are not independent phenomena, but complementary excesses.

° T. S. Eliot, <u>The Family Reunion</u>.

× <u>The Integration of the Personality</u>, pp. 56 ff.

"The gods and demons that could no longer hold their abode in the field of the physicists were discovered to have retreated into the human psyche. Instead of nature being full of gods and demons it was the human psyche that had to contain them all. A terrifying vitalization of the human psyche was the result." Gerhard Adler, <u>Studies in Analytical Psychology</u>, p. 199. See also Jung, <u>Psychology and Religion</u>, p. 104.

+ On the odour of sanctity which now clings to politics, in its role as religion substitute, see Rosalind Murray, <u>Time and</u> <u>the Timeless</u>, p. 27.

* T. S. Eliot, 'The Rock'.

† Burnet, Early Greek Philosophy, p. 225. ϕ We need to regain at a higher level the 'unpsychological' condition of the primitive whose mental states are the object's properties and not his. It is not that he is afraid, but rather that certain places or things are bad or terrible; it is not that he dreams, but rather that certain things happen, and he meets certain people, he ; it is not that he enjoys the sun, but rather that the sun itself is good. He has not learned to abstract from the concrete universe what we call the subjective element. We, on the other hand, have taken this abstraction to the limit. Cf. Jung, Modern Man in Search of a Soul, p. 161.

e <u>Centuries of Meditations</u>, I. 38. ^o <u>The End of our Time</u>, pp. 17, 23ff. Cf. Albert Schweitzer, <u>The Decay and Restora-</u> <u>tion of Civilization</u>, pp. xii, 11 ff, 72 ff: "Our present entire lack of any theory of the universe is the ultimate source of all the catastrophes and misery of our times." "Every being who calls himself a man is meant to develop into a real personality within a reflective theory of the universe." And without such a cosmology we suffer from "a pathological disturbance of the higher capacity for self-direction."

⊗ Meditations, II. 8.

there who can comprehend this ... unless he reaches out to the spiritual power of Heaven?" +

His greatness, in fact, consists in his discovery of Heaven's greatness.

7. THE PRACTICAL APPROACH: RELIGION TODAY

The churches (it may be said) exist to raise our hearts and minds to the things that are above, to put the vertical dimension into our lives. Indeed they do. Yet the steady drift away from organized religion continues;° church-going is becoming a kind of old-world eccentricity, like leaving cards or dressing for dinner --- harmless, picturesque, vaguely consoling. Why is this? Not, I think, for any lack of spiritual hunger in the modern man, but rather because he is faced with an unresolved dilemma. * On the one hand (represented, say, by the Church of Rome) is the full accumulated wealth of tradition; with all its beautiful imagery, symbolism, and paradoxes (including the angels) practically unmodified by science. On the other hand (represented, say, by liberal Protestantism) is religion so sterilized and aseptic, so bowdlerized by science, that what remains is little more than a vague uplifting tendency, and an eminently reasonable but almost sanctionless moral code: the only trouble with this common-sense religion is that it is not religious. (But I am wrong: it has another defect --- form outlasts conviction, and the words go on being repeated centuries after the belief is dead. As John Macmurray says somewhere, giving public assent to these beliefs which we no longer hold is very damaging.) • The distressing choice, then, which confronts modern man, is between heart, and head, and a little of each; between faith triumphing over the dead body of science, and science triumphing over the dead body of faith, and both at their last gasp, locked in a death struggle. ϕ The good grow less intelligent, the intelligent less good, and both less honest. And we are fragments of men. Is it any wonder, then, that our churches are empty, that religion declines, and public morality with it? Apparently we cannot scrap the cosmology and keep the ethics that went with it. Our crime problem, our war problem, our divorce problem, our juvenile-delinquency problem --- all these are at bottom cosmological. We suffer from a disease in our universe: all the rest is signs and symptoms.

What is the way out? A new religion? Many -- among them F. H. Bradley -- have thought so \otimes . My own conclusions are: firstly, that there is no such thing as a new religion; secondly, that what is needed is a return to the perennial wisdom of the race, rather than any new-fangled cult; thirdly, that this return has already begun. But something much more than a revival is required. \oplus To meet man's case, the dogmas of religion must be restated with uncompromising intellectual honesty, in such a way as to complete instead of contradict what science has established.× Moreover they must be restated in such a way as to command the respect of the educated Hindu and Buddhist and Moslem; they must stand above all racial prejudices and peculiarities, and so serve to bind men everywhere. Finally, they must be at once simple and profound, capable + E. R. Hughes, <u>Chinese Philosophy in</u> <u>Classical Times</u>, p. 42.

° Cf. Jung: "Man is never helped in his suffering by what he thinks for himself, but only by revelations of a wisdom greater than his own." Modern Man in Search of a Soul, p. 278. In the same book Jung has much to say about the neurosis resulting from the failure of our religious attitude to the universe. Many other writers have expressed similar views. Professor R. G. Gordon has pointed out that personality is shaped by cosmology, and cannot nucleate apart from some belief about the universe. To gain personality, according to Dr Inge, is to lose it, constructing our universe on a cosmocentric instead of an egocentric basis. Personal Idealism and Mysticism, pp. 94 ff.

* On a religious attitude as essential to mental health, see Dr William Brown, <u>Mind and Personality</u>, pp. 268, 283, 291. See, e.g., <u>Towards the Conversion of</u> <u>England</u>, a Report of a Commission on Evangelism appointed by the Archbishops of Canterbury and York, 1945. This Report finds "a wide and deep gulf between the Church and the people" (p. 2); "widespread decline in church-going; and the collapse of Christian moral standards" (p. 3).

• First in his list of the causes of the failure of religion, Sir S. Radhakrishnan puts "the unscientific character of religious beliefs". <u>Hibbert Journal</u>, July 1946, p. 296. The failure of religion in our time", says W. Macneile Dixon, "lies... in its inability to meet the needs of the intellect." <u>The Human Situation</u>, p. 36.

φ Our habits and traditions, Sir Richard Livingstone warns us, cannot long outlive the beliefs from which they grow. "Those who reject Christian beliefs cannot count on keeping Christian morals." <u>Education</u> <u>for a World Adrift</u>, pp. 24-5. Democracy, said Archbishop Temple, "can survive only if it is Christian". <u>Christian Democracy</u>, p. 30. Cf. Harald Höffding, <u>Modern Philosophers</u>, p. 223.

 \otimes Essays on Truth and Reality, p. 446.

 \oplus Cf. Sir Walter Moberly, <u>The Crisis in the</u> <u>University</u>, p. 294.

× Religion itself is a victim of that centripetal movement which drains off the meaning and holiness of the universe into a few set times and places: the sacred rite loses all connection with a profane universe. Cf. C. E. Raven, <u>Creator Spirit</u>, pp. 269 ff. of interpretation at many different levels of the human understanding, without the aid of white lies and pious frauds and that duplicity which has one creed for the masses and another for the few. • Two things we do not want --- a sacred Plenum, a museum overflowing with ecclesiastical relics; and a sacred Vacuum, a house of God so emptied and swept and garnished by science that, if it is not presently occupied by the good suprahuman, will be requisitioned by a less desirable authority.

--- A tall order, unlikely to be met in full, or soon. Certainly I cannot predict the form which this renascent religion will take. But if it comes at all, I think it will (in so far as it meets the needs of the whole man, head as well as heart) include what I call the new angelology: it will reassert the living hierarchical universe which is the topic of this book. ° Here I have tried to show that, so far from science having destroyed the essentials of the ancient world-view, it has only confirmed them. † The retreat of faith before each scientific advance has a very different look once religion claims science as its own agent and generalissimo, who hands back each territory purged of the forces of superstition. A religion that cannot stomach the universe that science reveals does not deserve to survive. As W. E. Hocking finely says, "A true religion requires cosmic courage." * I would add that a religion which has lost its cosmos has lost both its courage and itself. Science always has been the handmaid of the highest religion, and the executioner of the lowest. There is a large element of truth in Spencer's dictum that "The beliefs which Science has forced upon Religion, have been intrinsically more religious than those which they supplanted." ×

The new angelology is at once more elaborate and less arbitrary, more empirical and less speculative, than the old; and certainly (as the more cynical critic might observe) it does not lack that ingredient of mystery and vagueness which, according to Otto, is essential to all religion. + On the subject of Fechner and the stars William James wrote: ϕ "Men have always made fables about angels, dwelling in the light, needing no earthly food or drink, messengers between ourselves and God. Here are actually existent beings, dwelling in the light and moving through the sky, needing neither food nor drink, intermediaries between God and us, obeying his commands. So, if the heavens really are the home of angels, the heavenly bodies must be those very angels, for other creatures there are none." How odd that we should imagine we had never set eyes on an angel, that we should imagine we do not already live with them in Heaven itself, sharing their happy life! Heaven is not less heavenly because its angelic trines are now called planetary and stellar and galactic respectively, or because its hosts have developed a habit of calling one another by their N.G.C. numbers, or because they take one another's temperatures. Quite the contrary: angels cannot know themselves too well, and ignorance is even less admirable in Heaven than on earth.

8. THE PRACTICAL APPROACH: ART TODAY

Contemporary art is mostly a congeries of private cults, unknown to the masses, and ridiculous or incomprehensible when it is known. We talk of the drift away from religion, but what of the drift away from art? Page 592 • On double standards of this sort, see Raven, <u>op. cit.</u>, pp. 253-4.

° It will be a cosmological religion, whose mythos, whose ethic, whose mysticism, is not less 'distributed' throughout the universe than Dante's. Those current abstractions -- a secular cosmology, and an uncosmological religion -- will merge to reveal the sacred universe that lies about us, the Heaven we live in all the while but refuse to see. Cf. Whitehead, Religion in the Making, p. 141: "Whatever suggests a cosmology, suggests a religion." And Gerald Heard, Training for the Life of the Spirit, ii. p. 21: "The ethic which does not depend on a Cosmology is untrue; the Cosmology which does not result in an Ethic, a life of deduced action, is meaningless. Today our ethic has depended on an anthropomorphic cosmology and so has failed because people can no longer believe that picture of Reality to be true; while our cosmology, which has been completely mechanistic, has resulted and must result in behaviour which is utterly unethical, unrighteous."

† Thus I entirely agree with Sir Edmund Whittacker's statement (<u>Space and Spirit</u>, p. 84) that the law of gravitation exhibits mind in the universe far more clearly than did the star-moving intelligences; only I add that the former part of the confirmation, the elucidation and correction, of the latter.

* <u>Living Religions and a World Faith</u>, p. 204.

- × First Principles, 29.
- + The Idea of the Holy, pp. 67 ff.

φ A Pluralistic Universe, p. 164. In Die Drei Motive Fechner points out that we oscillate between two errors --- the error of ignoring the physical world in our search for the divine, and the error of sticking too close to the merely physical. The first is the error of mediaeval and religious man, the second of modern and scientific man. And, it may be added, when a writer like Seeley, in his essay on Natural Religion, attempts a compromise, and maintains that science purifies rather than destroys Christianity, he is taken to task by both Christians and scientists alike. Our education, L. P. Jacks points out, is mostly fit for man in a dead universe, an inert thing for his exploitation. But he is liable (like the king who built his palace on a great mountain, which turned out to be a wart on the head of a sleeping monster) to be rudely shaken out of this delusion. In any case, "Either the universe is alive altogether, moral law and starry firmament dancing to the same immortal melody", or our life is not worth much. A Living Universe, pp.14, 40 ff.

How often nowadays is what competent critics believe to be the best contemporary work -- in poetry °, painting, sculpture, music, architecture, the cinema -- popular? Never has there been a wider gulf between the artist and the people --- a gulf wider, surely, than that which now separates official religion from popular sentiment. Religion and art (and to these philosophy must be added) have become unreal because they have become independent of one another and of cosmology. At bottom, our troubles arise from our trifurcation of the values as concretely embodied: the good world is not the true one, and the true one is not the beautiful one. Scientists, and religious people, and artists, inhabit three universes; • and this is bad for science and religion and art. It is true, of course, that the art whose main concern is the propagation of truth or goodness has every chance of failing to achieve beauty; × but equally it is true that the art which is indifferent to the living science and religion of its day is likely to fail miserably in its own province. Informing and animating the Divine Comedy, and the architecture of Amiens, and the sculpture of Chartres, and indeed all the works of the Middle Ages, is a consistent and awe-inspiring hierarchical cosmology. Here are no watertight bulkheads between the values. And until we can arrive at a comparable world-view we may expect to have an irresponsible and even suicidal science, a neglected and ineffectual and often insincere religion, a sanctionless and faltering morality, and an unpopular and precious art. It was right and necessary that the one universe should divide into three, in order that its final unity might be all the richer for having been temporarily in abeyance. It was inevitable that science and art, having come of age, should leave religion their mother. But now the only way they can keep and enjoy their great gains is to share them at home.

Not surprisingly, as the family breaks up, its members become more self-conscious. In the end, they grow more interested in themselves -- in their own acts and feelings and reactions -- than in external reality; the subject gains at the expense of the object. And this shift can only culminate in sterility and death, seeing that to live is not to be alive so much as to find the living. I have shown how science must bleed the universe of its physical qualities, and religion must bleed the universe of its sanctity; even so must art bleed the universe of beauty, transfusing it to the 'eye of the beholder'. + In painting, for example, as the technique of representation is mastered, so the essence of art is taken to lie less and less in what the external world is, and more and more in what the artist's reaction is; till, in the limit, he paints from his own imagination, without any direct reference to nature at all. For such a one, art truly is expression, as Croce insists, and not impression: in so far as there is an object its role is the evocation of subjective associations and meaning, and so the revelation of man to himself. It is degraded to the rank of mere stimulus, in itself nothing more than the "inanimate cold world" of Coleridge's poem. That way lies, besides dejection, the drying up of all the spirit's fountains. But when the artist ceases to look round for some objective peg on which to hang his subjective experience, when he no longer seeks 'inspiration' anxiously within himself, but is overwhelmed with the tremendous external Fact that will not let him alone --- then, even if his technique is not yet a match for his vision, he must compel us all. And this Fact, this masterful Other, is certainly lying in wait for him: already the angel is

° The fact that the real poet voices the deeper ideas of the popular mind does not, unfortunately, mean that he is recognized or even heard by those for whom he speaks. Indeed, the function of the great artist is to become the instrument of the 'collective unconscious', thereby compensating for the current <u>conscious</u> attitude: thus he must often oppose the overt spirit of his age. Cf. Jung, <u>Modern Man in Search of a Soul</u>, p 191.

• In fact, there are many more. For example, it is notorious that the moral and the mystical elements in religion may become for a time almost independent.

× Cf. Upton 'Sinclair's Mammonart, in which the author defends the impossible thesis that great art is always 'progressive' and never 'reactionary'. But the all-toofamiliar doctrine that the real or supposed political or moral tendency of a work of art is relevant to its aesthetic worth, ought not to drive us into the opposite fallacy of the aestheticism which cannot see the triviality of art that is aloof from the religion and science of the time. There are two errors --- the facile assumption that the true universe is good and beautiful, or that it is bad and ugly. The discovery of the coincidence of the values is always difficult and often agonizing, but it is of the essence of art and religion: except for the rare moment of vision, it is a working faith increasingly justified by results.

In Decadence, Dr Joad discusses far more thoroughly than I am able to do here the "dropping of the object" which is characteristic of our time. The excellence of music even (he points out) consists not in the revelation of human personality, or the composer's creativity, but rather in the discovery of a somewhat which is there and objectively real. See particularly pp. 173 ff. John Macmurray takes up a similar theme in Freedom in the Modern World, where he says that objectivity, the capacity to apprehend and enjoy a world that is essentially independent of ourselves, constitutes the essence of human nature; and our freedom lies in our ability to express our nature thus, by losing ourselves in the object.

+ The primitive notion that the soul may be transferred elsewhere for a season --Fraser calls it "a real article of primitive faith" -- is unwittingly put into effect on the grandest scale by ourselves. Among the Minahassa in Celebes, when a family is about to move house, the priest collects the souls of the whole family into a bag, and afterwards restores them to their owners. (<u>The Golden Bough</u>, Abridged Edn, LXVII. 1.) What he does for a single household, we do for the whole family in heaven and earth. beginning to wrestle with Jacob.

Where the vision breaks up into kaleidoscopic fragments the people perish. * Until the artist, as well as the priest, has discovered the world that the scientist has discovered, that world remains a dangerous and deceptive abstraction, a menacing outline void of all moral and aesthetic filling. We have on our hands a Frankenstein's monster of a universe, and energetic body without a soul. No wonder our world is mad: two thirds of it are missing. The business of art is now to combine with religion in what is, from one viewpoint, the discovery of objective values at nonhuman levels, and what is, from another viewpoint, the hierarchical dispersion of subjective values (so to say) which have for many centuries been accumulating in man. Let me give an example. Prayer, it is fashionable nowadays to say, is therapeutic, not cosmological; rectifying the man, it has no effect upon the universe. But for George Herbert prayer is:

> "Heaven in ordinary, man well dressed, The milky way, the bird of Paradise, Church-bells beyond the stars heard, the soul's blood, The land of spices, something understood."

Here is vertical redistribution in earnest. ° So thoroughly do we insulate the human from the cosmic that when at last they are brought together the effect is apt to be overwhelming: the pent-up potential energy is discharged in a flash of illumination, revealing a poignant and unfamiliar beauty. Marlowe's lines "See where Christ's blood streams in the firmanent" \times and "Now walk the angels on the walls of heaven" + are instances. Indeed the aesthetic possibilities of the higher anthropomorphism (which might equally be called the lower cosmomorphism) are now, by reason of the centuries of growing dissociation, immensely enhanced. The time is ripe for a great poet to celebrate the marriage of a virgin Heaven and Earth, in an ecstasy of union proportional to their long continence and the severe discipline imposed by science. His Dantesque vision will not be 'subjectively true' or 'aesthetically valid' but as objective as a woman whose breath-taking beauty confronts a man, as remote and as indubitable as Mont Blanc. What he will not do is recognize for part of the time a hierarchy which is beautiful but imaginary, for another part a hierarchy which is a rather sordid fact, and for a third part a hierarchy which, though morally admirable, is dreary, and in great part fiction. * His cosmos will be one; and accordingly he will be one.

9. THE FOUR APPROACHES: SUMMARY AND CONCLUSION

I have tried to show in this chapter (1) that men have generally believed in a minded cosmos, governed by a heavenly hierarchy, whose members are potent and august and holy in proportion to their cosmological status; ϕ (2) that the same belief, though submerged and no longer intellectually respectable, is widely held even today; (3) that science, so far from having abolished the hierarchy, furnishes the most notable example of its functioning, giving precision and full actuality to much that before had been nebulous and fantastic; (4) that for the sake of our health and happiness, our art and our religious life, and perhaps our survival, a * In <u>The Structure of Religious Experi-</u> ence, John Macmurray comments on the pervasive dualisms which disrupt our life --- the dualism of the spiritual order and the natural, religion and common life, the divine and the human, reason and emotion, mind and matter. This dissociation leads slowly but surely to complete disintegration. But in fact the world of the spirit is only the world of nature, known and intended. See pp. 106 ff.

The vast difference between our universe and that of our forefathers is the measure of the gulf that divides us from them. No doubt a world in which angels -- Dante's uccelli di Dio -- were, as Ruskin pointed out, at least as real as our birds are to us, had its inconveniences; no doubt a fairyland world, inhabited by enchanters and demons and giants no less than by good angels, was a perilous place, and sometimes a kind of madhouse. But at least it was thrillingly alive, and neither a graveyard nor a magnified donkey-engine. Lovely and terrible, it was a home for the living, not a well-run and soulless institution for the half dead.

^o Other fine examples are the anonymous 'Tom o'Bedlam's Song', Gerard Manley Hopkins' sonnet 'God's Grandeur', T. S. Eliot's 'Hippopotamus', Robert Graves' 'Starlight', and Joseph Mary Plunkett's poem which begins thus:

"I see his blood upon the rose And in the stars the glory of his eyes, His body gleams amid eternal snows, His tears fall from the skies."

× Dr Faustus, 1428; Tamburlaine.

"La Question qui est au fond du problème religieux dans le temps présent", wrote Alfred Loisy, "est de savoir si l'univers est vide, sourd, sans âme, sans entrailles; si la conscience de l'homme y est sans écho plus réel et plus vrai à elle-même."

* "The poet now and then catches sight of the figures that people the night-world ---the spirits, demons and gods. He knows that a purposiveness out-reaching human ends is the life-giving secret for man; he has a presentiment of incomprehensible happenings in the pleroma." Jung, <u>Modern</u> <u>Man in Search of a Soul</u>, p. 188.

φ One of the most significant trends of modern times is the revaluation of myths and symbols, begun by Schelling and Schiller and Herder, continued by men like Görres and Bachofen, and now by Jung. Görres describes primitive man as cosmicdemonic, intimately united with nature, and so gifted with profound insight. Cf. E. Dacqué, <u>Urwelt, Sage und Menscheit</u>; and Berdayev, <u>The Meaning of History</u>, pp. 51 ff: sincere belief of this kind would now be of immense advantage. More concisely still, belief in 'angels' is supported by tradition, by present intuition, by science, and by practical considerations. In addition, many considerations of a more speculative kind -- for instance, the argument from continuity (why should the heirarchy terminate in man?), from organization (an ordered universe suggests organization, which suggests hierarchy Θ), from suprahuman 'sense-organs' and the world-views they furnish \otimes (astronomy is more intelligible as a stellar than as a merely human function), and so forth -- are contained in these pages, and it would be wearisome to repeat them here. Now this varied mass of evidence builds up, as I believe, into a most formidable case for 'angels'. I do not think, however, that their existence can be 'proved' in the strict or technical sense; in any case, the rigorous argumentation dear to the logician rarely convinces him, and leaves the plain man quite cold. Winning the argument is often losing the man. This inquiry is not an intellectual game played according to predetermined rules, in which debating points are lost and gained, but a matter of life and death. × And a matter, also, of the whole man, of heart no less than head. I cannot help believing that, amongst all the rival cosmologies, that one is truest which answers to most of me, and not merely to some privileged function, and which is least contemptuous of the traditional wisdom of the race. Of course I have not <u>demonstrated</u> that the most reasonable view is the noblest, the most hospitable, the most beautiful, the most practical; but I hope I have shown that probability lies that way, and that there could be no better working hypothesis.

Experience suggests that we do not see the world as it is till we transfigure it with love and admiration and wonder. Also, to know the doctrine we must do the works. Von Hügel said: "I kiss my child not because I love it, but in order to love it." We have the universe which our behaviour implies; we have to pay, in the currency of action, for our insights. Thought may run ahead of deed, or deed of thought, but they cannot let one another out of sight. "Such is the power of earthly pleasures", according to Tertullian, ° "that to retain the opportunity of still partaking of them one contrives to prolong a willing ignorance and bribes knowledge to play a dishonest part." <u>Quot homines, tot dei.</u> "The real way to approach spiritual reality..., which holds all the threads of universal and human history, is not through abstract philosophy but through concrete mythology."

θ Cf. C. A. Richardson, <u>Spiritual Plural-</u> <u>ism</u>, p. 324.

 \otimes Scientists sometimes describe the realm of the nebulae as a <u>product</u> of the 100" telescope, and so on.

× A personal confession may not be out of place here. Everything has happened, during the years of my work on this book, as if it had been decreed that no major doctrine should remain for me merely theoretical, but should be put to practical test. In this intellectual autobiography the order is:I write, I need, I know. It will take me all my life to begin to realize the thought that is now all too glib and superficial. A disconcerting notion this: that along with each new lesson comes the practical test-paper, to show how little one has really learned.

° De Spectaculis, I. Cf. Aldous Huxley: "Our conviction that the world is meaningless is due in part to the fact that the philosophy of meaninglessness lends itself very effectively to furthering the ends of erotic or political passion." Ends and Means, p. 267. Also Paulsen, Introduction to Philosophy, p. 69, on the connection between our behaviour and our metaphysics. We proceed, says Hugo, to make the universe a substance and a lump, to make the grand Whole a simple aggregation of molecules without any admixture of moral ingredient, and consequently to conclude that force is right ... Intellectual Autobiography, p. 314.

Chapter XXIII

THE THREE STAGES OF THE ANGEL'S DESCENT

The stars are dead. The animals will not look. We are left alone with our day, and the time is short, and History to the defeated May say Alas, but cannot help or pardon.

W. H. Auden, 'Spain'.

I must have a sense of... history as something that is deeply <u>mine</u>, that is deeply <u>my</u> history, that is deeply <u>my</u> destiny.... All historical epochs, from the very earliest to that at the topmost peak of modern history, represent my historical destiny; they are all mine. Humanism not only affirmed man's self confidence and exalted him, but it also debased him by ceasing to regard him as a being of a higher and divine origin. It affirmed exclusively his terrestrial birth place and origin at the expense of the celestial. In this way humanism helped to diminish man's stature. The result of man's self-affirmation, once he had ceased to be conscious of his tie with the higher Divine and Absolute nature and with the highest source of his life, was to bring about his own perdition.

Berdyaev, The Meaning of History, pp. 16, 141.

Habet mundus noctes suas et non paucas.

St Bernard of Clairvaux.

These discords and these warring tongues are gales Of the great autumn: how shall the winter be?

Ruth Pitter, 'A Solemn Meditation'.

Those who put their faith in worldly order Not controlled by the order of God, In confident ignorance, but arrest disorder, Make it fast, breed fatal disease, Degrade what they exalt....

T. S. Eliot, Murder in the Cathedral.

When the prophets are silent and society no longer possesses any channel of communication with the divine world, the way to the lower depths is still open and man's frustrated spiritual powers will find their outlet in the unlimited will to power and destruction.

Christopher Dawson, Religion and Culture, p. 83.

The centre of gravity of the human being has sunk so low that we have, rightly speaking, no longer any personality, only the fatal to and fro of the polymorphic larvae of the subterranean world of instinct and desire.

Maritain, True Humanism, p. 21.

The cosmos became anathema to the protestants after the Reformation. They substituted the nonvital universe of forces and mechanistic order, everything else became abstraction, and the long slow death of the human being set in. This slow death produced science and machinery, but both are death products. No doubt the death was necessary.

D. H. Lawrence, Apocalypse, pp. 54-5.

1. THE THREE STAGES: THEOLOGICAL, HUMANIST, SCIENTIFIC

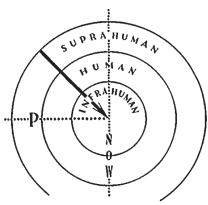
The chief topic of the previous chapter was the centripetal movement of our divinities, their descent or withdrawal from the remoter and higher regions to the nearer and lower. In this chapter I propose to illustrate this movement from the story of our Western civilization, bringing out in sharper relief and more detail its historical procedure. (I think that a somewhat similar movement can be discerned in other civilizations than our own; but that is a question which cannot be considered here. Already my sketch of our own history, in the frame of a short chapter, must be painted with a brush that is far too broad, and with strokes that are inevitably far too sweeping.) °

Our civilization has three phases -- I shall call them the theological,

° Toynbee (A Study of History, v. XIX. 4) quotes H. A. L. Fisher's celebrated rejection of historical pattern (in the Preface to his History of Europe) as an example of our 'sense of drift', and worship of Chance. Dislike of broad historical pattern -- the view that history is "just one damned thing after another" -- is itself a striking instance of that historical tendency to atomize which I discuss in this chapter. But of course the rejection of meaning can only be a matter of degree: every historian must apply to the immense and chaotic data a pattern by which he selects the relevant items. Historians who, like E. L. Woodward, "dislike looking for patterns in history" (International Affairs, April 1949), would be blind without them.

the humanist, and the scientific -- in which the suprahuman, the human, and the infrahuman are stressed in turn. The saint may be taken as the representative of the first phase, the artist of the second, the scientist of the third. This is not to say, of course, that the common man of our day is gifted with the scientific attitude, or that in mediaeval times he was deeply religious, or that considerable artists have in any age been numerous. Not numbers, but prestige, is in question. Today the scientist is in the ascendant: his most fabulous pronouncements are at once seized upon and made canonical, while the cautious and closely reasoned view of the theologian is suspect from the start. The priest, kindly and harmless, passes amongst us almost unnoticed; the terrible power he once wielded, and the fear he was capable of evoking, have passed to the man of science. As for the artist, we have only to compare the honour -- the adoration fit for kings -- accorded in Renaissance Italy to Petrarch and Boccaccio, Raphael and Michelangelo, with the present neglect (or worse) of our best artists, to realize that art does not count for much with us. An Epstein is a popular joke, an Einstein a popular god. We tar and feather the works of the first, and reverently preserve the mere blackboard chalkings of the second, in a reliquary. A great transcontinental express in the U.S.A., which had never before been delayed to oblige even a President, makes an unheard-of halt especially to take a physicist to a lecture. * Imagine the outcry if he had been a mere archbishop! A poet or painter might consider himself lucky if he could afford so much as a seat on the train. For, in a certain sense, he belongs to another age and another world: to the age of man himself + and the transition from the suprahuman to the infrahuman, when a remarkable number of men were able to make the best of all three worlds. The cosmos was neither dead nor capable of prohibiting man's exhilarating discovery of himself, and his new science had scarcely begun its work of disintegration; consequently it is the symmetrical man, a Shakespeare ° or a Leonardo, enjoying the human in its full cosmic setting, who is the fitting symbol of the Renaissance. The secular has arrived, and the sacred has not yet vanished. He no longer disparages, with his theological ancestors, the lower half of the hierarchy, and has only begun to disparage, with us, the upper half. × And if his piety is less remarkable than theirs, and his science less remarkable than ours, he is neither impious nor uninquiring, and his art is unmatched.

During the course of their inward migration, our angels appear first as the suprahuman which is good and also beautiful and true, then as the human which is beautiful and also true, and finally as the infrahuman which is true. To grasp their nature it is necessary to unite all three stages of their flight and of their changing constitution in a single historical picture --- the picture presented by our civilization as a whole, in its theological and humanist and scientific phases. In other words, you need three eyes to see the universe, and they are centuries apart: depth of vision comes of using all three at once ---- the long-sighted or telescopic eye of the saint and the mystic, the middle-sighted eye of the artist, and the near-sighted or microscopic eye of the scientist. To the extent that you are one-eyed and merely contemporary, to that extent is your universe out of focus. Only the man who takes on our whole civilization, so that its minimum structure-time of many centuries becomes his own, is



* I think the physicist was Sir J. J. Thomson, but I cannot be quite sure.

+ Ruskin went so far as to say that all the best pictures are portraits, and that "whatever is truly great in either Greek or Christian art, is also restrictedly human". At least it may be said that, while the beautiful is confined to no particular region, it is most evident in the middle regions which are richest in sense data: the fact that the age of humanism is also an age of great art is no accident. Whereas the eye of goodness looks beyond everyday things and the eye of truth looks into them, the eye of beauty is content to look at them.

° Shakespeare, writes Mr Hardin Craig, was "a child of his age and had all its virtues. He was comprehensive in mind and heart, unspecialized and unfragmented." For the Elizabethans "held what the world now seeks, namely, the conception of a functionally unified universe arranged according to a plan so ordered that all creatures of God -- including rocks, trees, flowers, animals, men, and angels -- were mutually related parts of one grand scheme." <u>The Listener</u>, July 21, 1949.

× "Science has made God unnecessary", announced the <u>Secularist League Mani-</u><u>festo</u>, in 1865. If religion is still practised with fervour in the East, writes Sir S. Radhakrishnan, it is because scientific education has hardly begun there: as soon as individuals become 'enlightened', piety vanishes. 'Progressives' in China and India and Turkey are sure that religion is the great crime. <u>Hibbert Journal</u>, July 1946.

φ Properly to qualify these statements would require another book. And of course many other equally inadequate formulations are possible. Thus the Hebrew, Greek, and Roman ingredients of our civilization may be linked with the theological, humanist, and scientific phases respectively. Again, the first phase may be represented as a union of emotion and intellect, the second as the triumph of emotion, the third as the triumph of intellect. Cf. John Macmurray, <u>The Structure of Religious Experience</u>, pp. 87 ff; <u>Freedom</u> <u>in the Modern World</u>, pp. 74 ff. equipped with adequate organs of perception. What you see depends on how much of you is looking. $\boldsymbol{\varphi}$

I can pause to mention only one or two of the many reservations which ought to be made here. Because our civilization is really a single 'time-organism' -- a mere mesoform within Humanity, it is true, and not of integral status, but still profoundly organic -- any one of its phases is misinterpreted if it is isolated from the others and not seen as a function of the whole. Thus our science proceeds from the piety of an earlier phase, ° to which it is united as thoroughly as our heads to our hearts. ° And the constitution of this great time-organism is regulated by the law of elsewhereness: in it hierarchical Pairs are reversed. That is to say, though the three phases are a descent from the suprahuman to the infrahuman, they are also an ascent from the infrahuman to the suprahuman, seeing that the highest levels always refer to the lowest, and vice versa. Thus the *ideal* of the Middle Ages was saintliness, while the <u>reality</u> was all too often corruption and cruelty \times and social injustice; + it is left to us, no longer caring about saintliness, to put into practice -- however partially and intermittently -- its humanitarian implications. In them the root; in us the flower. Again, our ideal is not sanctity but science, the truth about the universe, while our reality is a universe shattered into innumerable splinters, and as 'untrue' as it could well be; * if we want the unitary vision which our atomized knowledge implies, we must go back -- as I have already argued -- to something like the mediaeval synthesis of Dante. I may perhaps be excused for saying that, in this case, the flower precedes the root. They have reaped what we are sowing. As in the life of the individual, so in society: the intuition and the inspiration come first, and then long and toilsome experience are needed to work out the truth of it; or the high-minded resolve comes first, and then comes the painfully gradual application of it to our daily affairs. Thus the mediaeval ideal of goodness and the modern ideal of truth are neither illusory nor inoperative; their effectiveness is all the greater for its long range. But there can be no denying the cost to the individual devotee of goodness and of truth. If to aim at one's own spiritual development does not result in spiritual pride and humourlessness and all uncharity, it can hardly avoid some self-contradiction; ϕ and if to aim at scientific truth (culminating, ideally, in the mathematical formulation of all data) does not quickly reduce the data to meaninglessness and even nonentity, at least the tendency lies that way. Only in the pursuit of the beauty which does not forsake the middle levels of the hierarchy does this displacement or contradiction become almost negligible.

The man who fishes first with a mere rod, then with a mere line, then with a mere hook, has omitted nothing, nevertheless he is not likely to catch his dinner. † Simultaneity is needed. To see the world in true perspective we have to broaden our time-base, using instruments that are centuries apart yet simultaneous. Otherwise the planes of our universe collapse, and ourselves with them.

° Cf. T. S. Eliot's <u>Notes Towards the Definition of Culture</u>: "No culture can appear or develop except in relation to a religion"; culture and religion are "different aspects of the same thing", and indeed the culture of a people may be described as "an incarnation of its religion" (pp. 27, 29, 33). Cf. Whitehead, <u>Science and the Modern</u> <u>World</u>, I. Yet science progresses by repudiating its religious origins: the universe had to be chloroformed before it could be operated upon.

× Who, nowadays, is not appalled by the mediaeval notion (found even in St Thomas) that Heaven's joys are enhanced by the sight of Hell's tortures, suffered eternally by the great majority of the human race? + Thus of man in the Middle Ages G. G. Coulton can write: his "first and second and last task is to prepare himself for eternity". Yet, summarizing Piers Plowman, "Money rules everything; the man who can bribe is the man who grows to greatness; justice is bought and sold; the great town houses are built and inhabited by wholesale dealers in rotten stuff, who 'poison privily and oft the poor people that parcel-meal buyen'. Life is a jostle for worldly success; 'the most part of this people that passeth on this earth, of other heaven than here hold they no tale." The Medieval Scene, pp. 16, 159.

* W. E. Hocking (<u>Human Nature and its</u> <u>Remaking</u>, p. 405) does right to stress the intellectual honesty of our age; we care for truth, and in so doing gain contact with the spirit of the world. What he does not sufficiently appreciate is the untruth which comes of following truth alone, and the evil that comes of following goodness alone.

 ϕ There is plenty of reason for the little girl's famous prayer: 'O Lord make the nice people good, and the good people nice'. It is not merely that the good people are not good enough, but rather that the pursuit of virtue is self-defeating. But I think this is only an appearance. In India, where the ideal of spiritual self-development is still pursued to the limit, it is believed that the sanyasi's meditation has incalculable effects for good over men's minds everywhere and at all times. We have no idea how much we owe to the world's saints. † Archbishop Temple (e.g., in The Church looks Forward) is one of many recent writers who have noted that development means division in each department of life, but our task is now to bring the scattered results together in a living synthesis. I would say that the subdivision of art and science and religion furnishes invaluable new viewpoints, which are however misleading till the manifold compass-bearings of the object thus gained are united in a single survey. Till our eyes cooperate we are cyclopean. o This phrase, often attributed to St Peter Damian, has been traced by Professor H. A. Wolfson to Philo.

2. THE THREE STAGES IN PHILOSOPHY

(i) Until Bacon and Descartes finally handed in her notice, philosophy was, notoriously, the maidservant of religion. o Thus for St Augustine philosophy does not start with man and the physical world and work upwards to God, but begins with God as source of all, and then passes to the soul, and to the body, and to many bodies. Truth is vouchsafed by divine illumination, for which there must be moral no less than intellectual preparation. In a famous passage in the Soliloquies, he says that he wishes to know only God and the soul; the world does not really interest him. \times St Anselm insists that faith must precede understanding, since, of these two sources of knowledge, faith can exist without reason, but not reason without faith. Both turn for guidance and certainty to Scripture. We believe to understand. Gradually, however, faith and natural knowledge, theology and philosophy, pull apart. Albertus Magnus distinguishes between what can be known by unaided reason and what can be known only by revelation --- the ground is being prepared for an independent natural science. His pupil St Thomas allows some importance to the empirical study of nature, though the higher mysteries, reserved for faith alone, remain man's true end. The Franciscans Duns Scotus and William of Occam further widen the breach between natural and revealed knowledge: theological truth, which is supreme, is independent of natural knowledge and philosophy. In effect, the upper part of the hierarchy is handed over to the will, the moral life, and the law of duty as interpreted by authority; divine things are above reason, whose province is the sublunary world. Thus the Middle Ages, which had begun with faith and reason practically at one, end with them practically divided, if not yet at loggerheads. + If the world above man can have no rational basis, or contradicts what he calls reason, then it is no wonder he should find it somewhat barren or unreal; and if reason, forsaking these upper realms for the human and the infrahuman, gives them new interest and importance for him, that also is only to be expected. And so the doctrine of twofold truth, which Francis Bacon inherited, ° becomes in practice the charter of a natural science free from theological impediments, and destined to drive theology altogether into the background. We are descending the hierarchical staircase.

An important aspect of this downward movement was the final triumph (in Occam), after many temporary advances and retreats, of nominalism over realism. Stripped of all detail, this was really the victory of the parts over the whole. Only particular things exist, and the way is open for science's progressive atomization of the universe, and of man himself. *

(ii) The Renaissance produced a comparatively small quantity of original philosophical activity. Occam died in 1349 and Descartes was born in 1596: the two and a half centuries that separate them have no comparable figures. Nor is this surprising. The upper levels which were the concern of the first stage of our civilization, and the lower levels which are our own concern, lend themselves to philosophical speculation, seeing that they are already in part denuded of sense experience; not so the middle levels, the colourful and vivid world of man and terrestrial objects, which was the great discovery of the second stage. Sense and common sense come into their own together, in a world × Nevertheless St Augustine believed that we can ascend by creatures to a knowledge of God, and that His existence can be demonstrated by reason, as clearly as the sun's existence is demonstrated before our eyes. (<u>Soliloquies</u>, I. 6) In fact, St Augustine is practically free from that dualism of faith and reason which was later on to undermine faith itself.

Dr S. H. Mellone (following von Hugel) describes the 13th and early 14th centuries as the Golden Middle Age, whose constructive work "was the expression of a conviction that all the ranges of contemporary activity, art and ceremony, law, philosophy and literature, could and must be welded together in a synthesis which while not merely the servant of dogma must be a religious synthesis." Western Christian Thought in the Middle Ages, p. 31.

+ This development has, of course, been generally recognized since Victor Cousin divided mediaeval thought into three periods, in which philosophy is first wholly subordinate to theology, then its ally, and finally in a large measure independent. These correspond roughly to the first two of Comte's famous Three Stages -- (1) phenomena are given a theological explanation, in terms of the divine will; (2) then a metaphysical explanation, in terms of hypostatized principles and essences. In the third stage, no higher explanation is looked for, and science is content to record and codify.

• "The knowledge of man is as the waters, some descending from above, and some springing from beneath; the one informed by the light of nature, the other inspired by divine revelation." <u>The Advancement of</u> <u>Learning</u>, II. v. 1.

* But the infrahuman world had first to be projected, and discovered outside man, before it could be accepted as internal and his own. Thus religious prejudice against the mutilation of dead bodies was so intense that Vesalius was driven, at the risk of his life, to steal the corpse of a hanged man for dissection. which undeniably had beauty to make up for all that it lacked in virtue and reasonableness. Popes might commit every deadly sin except the sin of philistinism; sensuality and violence and immense pride flourished unashamed in circles where bad taste was a really serious offence. ϕ The Church's supersensuous mysteries were shelved and the Laboratory's subsensuous mysteries were as yet unrevealed; meanwhile the unmysterious visible world wore the halo of reality. * Everything contributed to this effect. Thus Copernicus and Galileo and Kepler, by destroying the mediaeval cosmology, threw the physical basis of the suprahuman into confusion: the higher orders were chased out of the universe of space, as a prelude to their total annihilation. Science's progress is the universe's regress; and, at first, the aggrandizement of man. \times (Too often we have been told that the ancient geocentric universe flattered man, and the Copernican revolution put him in his place; or that the Church makes man the crown of creation, while Science takes a more sober view of him. The truth is that, on the contrary, while the theological age put man as man on the lower half of the ladder of being, the Renaissance conveniently ignored the top half, which we (still more conveniently) have abolished, leaving man supreme. + Admittedly he is now eccentric and dwindling, but what he loses in relative physical status he gains in relative psychical status: if he is to be a mere speck in the immense void, at least he will make sure that the void has no population of angels to lord it over him. The history of Europe since 1453 illustrates the proposition that the littleness of dwarfs is offset by their aggressiveness. Our Adlerian 'organinferiority' in the face of cosmic vastness has the expected consequences --- over-compensation, undue self-assertiveness. Our gradual abolition of the suprahuman was by no means a disinterested act. It is humiliating to be dominated by rank upon rank of superiors, also it is a check upon our behaviour. To enjoy himself, Renaissance man, having come of age, had to throw off parental authority. He gave his reasons, of course, and they satisfied him, but in fact his motives were deeper than he knew.)

(iii) It is not the Lord God who turns man out of paradise, placing armed cherubim to guard the door, but he who turns out the Lord God and His cherubim, placing at the door a Censor, armed with the twoedged sword Repression. And when God and the angels go, man himself soon follows. Humanism is unstable in the direction of materialism. From Hobbes onwards, the chief stimulus to philosophy is physical science, replacing religion. Earlier centuries had made the world safe for naturalism by divorcing the angelic mind from the angelic body, and now Descartes makes the world safe for materialism by repeating this operation at the human level; and it is only a matter of time before the displaced human mind, evicted from its body, goes the way of the angelic. Divide et impera. If the history of Western thought may be summed up in a single word, that word is surely division, and division is always fatal. The nearer we come to the realization of our scientific ideal -- the complete analysis and mathematical description of the universe -- the further we go from man and life. ϕ We are persuaded that the jewel of truth is buried at the base of the pyramid, and we are prepared to tear down the whole structure to get at it. Not the crowning goodness of Heaven, or the earthly beauty of the middle realm, but the underlying truth of things is our passion. And this means cosmos-dissolving doubt; ϕ See Burckhardt's <u>Renaissance in Italy</u>, VI. 1, for a vivid picture of this period, when cardinals took the precaution of bringing their own wine and cup-bearers to a papal feast, and when nearly all rulers were not much better than gangsters, practising every kind of villainy. * Cf. Maritain, <u>True</u> <u>Humanism</u>, pp. 8, 17; and for a contrasting interpretation, Clive Bell, <u>Civilization</u>.

× "The Italians of the Renaissance", Mr Bell admits, "felt so acutely the importance of the individual as the chief source of all that is thrilling, significant, and splendid, that... in their glorification of personality they pushed, perhaps, too far." He finds in the eighteenth century a saner humanism. <u>Op. cit.</u>, IV.

Often there is little practical difference between doubt on the one hand, and 'shelving' or lack of interest on the other. Thomas Sprat, in his History of the Royal Society (1667), claims for the Society the widest range of inquiry, saving only God and the Soul -- these are to be taken for granted, and left alone. It has become almost axiomatic that what a scientist thinks on Sunday should have nothing to do with what he thinks on Monday. Cf. Basil Willey, The Eighteenth Century Background, p. 136. And so we come to our own times marked (writes Christopher Dawson) by "complete absence of cultural unity; science, religion, philosophy, and literature each went on its way regardless of the others. The mind of the age was divided against itself; it no longer possessed a common conception of reality capable of uniting the different activities of individual minds." Progress and Religion, p. 218.

+ In Maritain's language, mechanical dichotomy takes the place of organic subordination: terrestrial man is complete in himself, and furnished with a celestial double or envelope; and this ends in the total separation of the creature from the transcendent principle of its life. <u>Op. cit.</u>, pp. 14 ff.

 ϕ "I was especially delighted with the mathematics," says Descartes, "on account of the certitude and evidence of their reasonings... I was astonished that foundations, so strong and solid, should have had no loftier superstructure reared on them. On the other hand, I compared the disquisitions of the ancient moralists to very towering and magnificent palaces with no better foundation than sand and mud." Discourse on Method, I. But foundations, to be foundations, must not only support upper storeys, but be very unlike them: the architecture of the drawing room cannot be expressed in terms of the bearing capacity of soils.

and not merely doubt concerning the suprahuman, but concerning the existence of everyday objects and their sensible qualities apart from ourselves their observers, and concerning our<u>selves</u>, our freedom, our 'mind' itself. It has come to mean the replacement of 'inferred entities' by 'logical constructions', † the rejection of the 'meaning' of scientific discoveries or theories in favour of their 'operational' efficiency ° (which may be used to bolster no kind of cosmology), the shift of emphasis from the universe to the words and figures by which we discuss it. Philosophers have stopped work to sharpen their tools -- which is, of course, itself an important part of their work. Instead of the universe, we discuss our discussion of the universe; but this perpetual knife-stropping, without anything to cut, becomes, as Lotze noted, tiresome.

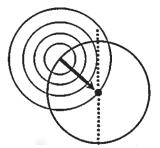
So far has this reversal of regions progressed that the Neoplatonists' outermost ring of sense and division and near-nothingness has become our holy of holies, Central and most real; while the One, the divine Centre of Plotinus, has been banished to the remotest darkness of disgraced metaphysics. The facts, however, are not to be deplored, but rather to be accepted with natural piety; indeed they are, from the viewpoint of this inquiry, most encouraging. In terms of Chapter II, philosophers have, since Descartes, been approaching their object: there has been much movement to and fro, but the over-all result is that the observer is at last on the point of arriving. And at the point of contact he finds --- nothing! × The object has gone, because he has left its regions and come to its Centre. But in fact there is no better place to be at, and his long and anxious journey will not be wasted if now he turns round, and, looking with his object (which is now himself) instead of at it, perceives the object gloriously reborn in every region. The philosopher in his quest for truth must reduce the old universe to himself and so to nothing --- to nothing but a receptacle for the new universe which is not himself.

3. THE THREE STAGES IN SCIENCE

The growth of science is necessarily the ungrowth of the universe, from its solitary suprahuman flower down to its innumerable infrahuman rootlets, or (perhaps I should say) from the organism as a whole to its ultimate particles. So long as our universe was in one piece and thoroughly organic, there could be no science. + The first major step was to amputate a limb for study, namely the solar system. Copernicus, and then Kepler Θ and Newton, owed their success to their knack of doing violence to the wholeness of things, to their skill with the surgeon's knife: like Chuang Chou's famous butcher, they knew where to cut and how to cut.* (It is not enough that science should hack the world to pieces: though its scalpel inevitably kills at every stroke, by severing vital connections, it must follow the natural lines of the body's structure.) A second great discovery, which again reduced the object, was Earth -- the Cape-route to India, the Americas, Australia, the Far East -- capturing man's imagination and endeavour, and setting all manner of new problems, such as the measurement and mapping of the planet. And now, gradually, Life came to the forefront. Buffon, in his great Histoire Naturelle, perceived

† Begun by Bertrand Russell towards the beginning of this century.

° As in the Operationalism of Professor Percy Bridgman, which has affinities with the Instrumentalism of Dewey ("that which guides us truly is true"), and Vaihinger's Fictionism ("the philosophy of 'as if"). Myths about the nature and origin of the universe, says Vaihinger, may be morally and aesthetically helpful, but it is a mistake to imagine that we can know the 'truth' about such matters, or indeed that there is any 'truth' or 'value' to find in the world, apart from what we put into it.



× Berdyaev (<u>The Meaning of History</u>, p. 12) believes that Marxism's entire repudiation of the spirit is its strength and originality. Its important negative contribution is that it forbids us to rest short of the depths of non-existence (which I call the Centre); by completing the downward movement it prepares the way for the ascent. And in varying degree this is true (I would add) of most recent philosophy.

+ "What retarded mediaeval progress in science was no backwardness in believing in universal determinism. Quite the contrary; putting man's free will on one side, philosophers and theologians all agreed in a universal determinism of an astrological kind. St Thomas considers that the movements of lower bodies are caused by those of the heavenly bodies, and that all the phenomena of the sublunary world are ruled by the movements of the stars. Albert the Great and Roger Bacon went still further..." Gilson, <u>The Spirit of Mediaeval</u> <u>Philosophy</u>, pp. 366-7.

 $\boldsymbol{\Theta}$ Kepler went so far as to identify the Sun with God the Father.

* "When I first began to cut up bullocks, what I saw was just a bullock. After three years I no longer saw a bullock as a whole.... I rely on the Heaven-given structure of a bullock. I press the big tendons apart and follow along the big openings, conforming to the lines which must be followed..." <u>Chuang Tzu Book</u>, III (Hughes, <u>Chinese Philosophy in Classical Times</u>, pp. 184-5). that the configuration and history of the globe are at every point bound up with its creatures. But once more, before the new science could come into its own, its data had to be isolated, its umbilical cord severed. To put the matter differently, Earth had to be flayed alive before the science of Life -- which is, after all, only a kind of planetary dermatology -- could progress: only her skin lives; she is a corpse. Biology becomes the keyscience of the 19th century, † but towards the end the sciences of man approach maturity: the human being himself comes under the spotlight of science. ϕ Anthropology, sociology, economics, and psychology hold out high hopes for a brilliant future of human progress and selfmastery. ° But meantime the science of the infrahuman -- of the cell with its chromosomes and genes, × and of molecules and atoms -- has been rushing ahead; and even the sciences of man tend to follow the same path: psychology descends to the depths of the Id; economics lends itself to the materialist conception of human history; all ideas, the concepts of science itself, are referred to 'the forces of production.' The human being vanishes just as he is about to be revealed. Having whittled down the universe to himself, man is presented, not with his own likeness, but with the very sawdust and shavings of the universe. It is just as though, in the course of his downhill journey from the crown of the hierarchy to the middle levels, Western man had so gathered speed and momentum that he could not halt there for a moment, but must plunge into the abyss. All the elder sciences go on at their own levels, it is true; but the key-science of our day -- the one which is on all our lips, and which we believe will determine our destiny -- is nuclear physics. Truly we have come down --- from the Whole to the electron.

And what is true of the object of scientific study is true, though in another degree, of the organization of scientific study: progress is by division and subdivision. It is no accident that the earlier science was a unitary discipline speaking one language, and the whole of it lying within the comprehension of one man; whereas our science does not really deserve that name at all, any more than a pile of bricks deserves the name of a house. The atomization of our science, the secret codes current in each of its departments, their refusal to merge and their readiness to divide --- these are not incidental defects of management and capable of reform, but inescapable; for the science of the lower levels, because it inheres in them, shares their limitations. Unity, effective liaison between scientific departments, is indeed both possible and urgently needed, but it is not to be had at their own level. The upper hierarchical unit is the union of the lower units, and they can have no other. Range is required. At present the scientist is like a painter whose canvas is rapidly growing while he and his studio remain unchanged: it is impossible for him to stand back from his work in order to coordinate its parts, which become in effect separate paintings.

As the scientific observer approaches the object, his estimate of it must diminish; and the parts of it which he ignores, which he can no longer register or contain, become surplus, and have to be disposed of. In particular, the object's energy, in common with all its other characteristics, does not belong Centrally in itself, but regionally in its observer, who must get rid of it as he moves inwards, and accumulate † Cf. Benjamin Kidd, <u>The Science of</u> <u>Power</u>, pp. 45 ff.

φ The isolation of man had, of course, begun long before. The real importance for science of Vesalius' <u>The Structure of the</u> <u>Human Body</u> (1543) was that, ignoring all connections between the macrocosm and the microcosm, it freed anatomy from the universe's apron-strings. °Comte saw the new science of sociology as the crown and end of the older sciences; they are for humanity, and are not to be pursued for their own sakes. A pious but ill-founded hope!

× The effect of the work of Mendel and Weismann was not merely to cut off the creature from his environment, but also his sex cells from the rest of him, and to concentrate everything of genetic importance in his genes. Various current qualifications of this extreme atomism, and the violent reaction (led by Lysenko) which it has provoked in Russia, are possibly indications that the tide is about to turn.

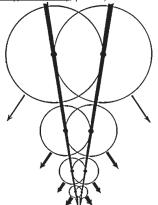
"No attempt is made to produce a comprehensive synthesis of the general results of scientific research. Our universities possess no chair of synthesis. All endowments, moreover, go to special subjects -- and almost always to subjects ... such as physics, chemistry, and mechanics. In our institutions of higher learning about ten times as much is spent on the natural sciences as on the sciences of man... Meanwhile intensive specialization tends to reduce each branch of science to a condition almost approaching meaninglessness. There are many men of science who are actually proud of this state of things. Specialized meaninglessness has come to be regarded, in certain circles, as a kind of hall-mark of true science. Those who attempt to relate the small particular results of specialization with human life as a whole and its relation to the universe at large are accused of being bad scientists, charlatans, self-advertizers." Aldous Huxley, Ends and Means, XIV.

The Prince Consort, speaking of the Great Exhibition of 1851, rejoiced that "the great principle of division of labour, which may be called the moving power of civilization, is being extended to all branches of science, industry, and art." Martin, <u>Life of the Prince Consort</u>, 3rd Edn., iii. p. 247. On the evils of specialization, and the increasing intrusion of technological studies upon the curriculum of liberal education, see Toynbee, <u>A Study of History</u>, iv. XVI, 2; Sir Walter Moberly, <u>The Crisis in the</u> <u>University</u>. it as he moves outwards. In fact, <u>a civilization may be regarded as a</u> system for the release of energy in increasing quantities, by means of <u>a centripetal movement</u>, following the storage of energy by means of a <u>centrifugal movement</u>. *

It needs no argument to show that the physical energies at the disposal of our civilization are inversely proportional to the hierarchical status which we accord to our universe. At first man can call only upon the energies of wind and water, of draught-animals and slaves, to help out his own puny resources. Then he finds the secret of breaking down particles of decreasing size, so that their increasing energy is released and put to work. Finally he shatters the atom's nucleus, tapping unheard-of power. This is what happens when he undoes the universe, by taking a closer and poorer view of it. Truly speaking, the atomic nucleus is a trivial thing; indeed it is in itself nothing at all. What we call its energy comes, not from itself, but from 'what the observer makes of it' and 'what it makes of the observer', or rather from the reduction of these estimates. In the terminology of Chapter IV, when the electron (which I describe as the regional observer of a Central proton) jumps from a larger to a smaller orbit in the atom, a quantum of radiation is liberated, and, conversely, when it jumps back again a quantum is absorbed; and this is only an instance, described in a specialized language, of a relation which holds good throughout all the hierarchical regions --- namely the dependence of energy upon the radial movements of mutual observers. In the terminology of the present chapter, we owe the abounding dynamism of the third stage of our civilization to the potential energies stored in the first stage, when, at immense cost, man withdrew from the infrahuman regions of his object to the suprahuman regions. The hermit weeping and starving in the desert for the love of Heaven, the religious inventing still more dreadful mortifications to bring the lower into subjection to the higher, the scholastic theologian driven upwards through the spheres by his intellectual passion --- these learned on our behalf the art of keeping distance. Circulating in remote orbits, they found themselves in regions where God and the most exalted angels are facts. A later generation jumps to nearer orbits where suprahuman beings are fictions. Almost literally, they have gone up in smoke: our machines are driven by this highly combustible angelic fuel. It was not so much the fission of U235 nuclei which destroyed Hiroshima as the fission of the cosmos, arising out of our regress from the place where there is a Cosmos to the place where there is only a proton. • Only a fallacious body-mind dualism leads us to suppose that we can shatter the world mentally and leave it physically intact; and only the fallacies of simple location and of inequality deceive us into thinking we can atomize without being atomized.

Really it is not safe to dismantle a universe: the further the mechanics take it down the more dangerous the parts become to handle, till in the end they are nothing else than naked, directionless violence. The Whole, gathering up into its seamless unity all time and space, does not suffer itself to be unravelled without some forcible reminders that the threads we fasten upon are not all there is. If they are 'ultimate particles' they are fuzzy, indeterminate things, impossible to pin down and specify accurately; if they are molar objects they are for ever becoming some-

* Maritain speaks of the "dissipation of energy", of the "disassociation and descent", when culture becomes civilization, and decadence takes the form of "atomic anarchy". (True Humanism, p. xiii). Other writers describe the same situation by saying that we are living on and exhausting our "moral capital". Jung tells us that the idea of God represents an overwhelming psychic intensity; something has to happen to the energy when we lose this idea, and it appears in various 'isms, mental epidemics, dissociations of the personality. (Psychology and Religion, p. 104) Of the reverse or centrifugal process of energy accumulation, Berdyaev writes: "The titanic struggle, conducted by the great Christian ascetics and hermits against the passions of the world, finally achieved man's liberation from the baser elements." (The Meaning of History, p. 118)



"For European man today is emerging from modern history exhausted and with all his creative forces spent. He had, on the other hand, emerged from the Middle Ages with accumulated and virgin forces..." Berdyaev, <u>op. cit.</u>, p. 126.

• T. S. Eliot's lines, from 'The Rock', are an excellent summary of this descent: "All our knowledge brings us nearer to our ignorance

Where is the wisdom we have lost in knowledge?

Where is the knowledge we have lost in information?"

St Augustine's doctrine that each section of time is in revolt against the others, that divided time is at war with itself, is profoundly true of the lower hierarchical levels, and profoundly untrue of the higher levels: the higher is the lower reconciled. Hierarchical descent means spatiotemporal fragmentation, which means the triumph of force. Dr Alex Comfort is only being realistic when he speaks of modern man's "need to fight the universe". (Listener, July 21, 1949). But he should note that the more he wants to fight the universe the less there is of him to fight it, till, in the limit, the extreme of aggressiveness issues in the aggressor's nonentity. As a wave-motion is the fossil of middle-C,

thing else and going somewhere else, demonstrating by many energetic self-contradictions that in no sense are they 'all there'. All 'forces' -- that of gravity is an instance -- are relics of a universe. Our specious present contracts, and a ring-shaped Earth 186 million miles across contracts to a globular Earth 8,000 miles across, plus that motion which is the fossil of its former shape. For the mediaeval mystic whose moment of experience embraces the whole of time, the Datum is a perfect whole, entire and at peace; for the modern scientist whose moment of experience embraces an instant, the Datum is innumerable minima in a state of maximum agitation. (And inevitably these symmetrical or Paired extremes tend to meet. David Hilbert, Lagrange, and other mathematical physicists have developed equations to predict the behaviour of numbers of bodies simultaneously, in a single system devoid of 'forces' and 'causes': the 'world function' begins to replace separate entities causally linked. A 'reversal of regions' is in sight.)

A civilization (as I pointed out in the last chapter) lives on its angels, projecting them only to withdraw them, discovering them only to destroy them; and this give-and-take constitutes an indivisible history, or unitary time-organism whose phases involve one another after the manner of the movements of a well-constructed symphony. × It is therefore mistaken to deplore unceasingly the spendthrift destructiveness of our own period and lavish all our praises on earlier periods of conservation, as if each period did not imply and require the others, and as if each did not have its own peculiar glory. Again it is mistaken gloomily to suppose that we are now, near the end of our inward journey, quite exhausted and done for. In one sense this is indeed how matters stand, yet in another sense they are the other way round: for, as I have shown, we do not really get rid of our angels by killing them off. Though unprojected, they live on in us: the dying transcendent is privily reincarnated as the immanent.° Our journey to the Centre is thus at once a dissipation and an accumulation: imitating the soul which (according to the ancient tradition), in the course of its descent from Heaven to earth through the spheres, derives from each its gift, we claim all the goods we find on the way, till on arrival we are possessed to the degree that the universe is dispossessed. But once our interesting but dangerous -- because dangerously one-sided -- condition is brought home to us, once we observe that this Void to which we have come is a womb big with the hierarchy of Heaven and Earth, then our delivery and the universe's repopulation are near. And if the cosmos is about to be reborn, a new civilization is about to be born also.

4. THE THREE STAGES IN RELIGION

The Christian religion recognizes three main phases of history, linked with the three Persons of the Trinity + --- (1) the Old Testament era when God was as yet only in Heaven, and imperfectly revealed to man; (2) the Gospel period of Christ's life here, as God in human form; (3) the post-Pentecostal era of the Spirit, of God hidden in the believer. In other terms, the Divine is first located at the circumference, then in the Page 604

or of green light, so the scientist's world is the fossil of the artist's, and the artist's the fossil of the mystic's. (And, of course, there is everything to be said for fossil-hunting, in its place.)

× No doubt the descent to Hell is easier than the return journey, but they are linked as the falling counterweight is linked to the rising weight. This interdependence has been well put in Ruth Pitter's poem 'A Solemn Meditation' --- "The swift fall wings the ascent", and "More withering now, more blossoming by and by".

° Cf. Alex Comfort: "The growth of humanism, the belief in man rather than God as the centre of values, has not sprung out of the ground or dropped from the sky. It has grown perfectly naturally out of human history, as a logical development, I believe, of the Christian and the religious tradition which preceded it The first thing which follows from this belief in the isolation, the uniqueness, of man is that his values exist inside himself. Like scientific technique or art, they are things which he has created." We are up against the universe, and our struggle against it determines our survival. (Loc. cit.; Dr Comfort's broadcast talks were subsequently published as The Pattern of the Future.) But this attitude is only to be expected. Mind in the universe realizes itself by progressively denying mind in the universe, hiding itself from itself in an endless game of elsewhereness.

+ There are a number of curious variations on this theme. Joachim of Flora, for instance, linked the Age of the Father with the rule of married persons, and the literal interpretation of the Old Testament; the Age of the Son with the rule of the secular clergy and the literal interpretation of the Gospel; and the Age of the Spirit with the rule of monks, and spiritual interpretation middle regions, and finally at the Centre: history is marked out by the three stages of the divine descent or contraction. Now however well or ill this schema fits the larger field, it certainly fits the history of our own Western civilization: first our preoccupation is the divine goodness in the heavens, then the divine beauty on earth, and finally the divine Truth in ourselves. * The chief difference is that whereas the Christian believes that the Deity is Three-in-One and One-in-Three, and that the overemphasis of any one at the expense of the other two leads to heresy, we have no such compunctions: our Trinity is so scalene that it is practically a mere line. Truth in contrast to beauty and goodness, the Inner Light of Paul rather than Saul's great light from Heaven, the immanent power and intelligence of science instead of the transcendent Powers and Intelligences of theology, are the choice of our age. "The spiritual world", says Drummond, ° "is simply the outermost segment, circle, or circles, of the natural world." Nothing could be truer of the first stage of our civilization, or less true of the third, in which the 'spiritual', like so much else, has been thoroughly Centralized. (Though no general reaction is apparent, yet in theology, even more than in physics, there are many signs of a new flight from the Centre. \times It is now the habit of a number of eminent Protestant theologians to decry immanence, particularly as it is represented by neo-Hegelians in philosophy, by liberal ecclesiastics in theology, and by practically all mystical writers. The rediscovery of the transcendent God, immeasurably above sinful man, would indeed be great gain if it were not gain at the expense of the God who is immanent in man and the God who is incarnate on every plane of the universe. In correcting our one-sidedness we rush to the opposite extreme, violently over-compensating. First we draw all Divinity to the Centre, then we over-project it. The fact is that our idea of God is peculiarly subject to the fallacy of simple location: maldistribution is here the rule. And the latest tendency is to evacuate the Divine from its home in man's heart, and from nature, in order to concentrate it all in the realm of the transcendent. • The tragedy of this religion is not that it cannot agree with physical science, but that it agrees only too well: for the neo-Protestant cosmology is in most respects indistinguishable from the 'scientific' --the universe remains the dead and mindless machinery which science takes it to be, only it is somewhat less automatic. It is designed and supervised by God --- by a God who has to work singlehanded, seeing that the angels are still undistributed. Perhaps they will not fly to their stations in the universe until, after many centuries, the civilization whose birth we await approaches its second phase; and meantime only the rare mystic and poet will thrill to the angelic life and beauty of the cosmos --- the hierarchical cosmos whose vitality surpasses man just as he surpasses the mechanical universe.)

On the one hand, there is a broad historical tendency for the religion of transcendence to give way to the religion of immanence which marks the close of a civilization; on the other hand, this descent is complicated by many subsidiary movements, and above all by the fact that the geniuses of religion, no matter when they happen to live, necessarily place themselves at all three levels simultaneously. + The greater they are, the less they are subject to the limitations of current thought and feeling. But less gifted and less balanced souls, concentrating unduly upon the * "Truth is within ourselves; it takes no rise

From outward things, whate'er you may believe.

There is an inmost centre in us all, Where truth abides in fullness..." These lines of Browning's seem reasonable; but it will not do to make similar claims for beauty, and <u>a fortiori</u> for goodness. <u>My</u> beauty is not beauty, but <u>my</u> goodness is definitely evil. The Periphery is the region of the good; the Radius -- the visible universe -- the region of the beautiful; the Centre the region of the true..

° <u>Natural Law in the Spiritual World</u>: Death.

× For example, Dr Leonard Hodgson, who (as he points out) is no Barthian extremist, describes non-human nature as "the impersonal mechanistic order from which he (man) has come", and firmly rejects the doctrine of the Logos as the link between the transcendent being of God and His temporal immanence in creation. Panpsychism is singled out for special disapproval. The relation of God to the universe is much more like the relation of the potter to the clay than of the potter's soul to his body. The notion that we might be blind to the living unity of the cosmos, just as an insect hopping about on a man, is blind to the living unity of the scenery it encounters, is a "flight of fancy" worth mentioning only as an instance of the extremes to which the doctrine of divine immanence can lead. (Towards a Christian Philosophy, pp. 9, 110, 157, 163, 170.) But isn't this precisely what an 'insect' suffering from alternating myopia and hypermetropia would say?

• It is no use complaining that the theology of today ought to find a way of being true to its own indispensable vision without being untrue to the equally indispensable vision of yesterday. History does not tell the whole story in a day, and it is the whole story that matters. Indeed there would be no story if the words melted into one another. There would be no history if the men who defend the contemporary vision against all comers did not outnumber those with a wider allegiance. Broadmindedness is rightly suspect; too much of it is a luxury which history will not stand. It is the mark of our first stage to have too little of this commodity, and of the third to have too much for convenience.

+ "Only the transcendent, the completely other, can be immanent without being modified by the becoming of that in which it dwells... It is... necessary to know the spiritual Ground of things, not only within the soul, but also in the world and, beyond world and soul, in its transcendent otherness -- 'in heaven." Aldous Huxley, <u>The</u> <u>Perennial Philosophy</u>, p. 8. Father in Heaven, or upon the Son who comes down, or upon the Spirit who takes up His abode at our very Centre, are liable in the first case to become coldly moralistic, legal, uncharitable, full to bursting with <u>odi-</u> <u>um theologicum</u>; in the second case to idolize the visible and tangible, or yield to superstition or morbid emotion; in the third case to fall victims to the antinomian heresy, and quietism, and a most insidious spiritual pride. Even the saintliest cannot, indeed, hope to inoculate themselves against these diseases of the religious life, except by succumbing to (or rather, admitting to) mild forms of them, and, by setting one against another, to neutralize them all. In other words, the only safeguard is an equilateral Trinity.

Though individual mystics rise above the law of the three stages, the stages themselves are evident enough in the history of western mysticism. (1) The mysticism of the early Middle Ages, of St Bernard and the Victorines, is dominated by the writings of St Augustine and Dionysius, who in turn owe much to Neoplatonism: on the whole, therefore, it is theocentric. ° Its aim is that the soul may ascend above all human and earthly things to the knowledge and enjoyment of God; its ideal is the ecstatic vision as it was granted, for example, to St Paul. So far from the sensible universe contributing to this vision, it is, according to St Bernard, the great impediment, which must be reduced by the method of abstraction. (2) The second and most splendid stage of Western mysticism is initiated by St Francis, who saw a reborn creation, awake and divinely luminous; it includes in its sweep the comprehensive intellects of St Bonaventura and St Thomas; and it is completed in the matchless synthesis of Dante. The middle levels of the hierarchy -- from Brother Sun and Sister Moon and Sister Mother Earth, to flowers so beautiful that, whenever St Francis saw or touched them, "his spirit seemed to be not on earth but in heaven" × -- are illuminated, not indeed by any intrinsic radiance, but by the light that streams from their transcendent Creator and their immanent Ground. Here is classical mysticism, balanced, symmetrical. (3) The third stage, reaching its peak in the great company of mystics (amongst them St Teresa and St John of the Cross, Boehme, Fox and the early Quakers, and the Cambridge Platonists) of the 16th and 17th centuries, is not so much concerned with the awful otherness of the Godhead, or nature as His theophany, as with His presence in the soul. The techniques and stages of contemplation, the soul's dark nights and illuminations, the complex cartography of the mystic way, are certainly no discovery of this period, but in it they take on unprecedented importance; and spiritual direction becomes the finest of fine arts. It is true that the masters of this art repeatedly urge that God should be adored for what He is in Himself, + but the frequency of this advice points to the need for it, and to the growing subjectivism of the age. First the Object, then the experience of the Object, and finally the experience for its own sake --- such is the tendency of the less robust soul. Amongst Catholics, spiritual passivity and Quietism become common; amongst Protestants, theosophical extravagances, enthusiasm, schisms. The Inward Light leads men in all directions, and sometimes into very odd and perilous places. * As in so many other ways, the third stage is one of progressive atomization.

° Nevertheless St Bernard gave an important place to "the carnal love of Christ" by men who are at first capable only of "the healthful love of his flesh", and afterwards, little by little, may attain to spiritual love. The Cistercian mysticism, Gilson points out (<u>The Mystical Theology of St Bernard</u>) made meditation upon the visible humanity of Christ a necessary beginning. But sensitive affection for the Person of Christ was regarded by St Bernard as love of a relatively inferior order; the soul should go on to a stage of union, in virtue of its spiritual powers, with God who is pure spirit.

× The Mirror of Perfection, CXVIII, CXX.

+ "The aim and end of prayer is to revere, to recognize and to adore the sovereign majesty of God, through what He is in Himself rather than what He is in regard to us, and rather to love His goodness by the love of that goodness itself than for what it sends us." Bourgoing.

* Yet even the oddest sects deserve to be taken seriously, since they probably stand for some truth neglected by the others. The 18th century Gichtelians or Angelic Brethren, for example, sought to hear the voice of God within, and to live the sexless life of the angels in Heaven, at the same time enduring sufferings on behalf of lost human souls. I have indicated only the general drift, and of course it would be easy to find, at each stage, besides the great saints who really belong to all three stages, many lesser individuals and movements which (alike in their aberrations and in their positive gifts) belong to the past or the future. † The antinomian heresy and unbalanced subjectivism are no more confined to the third stage than indifference to natural beauty is confined to the first. And in any case no mysticism (in the good sense of the word) is genuine which is not in some degree 'trinitarian', or which leaves the divine altogether undistributed.

As for the religion of the ordinary non-mystical Englishman, its first vehicle -- or rather its full expression and embodiment -- was the one Catholic Church, then the reformed national Church, then High Church or Low, this particular Protestant sect or that. In the 18th century the 'religion of the home', with family prayers, comes increasingly into favour;° and in the 20th the 'religion of the radio-set', which has the merit of not interfering seriously with desultory fireside conversation, or light reading, or housework. And so, by the familiar whittling-down process, we have almost arrived at the point when each man's religion is his private business, concerning which his public behaviour provides no clue --- we would sooner ask a man about his sexual habits than about his God. But this atomic subjectivism is self-contradicting; it is top heavy and can only end by turning a somersault. ×

5. THE THREE STAGES IN ART

(i) Dr Herbert Read has described art as "the direct measure of man's spiritual vision". Certainly the visual arts of our civilization body forth, as nothing else can, the phases of its development. One has only to put the typical French cathedral of the 13th century alongside the typical Italian <u>palazzo</u> of the 16th, and both alongside any contemporary school or hospital or factory, to divine at a glance the gulfs that part their respective builders. It is a truism that, in the first of our three stages, art was inseparable from religion: almost one might say it <u>was</u> religion ---- religion become visible, tangible, audible. + The Gothic style is the assertion, in attenuated stone and glass and timber, in metals and fabrics, in the music of bells and the discantus, of the angelic world: it is heavenly, not in the neck-craning tourist's sense, but in fact. It does not soar to heaven (as the cliché has it) so much as dangle from Heaven, and its gradual collapse earthwards and fragmentation are the result of letting go rather than of ceasing to mount.

<u>To lose height is to lose unity</u>. At first there is little 'individual selfexpression' in religious art, and little art that is distinctively secular. The artist, not yet fully aware of his unique function, is content as a rule to remain the anonymous instrument of the religious consciousness; and if his aim may be described as 'expression', then it is the expression of more than the atomic self. * In general, his subject-matter has other-worldly reference, and his intentions are homiletic, devotional, or mystical. The chief uses of secular and mundane things are to throw the divine into sharp relief, or to symbolize it, or to serve it in humble ways. Beauty there certainly was in this first phase of our art, and beauty of the high† For instance, the followers of Amalrich, at the beginning of the 13th century, believed (somewhat after the manner of Joachim) that in their own time the Age of the Son came to an end, and the new Age of the Spirit (of which they were the vehicles) began; the result was that they identified their impulses uncritically with the indwelling Spirit of God. The Brethren of the Free Spirit (as they came to be called) survived and even flourished for some hundreds of years in spite of all efforts to suppress them.

° Cf. G. M. Trevelyan, <u>English Social His-</u> <u>tory</u>, pp. 47, 127, 565. "Family worship and the religious dedication of family life and of business life are later Protestant accretions. They had no place in mediaeval ideals or practice." And Charles Smyth, on English religious life in the 19th century: "Evangelicalism was the religion of the Home; and in this revival of Family worship it won the most signal and the most gracious of its triumphs." <u>Simeon and</u> <u>Church Order</u>, p. 19.

 \times Cf. G. R. Levy: "A point is reached, in the mutual development of God's image and the human soul, when the task of maintaining the equilibrium of seasonal recurrence, and the growth and renewal of man and beast, is no longer considered to depend upon the mutual effort of ritual; when the conception of deity becomes sufficiently detached to permit a corresponding individuality in a people regarded as a single being, and finally in every member of that people." <u>The Gate of Horn</u>, p. 196. But the descending process (I add) cannot halt at that level.

+ Yet there flowed beneath the surface a counter-current of popular art, not antireligious, but barbaric and coarse and pungent: it appears in misericords and vault-bosses, and wherever else the sculptor had a comparatively free hand. (I can vouch for one instance, in this enlightened century, of the defacing of an 'indecent' boss, despite the fact that it looked perfectly chaste till the vicar and his architect climbed a scaffolding to inspect it closely.) In Jungian terms, the popular mind is in touch with the unconscious, and compensates for the excesses of the conscious and official attitude. In the Middle Ages the people surreptitiously cultivated the infrahuman; now they cultivate (in ways that seem, to the official scientific mind, almost obscene) the suprahuman.

* The early Church was not altogether unaware of the potentially dangerous rival which it was nursing so carefully to maturity. Tertullian, St Bernard, and others sensed danger in ecclesiastic art. est order, but of a comparatively un-selfconscious kind: its peculiar grace and glory arise from the fact that it is not an end in itself, but a means to the divine Goodness. Art <u>per se</u> belongs to the second phase, when the pursuit of virtue and the pursuit of loveliness begin to take men in two very different directions. †

(ii) Long before the fall of Constantinople and the revival of Greek learning, signs of the new spirit were manifest. Particularly in Italy, distinct schools and individual names emerged. The troubadours sang more of earthly love than divine, and the cult of chivalry paid tribute to sublunary beauty; St Francis brought religion down to earth, making of this world something more than a sordid waiting-room for the next. It became possible eventually to paint a picture without pointing to a moral, ° and with a new eye for the sensuous facts; the subject becomes important for what it manifestly is, rather than for any transcendental meaning which can be read into it. In the service of religion, art had brought forth from her own imagination such wonderful iconography as the mosaics of Ravenna and Monreale and Venice, but at the end of this inbreeding is a sterile formalism. Sacred art is at a disadvantage in that the higher levels are naturally devoid of that inexhaustible and resistant sense-content upon which the visual arts thrive: \times however clearly the heavens may declare the glory of God to the saint, they are in themselves unrewarding material for the painter, and even the poet has to fill them with all the furniture of earth. Thus architecture and music, as non-representational or abstract arts, are peculiarly fitted to express the spirit of the first stage, painting and sculpture the spirit of the second stage. It is not that the painter portrays the earthly and human subjects which fascinate his age: rather he is their Columbus, their prophet and priest. His work is the organ by which men see a new world, undreamed-of Americas on their own doorsteps.

But each age, with the values it cherishes, has the taint of that elsewhereness which comes of partiality; it refers onwards, and its development is its progressive self-contradiction. It is as if an irresistible gravitation were at work, resulting in a descensus ad inferos of which the stations are (to use the old terms) Heaven, Earth's surface, and Earth's centre. Just as the suprahuman goodness, which is the ideal of the first stage, issues in the human beauty which is the ideal of the second, so this in turn issues in the infrahuman truth which is the ideal of the third. Now one of the most fascinating manifestations of this process of transvaluation (or value-chemistry, as it might be called) may be seen in the history of European painting. In Heaven there is neither perspective nor chiaroscuro; its light casts no shadows; its angels have no pectoral muscles; the laws of gravity do not hold. But once the painter begins working from earthly models a host of new problems and opportunities arise. Sciagraphy and the rules of perspective, human anatomy, the manufacture of a range of pigments capable of doing justice to nature, and all other aids to verisimilitude, become increasingly important. Yet, to speak strictly, the precise truth about the world is no more the business of the artist, qua artist, than its moral implications are his business --- if it were, Niepoe and Daguerre and Madame Tussaud would have supplanted him a century ago. Painting and sculpture, the drama and novel-writing, do

† Few artists of distinction (the late Eric Gill was a noted exception) are interested in religion nowadays, and few deeply religious men are interested in art. According to the Archbishops' Report (1919) on <u>The Teaching Office of the Church</u>, "If a boy shows a marked artistic gift, it is generally taken for granted that he will not be much interested in religion." Sunday-school art, like art-school religion, amounts to a contradiction in terms.

° The history of art is a tale of servitude to morality and religion, alternating with periods of revolt and independence. Plato, like some of our contemporaries, decides for servitude: "Absence of grace and bad rhythm and bad harmony are sisters to bad words and bad nature, while their opposites are sisters and copies of the opposite, a wise and good nature.... Then we must speak to our poets and compel them to impress upon their poems only the image of the good, or not to make poetry in our city." <u>Republic</u>, 401.

× If, says Leonardo, the painter "will apply himself to learn from the objects of nature he will produce good results." Thus the young Giotto, reared in the mountains, "began to draw on rocks the movements of the goats which he was tending, and so began to draw the figures of all the animals which were to be found in the country", and eventually surpassed all the painters of his time. Later on, says Leonardo, "Masaccio showed by the perfection of his work how those who took as their standard anything other than nature, the supreme guide of all the masters, were wearying themselves in vain." <u>Notebooks</u>, p. 164.

"Natural things

And spiritual, -- who separates these two In art, in morals, or the social drift Tears up the bond of nature and brings death,

Paints futile pictures, writes unreal verse." Elizabeth Barrett Browning, 'Aurora Leigh'



<u>Angelus Domini</u>, from a French MS, c. 1100 A.D.

not <u>improve</u> as they imitate nature ever more closely; they gain new life and inspiration by increasing objectivity, but the end they work towards is the supersession of art by science. Nevertheless that is the self-denying road art has to take. With Giotto and Boccaccio, in the 14th century, the portrait and the novel are born. Soon after, Uccello brings perspective into his pictures. Rubens and Pieter Breughel begin painting scenes from everyday life. The Holy Family becomes a group of poor peasant folk, lifelike and homely. The human figure is no longer frozen into stiff conventional attitudes, neuter, flat, symbolical; it acquires freedom of movement, infinite variety. Even the mysterious angelic anatomy fills out; and the Areopagite's ineffable cherubim, unimaginably grand and remote, become Rubens' bouncing cherubs --- all smiles and dimples, like a baby-food advertizement. In at least one German example they have left the mystical contemplation of the Absolute, for bird-nesting. Everything comes down to earth, where even the nimbus takes on perspective and is worn like a hat.

(iii) The descending movement may be described in terms of <u>what</u> the artist paints, or <u>for whom</u> he paints, or <u>how</u> he paints. His patron is first the Church, then the Court, then the upper and merchant classes, and finally anyone with money to invest. And the subject matter is graded accordingly: it is secularized, humanized, and in the end de-humanized: indeed the title and objective reference of a picture are now almost irrelevant. The millionaire buys a Picasso, not an Assumption, or even a still life; in any case, the only 'message' the picture conveys is likely to be an infrahuman one. * The artist's concern is no longer with the universal figures of religion, or with the national figures of State and Court, or with other persons at all, but only with his own private experience. This (he says) is the way I see a mandolin and a dish of apples; or, this is the way I feel about them. For him, one hint rising from the unconscious outweighs the whole superstructure of religious ideals and political institutions.

The paradox that the pursuit of realism should end in subjectivism is no accident. Let me try to show that in painting, just as in physics, the search for 'external reality' is bound to lead to the discovery of 'internal reality'. The full story is too long and complicated to tell here, but some main stages may be noticed. The Florentines set the human body in motion and its surroundings in perspective, but still added colour to shape; the Venetians went on to unify them, having discovered that light and shade are no respecters of the hard outlines which we think we see round objects. They had the genius to stop thinking and start looking --- Galileo's kind of genius --- and what they saw was that nature erases boundaries, so that a man and his world are extensions of each other. Increasingly the depth of the picture becomes continuous, instead of laminated: its distinct planes are knit together into a convincing third dimension. + A sense of history awakens, anachronisms in dress are criticized; a kind of time-depth is added to depth in space. More to the purpose was Constable's theory that the artist must study nature with all the humility and industry of the scientist. Leaving the studio for the field, he did for painting what Wordsworth did for poetry ° --- administered a large and health-giving dose of open-air realism; he built up the volume



Angels in marble: Donatello, c. 1435

* Already in the1890's Maurice Denis (Theories) had written: "A picture -- before being a war-horse, a nude woman, or any subject whatever -- is essentially a plane surface covered with colours assembled in a certain order." But though the ostensible subject is becoming a matter of indifference, its trend is downwards, to infrahuman depths. Toulouse-Lautrec paints brothel-life; primitive negro masks inspire the young Picasso; van Gogh is content to paint a chair; the human body is dismembered as if by trunk-murder, and its parts take on the rectilinear outlines of machinery; Apollinaire announces: you can paint with pipes, postage stamps, postcards or playing cards, candelabra, sealing-wax, collars, wallpaper, bits of newspaper, or

anything else you like; Fernand Léger exhibits geometrical diagrams.... To deplore all this is irrelevant: not only had art to take this downhill path along with every other aspect of our culture, but the result was the discovery of new kinds of beauty, a disturbing and often profound mysticism of the infrahuman.

+ In some respects the baroque painting of the 17th century was a temporary respite from the search for realism: it revelled in extravagant imaginations. Yet to lend these creations their astonishing vigour, such painters as Rubens and Bernini had recourse to the abandon of nature and the unity of all its parts; by comparison, the compositions of the previous century were conventional and imperfectly integrated.

Of course the general tendency I am describing here was often halted or temporarily set in reverse by individual painters and schools. Instances are the weird distortions of El Greco's human figures, and the deliberate looking-back of the English Pre-Raphaelites and the German Nazarenes.

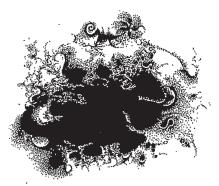
[°] Cf. Herbert Read, <u>The Meaning of Art</u>, pp. 117-8.

of his pictures by careful attention to the minutest effects of light and shade, of reflection and refraction. In this he was the forerunner of the French Impressionists, who aimed at still greater accuracy. Thus they found that shadows were in fact often blue or purple instead of the dull grey we expect to find and that all manner of surprising colours (colours that 'oughtn't to be there') are visible to the innocent eye; moreover there occur shimmerings, 'illusions', queer atmospheric effects, obscurities which nobody had bothered to notice, still less to capture in paint. The purpose was to seize the immediate sensuous datum of the moment, to set down faithfully and without any preconceptions the instantaneous experience. Realizing that the face of nature is always changing its expression, Monet made it a rule not to work for more than a quarter of an hour on a particular canvas. Degas tried to catch -- after the manner of our candid-cameramen -- the gestures, the odd and fleeting movements, of ordinary people. The Post-Impressionists Seurat and Signac attempted to overcome the limitations of paint itself, by laboriously building up their pictures out of dots of primary colour, in the effort to reproduce the luminosity and sparkle of the surfaces of things.

Now this long pursuit of accuracy in the representation of nature is also the gradual victory of 'sense' over 'thought'. ° The moral sublimity of the painter's subject, its social importance, its uses, its known or reputed contours and colours, the limitless network of meanings or relationships which bind it to all other things --- these he must reject and dismiss, forgetting everything that is not immediately present to his eye. He must paint a duchess as he would a dustbin, a dustbin as he would a duchess. His art must be used in the service of artlessness, of a cunning and difficult simplicity. He has to conquer his sophisticated human habit of encircling the thing he observes, of placing himself at innumerable viewpoints in its regions of space and time, and content himself instead with that one viewpoint which is directly given and peculiar to himself. He must, so far as he can, cultivate the private and unique vision in place of the public and general. In short, he must descend from the level of the whole to the level of the part, from the level of 'objective meaning' to the level of 'subjective impression'. The search for external truth, whether by the artist or the scientist, inevitably leads downwards and inwards -- down to the base of the hierarchy, and in to the subject at the Centre.

I have shown that the history of science is a tale of withdrawing projections: so is the history of painting. In an operation lasting six or seven hundred years, the artist shifts the datum from its Centre there to his own Centre here; and this centripetal movement through his regions necessarily involves the datum's disintegration until, in the limit, it is nothing. The moment when the datum becomes wholly subjective and Central is the moment when it vanishes altogether. Strictly speaking, then, contemporary art is still in pursuit of 'external nature', still intent upon the faithful portrayal of what is given; but the datum is now infrahuman, and approaching the Centre. The day-dreaming of Mrs Bloom in <u>Ulysses</u>, the doodles of Miro and Klee, the dreamlike imagery of Dali and Max Ernst, Tanguy's fantastic and disquieting protozoa, Calder's wire insects, the 'exquisite corpses' of André Breton and Tristan Tzara, are in one sense the climax of realism. Here at last are the unselected, unedited ° We are unable to see the objects of everyday life as they are at their own level, until the painter amputates them from transcendent reality, freeing them from all their high-level connections. His iconoclastic realism is distorting and shocking, until we have learned to use his eyes. But thus to make photographic realism the goal is to defeat the ends of art, and from

Cézanne onwards painters reconnect everyday objects with other levels -- only this time the other levels are infrahuman instead of suprahuman. Painting after 1900 does for the lower half of the hierarchy what painting before 1900 did for the upper half; and the Impressionists mark the axis of symmetry. If by realism we mean the common sense of the middle levels, then art since 1900 is unrealistic; if we are thinking of the lowest levels as most important (after the manner of science) then art since 1900 only continues the long war on high-level 'illusions'.



Dragons: An assisted inkspot

"He who is a fanatical pursuer of truth, careless of goodness and beauty, becomes hard and unhuman", says Percy Gardner (The Principles of Christian Art, p. 102). But this (I say) lies in the nature of things, --- truth gravitates just as goodness levitates, and only beauty can remain poised at mid-level. Truth leads its pursuer from the levels of the good truth and the beautiful truth down to the level of the mere truth, the abstract truth which is progressively infrahuman. Yet the objective truth that the lower levels are neither virtuous nor lovely makes their study all the more necessary and rewarding. facts of nature; here is the datum at its most primitive, before analysis into orderly 'fact' and disorderly 'fancy'. We call this datum subjective and internal; and so it is, regarded from the merely human plane. But on the lower planes it is objective and external --- as other as the pouncing ghost in a nightmare, and made of hard facts, the bedrock experience out of which the respectable furniture of our human life is carved. Indeed, as Jung points out, "It is precisely the most subjective ideas which, being closest to nature and to the living being, deserve to be called the truest." × The content of the infrahuman levels, as disclosed from one angle by modern science and from another by modern art, is the fundamental objective discovery of our age and the demonic counterpart of the angelic realm which fascinated the mediaeval artist. The aim of Surrealism, wrote Max Ernst in 1933, is "to remove the work of art from the sway of the so-called conscious faculties." ° Techniques are devised, "making it possible for certain men to represent on paper or on canvas the dumbfounding photograph of their thoughts and of their desires." According to Georges Hugnet, Surrealism is a way of discovering that immanent reality which, though infinitely surprising, is yet "as dizzily evident as a blazing meteor"; that non-rational force which combines dream and 'reality' in what lies deeper than these. Spontaneity -- something like Freud's method of free association, or Jung's word association -- is essential, but its mode and degree are very varied. If the fabulous or insane imagery of Dali's "hand-painted dream photographs" is the product of uncensored automatism, his extremely meticulous record of it is nothing of the kind: the peculiar madness of his painting requires a large ingredient of reasonableness." × But when the technique becomes as spontaneous as the subject-matter -- when the artist is content to "assist" an ink-spot or the grain of marble, or merely to scribble at random -- it is difficult to talk of art any longer. In fact Dada, Surrealism's predecessor, proclaimed itself the enemy and annihilator of all art. And indeed it may be said that, with the exhibition of Duchamp's mustachioed Mona Lisa and Schmalhausen's mustachioed and squinting head of Beethoven, European art had committed suicide. + Kasimir Malevich's white square painted on a white canvas (and equally Alexander Rodzhenko's black square on a black canvas) was a perfect likeness of that infra-human Centre at which the painter had at last arrived.

History, by breaking news gently, hides what is really going on: only by measuring the end against the beginning can we appreciate the interval that separates them. In Cologne, in the year 1320, sculptors and wood-carvers and painters were at work on the great Cathedral --- Germany's most sublime monument to the reality of the transcendent world. Six centuries later, in 1920, their successors and heirs held a public exhibition in the same city. It was capable of being entered through a lavatory. In the centre of the room stood a little girl in religious costume, reciting shocking verses. One of the exhibits, entitled <u>Fluidoskeptrik</u>, consisted of a aquarium full of red liquid with an alarm clock at the bottom, a floating lock of hair, and a wooden arm emerging from the surface. Another exhibit was provided with a chopper, so that visitors could hack at it. Nine years later, a Surrealist film called <u>The Andalusian Dog</u> was shown in Paris --- a young man is shaving in the presence of a girl; he cuts out her eye, and then chases her down immense corridors; when

× Modern Man in Search of a Soul, p. 133.

° See the Essays by Georges Hugnet in <u>Fantastic Art Dada Surrealism</u> (Ed. Alfred H. Barr, Jr.), p.37.

In <u>The Dilemma of the Arts</u>, M. Wladimir Weidlé shows that the modern painter and poet are more interested in the act of perception than in the thing perceived, in <u>their</u> vision rather than their <u>vision</u>. He quotes Ortega y Gasset: "The writer has become like a man who approaches a window, not to look outside, but to gaze at the windowpane itself, with its tiny defects, the particular shade of glass and its relative transparence." Much of José Ortega y Gasset's book, <u>The Dehumanization of Art</u> <u>and Notes on the Novel</u>, is relevant to my theme.

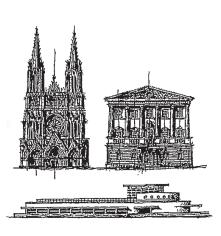
× Before his conversion, Dali made a point of his psychological abnormalities, his egotism and paranoia; madness, which he described as the "visceral cosmos of the subconscious", was essential to the artist. The art of the insane, like that of young children, has found an honoured place in many exhibitions of modern art.

+ In 1917 Duchamp submitted to the New York Independents' exhibition a urinal, signed 'R. Mutt'. It was not accepted, but 'ready-mades' became a feature of modern art exhibitions.

* It is a vulgar error to suppose that Surrealism and its analogues are not, in the main, intensely serious movements. Of course they are silly and shocking, but that is precisely what they are meant to be; of course they are the reductio ad absurdum of art, but that, again, is the intention. It is as if art were in a hurry to get to the Centre, turn round, and start over again. But I believe that the best Surrealist works are far more than means to this end; they are fine ends in themselves, destined to live. I find in the paintings of Ernst, for instance, the equivalent in paint of that sense of mystery and astonishment on which I have so frequently insisted in this book. It might almost be said that the aim of this book is surrealist, seeing that it is a polemic against common sense and taking-things-for-granted.

at last he catches up with her he is held back by cords attached to two pianos, on which rests a bleeding donkey's head. *

(I have confined these remarks in the main to painting, but somewhat similar stories could be told about poetry and the drama, and even about the abstract arts of music and architecture. The gothic architect plans for heaven, the renaissance architect for man, the modern architect for the machine. Indeed the house itself, according to the celebrated M. Le Corbusier, is a machine for living in. Functionalism is the catchword; the designer invites his materials, and the economics of his problem, to provide the solution. Aesthetic considerations, if they come in at all, come in last, to settle any residual matters which practical requirements may have left undecided and open. The result is that we can build excellent factories, but in so far as the problem rises above the level of the machine we are at a loss. A modern church, for instance, is either a soulless mediaeval pastiche, or a factory with a cross planted on the gable. Architecture philosophizes: the lines of our buildings are as much diagrams of our universe as those of the ziggurat and the pyramid were diagrams of more ancient cosmologies. If the history of Western architecture can be put in a nutshell, it is the tale of a collapse, of an earthward sag. ° The pointed Gothic arch subsides by degrees from the 13th century lancet to the almost flat four-centred Tudor outline; the Renaissance nobly compromises with vertical column and horizontal entablature; the modern style, at its most typical, hugs the ground --- even the window panes lie on their sides. The mediaeval cathedral is a campaign against gravity; the Renaissance palazzo is reconciled to earth; the modern factory grovels. The symbolism needs no underlining.)



° Collapse means hierarchical descent, and division or analysis. The advance of a civilization entails progress in discrimination; accordingly, as the <u>lines</u> of buildings tend to flatten, so their <u>finish</u> tends to improve. True and polished surfaces, fine joints, and a clean appearance, are now prized; whereas earlier times (whether in the matter of buildings, clothes, or personal cleanliness) were less minutely sensitive, more content to contemplate the general effect. In literature also attention to detail is carried to the limit, as in James Joyce's <u>Ulysses</u>.

6. THE THREE STAGES IN POLITICS

Finally, consider the changing structure of society. Europe emerges from the chaos of the Dark Ages with the ideas of universality and hierarchy, with the vision of a Christendom organized as a vast all-inclusive system of feudal and corporate rights and duties, with politics and economics as departments of morals, and each man from Emperor to serf filling that place in the hierarchy to which God had called him. Of course the ideal, though operative, was never completely realized, and the early rise of separate sovereign States, often at war, thrust it further and further into the realm of impracticable dreams. The Church's unity, it is true, survived the political fragmentation of Europe, but long before the Reformation we find such men as William of Occam (monk though he was) openly taking the side of national authority in its conflicts with the Pope. And certainly Luther was the stoutest ally of the autonomous State, defending its secular ruler's claim to absolute sovereignty. Even in matters of religion, the State became a law unto itself. "This is our doctrine," declared the Elizabethan Bishop Jewel (and most of the clergy were with him) "that every soul, of what calling soever he be, -- be he monk, be he preacher, be he prophet, be he apostle, -- ought to be subject to the King and magistrates." × But as Christendom gave way to kings, so kings in turn give way to parliaments, and even their power is curbed by all Page 612

In Religion et Culture; and Du Régime temporel et de la Liberté, Maritain describes three 'moments': (1) the classical moment of the 16th and 17th centuries, when civilization, though inaugurating a human order, had not yet broken with its Christian source; (2) the bourgeois moment of the 18th and 19th centuries, when man's liberation from religious bondage is completed, and the way to his unlimited progress seems open; (3) the revolutionary moment of the 20th century, when man, having made himself his goal, is forced downwards: he is increasingly subject to forces which are no longer religious or political, but technical. Matter has triumphed over man.

× Trevelyan, English Social History, p. 174.

manner of guilds, corporations, trade unions, and so on. The age of individualism -- the anti-hierarchical age -- has arrived, and government is described as a necessary evil: the less there is of it the better. * Every man is king in his own castle. But sometimes the Englishman's castlehome is a hovel and sometimes it is a mansion. This will not do: political equality without economic equality is little more than a name. Prudhon says: "The social age which begins with the French Revolution is characterized by the preponderance of the economic principle over the two great former principles, now superseded and eliminated, of religion and government." And so, just when the individual human being is at last on the point of coming into his own, the emphasis shifts away from him to a still lower level --- to the level of productive forces and techniques, + to the physical environment, to matter.

The revolt against hierarchy does not end in the perfect democracy, or even in the dictatorship of the proletariat; it succeeds only too well, and cannot be halted at the human level. In practice, it is impossible to tear down the upper half of the structure and leave the lower intact. When the suprahuman goes the human goes. Truly our politics hold up a mirror to our cosmology. ° The great truth that escapes us is that the politics of the City of God are of a piece with those of the earthly city, so that our democracy is celestial before it is terrestrial: the angelic aristocracy had to precede the human to the guillotine.

The historical fragmentation of the social structure and of the universe are two aspects of a single descending movement; accordingly it may be said that class distinctions have a cosmological basis. It is no accident that the first phase of our civilization is predominantly aristocratic as well as religious; or that thereafter the ancient and established religion is especially bound up with the obsolescent landed aristocracy, and with the country rather than the town. \times Again, it is no accident that the era of the rising urban middle class should also be the era of the broadening and secularization of culture, of religious reform and schism, of the pursuit of art and knowledge for their own sakes; even now there remains a perceptible tendency, both on the part of the upper and the lower classes, to associate the earnest and enthusiastic pursuit of humanistic culture with the intervening social stratum, and to deride it accordingly. Finally, it is no accident that the third phase should belong to the urban masses and to science: in so far as there is a distinctively proletarian culture it is inspired, not by religion or art, but by science, and its tendency is materialistic, anti- aesthetic, and irreligious. In the course of its descent from the highest to the lowest social levels, education itself is transformed; no longer unified by religion or graced by art, it becomes primarily technical, utilitarian, departmentalized, atomistic. "When the greed for life spreads to the masses," writes Berdyaev, "then the higher spiritual culture, which is always aristocratic and based upon quality rather than quantity, ceases to be the goal." • Towards the end of the 19th century, M. Maritain points out in Christianity and Democracy, "the working classes sought their salvation in the denial of Christianity": and this denial (I would add) was the necessary concomitant of their political affirmations, for institutional religion is inextricably bound up with the old system of class privilege. The militant atheism of the ex* Herbert Spencer, for instance, managed to combine his organismic theory of the State with a thorough-going individualism: the State's role is the merely negative one of preventing interference with our right to do as we please, so far as that is possible in society.

+ Some aspects of this shift are discussed in James Burnham's <u>The Managerial</u> <u>Revolution</u>

° It has often been pointed out (e.g., by Aldous Huxley in his essay 'One and Many') that cosmogonies and cosmologies reflect the pattern of the State. Gerald Heard (Man the Master, pp. 61 ff) has suggested that our own political dyarchy mirrors the duality of our own nature: the changing conscious mind corresponds to the removable government, the more permanent unconscious to the monarchy. The king used to be (and to some degree still is) the community's pipeline to the collective unconscious, and to the universe in general. The king (as I would say) is that visible 'angel' who linked men with the celestial hierarchy.

× The 1945 Report of the Commission on Evangelism: Towards the Conversion of England, stated that church-going is at its minimum in large industrial cities, and the belt around London. In provincial towns and comfortable suburbs the decline is less marked, while in villages a parson with the right gifts may fill the church. The Report links religious decline with urbanization and industrialization, and with growing stress on the sciences in education. Cf. Christian News Letter, 10th Feb. 1943, and Supplement 172 on 'Religion and the People' by Mass Observation; also the Mass Observation survey, commissioned by the Ethical Union and published in 1947 as Puzzled People, of religion in a London suburb: the Churches were censured for supporting political and economic privilege. On Anglicanism as the upper-class religion, and the connection between the meeting-house and trade, see Trevelyan, op. cit., pp. 253 ff.

• <u>The Meaning of History</u>, p. 210. In general, the social status of the established religion tends to be high. For example, Aristotle lays down that citizens and not mechanics should become priests (<u>Politics</u>, VII. 9), and in India the Brahmin caste traditionally combines social superiority with the priesthood. treme left, its subordination of art to politics, and the high value it places upon physical science, are not incidental to its political programme, but essential to it: no movement which compromises on these vital issues is likely to retain a broad proletarian basis, and revolutionary fervour. +

European politics, then, are a tale of twofold descent --- the first a descent from the regime of one (or a few) to the regime of the proletarian masses, and the second a descent from the regime of God to the regime of matter --- and the first, though its scope is limited to a single hierarchical Pair, recapitulates the second, which covers the entire hierarchy. Moreover these two, when torn apart, are mere abstractions: the political revolutions which place first the bourgeoisie and then the masses in power are solidary with the cosmological revolutions which substitute the human for the divine, and then the material for the human.

Of the many qualifications which suggest themselves at this point, I can only mention a few of the most important. (a) Plainly, all three historical moments co-exist: just as the ancient country °, the old-fashioned small town, and the modern industrial city, are integral parts of present-day society, so also are the social classes which are linked with these regions. The main lines of our present division of labour and of interests are due to the survival of the old in the new, to our 'time-depth'. (b) It should be remembered that the individual man has a dual nature --- though a member of his own social class he is fulfilled in the others;× though serving society in some narrow capacity he is nevertheless to be served by all; though confined to one station in the social and cosmic hierarchies he is also at home on every plane. In the first sense men are exceedingly unequal; in the second, equal. In the first sense a man is the merest particle; in the second he is the whole, and the threefold structure of society is his own threefold structure. + (c) The process by which political power is transferred from the few at the top to the many at the bottom is a single energy-releasing movement, productive throughout of magnificent and heroic works which are as little independent as are the words of this sentence. In so far as we are whole we are alive to this whole, and refuse to identify ourselves with one or other of its three moments: bandying such abusive words as 'bolshevism' and 'decadence', or trying to bring the downward movement to a standstill midway * is seen to be futile. On the other hand there is no excuse for political fatalism: once the movement has been studied in the spirit of science, as a natural phenomenon like any other, then it ceases to be merely natural, and begins to be deliberate. It becomes possible for man to take over, and to avoid some of the worst excesses. (d) We are, then, approaching the end of the third stage with some awareness of how we arrived in this position, and some idea of the shape which the new civilization will take; no longer swept along by a tide of which we are all unconscious, we can begin to consider the question of navigation. And the great turn of the tide -- in politics marked by the shift from anarchy and nihilism to extreme authoritarianism -- need not catch us unawares. That the hierarchy of heaven and earth must be reinstated if man is to survive --- this is, I believe, practically certain; but the manner of its reinstatement, and the new political and cosmological outlines it will assume, are matters which do not lie wholly outside our choice.

+ Is atheism, which is no concern of politics, necessary to communism? M. Maritain replies: "This atheism is not a necessary consequence of the social system ... but on the contrary is presupposed as the very principle of the latter. It is the starting point. This is why communist thought holds to it so ardently, as the principle which stabilizes its practical conclusions and without which these would lose both their necessity and their value." The origin of Marx's communism was not economic, but metaphysical: he was an atheist before he was a communist. True Humanism, pp. 28-9. This is not to deny that there are some theistic and Christian communists. There is, however, much truth in Leonard Woolf's contention (After the Deluge, II. i. 3) that "democracy is essentially irreligious and anti-Christian", particularly when democracy becomes concerned solely with man's material well-being, and the liquidation of the past.

° As late as the 14th century the English town was a rural and agricultural community, whose citizen-farmers cultivated their own corn strips outside the city walls. Even London was semi-rural, and no Englishman was as ignorant of the land which supported him as the majority of us are today. Trevelyan, op.cit., p. 28. × D.H. Lawrence wrote of the citizen: "If his country mounts up aristocratically to a zenith of splendour and power, in a hierarchy, he will be ... fulfilled, having his place in the hierarchy..... To have an ideal for the individual which regards only his individual self and ignores his collective self, is in the long-run fatal." Apocalypse, pp. 217-18.

+ Professor FlügeI, warning us against voting left to spite our Super-Ego, or voting right to placate it, is recognizing the link between the class structure of society and the structure of the psyche. See his chapter on Politics in Man, Morals and Society. * I admire the works of thinkers like Maritain, Gustave Thibon, and Christopher Dawson, and I agree with their view that the only cure for our atomized society is to return to its religious source; but I cannot follow their tendency to make the second and third stages of our civilization a mere falling-away from the first, -- as if our scientific era were an unnecessary aberration. (See, e.g., Dawson, Progress and Religion, pp. 231 ff.) To deplore or ignore the positive achievement of our own time is to try to repress an important part of our make-up.

When the dialectic of revolutions reaches down to the lowest social strata, it arrives (in any case) in a region of contradiction and reversal. Here materialism is incongruously combined with magic, and the worship of science with fantasy and superstition: here also are angels. In Hyde Park, as Professor Saurat remarks, a workingclass audience receives favourably

7. CONCLUSION

I have chosen certain aspects of our civilization to illustrate the three stages of its development, but a thorough treatment would include many aspects which I cannot stop to consider. (For instance, the three stages in psychology would be distinguished in detail --- (1) the psychology of the suprahuman or religious consciousness, from Origen, who "knew more about angels and demons than he did about human beings", † to St Thomas, for whom the human soul is a substantial and spiritual principle, immortal, in its highest functions even now independent of the body, and created by God to enjoy eternal happiness in intellectual union with Him; (2) the psychology of the human or ordinary consciousness, made possible by Descartes' method of universal doubt, by Locke's empiricism and the denial of innate ideas, and by the total separation of human psychology from all suprahuman influence, ° as in the work of Hume, Hartley, Condillac, and Herbart; (3) the psychology of the infrahuman or unconscious, as studied by Freud and his associates.) Moreover it would be necessary to show to what extent the stages overlap -- obviously the different departments of science and art develop at different rates, and their organic unity is nothing at all like mechanical uniformity; + to show also how such factors as racial stock, climate, geographical and geological situation, dynastic accidents, the emergence of dominant personalities, complicate the broad pattern, how each country has its peculiar achievements and lapses, and how they are complementary. In addition, a thorough survey would not only try to determine how far other civilizations have developed along lines similar to ours, but also how they have interacted with it, and how they divide amongst themselves the many-sided task of Humanity. The great civilizations are, after all, anything but the self-contained wholes which Spengler's great work often suggests; they are meso-forms, organs that mutually penetrate and not organisms that are distinct. (Much more than we realize they are interdependent, and there are many indications of the powerful influence which one stage of a civilization may exert upon the corresponding stage of another civilization. Instances are the impetus which the Greek art of the 4th and 5th centuries B. C. gave to Renaissance art, and the influence of Hellenistic thought today. \times)

There is one characteristic of our own civilization which calls for brief notice here: namely, the westward trend. The home of our religion, and the locus of the earliest stages of Christian civilization, was the Eastern Mediterranean --- Palestine, Asia Minor, Alexandria, Greece, Italy. The Renaissance began in Italy, and spread north and west to Flanders and Spain, to France and England. The third or scientific-materialist phase was centred upon Western Europe, and upon Great Britain in particular; before long, it had crossed the Atlantic. Moreover this historical sequence leaves permanent marks: the Eastern Mediterranean zone has been relatively unaffected by the later stages of the civilization which began there; North America, on the other hand, is relatively untrammelled by the earlier stages. * Perhaps the full quality of our civilization can be a biblical proof of the non-existence of the soul. "This sort of speculation constitutes a happy synthesis between the traditional belief in the Bible, which is a part of the very soul of the English people, and the brand of materialism that Socialists and Bolshevistic propaganda spread among the lower classes." <u>Gods of the People</u>, p. 18.

† R. B. Tollinton,. <u>Alexandrine Teaching</u> on the Universe, p. 83.

° "In religious lives accessible to psychological investigations, nothing requiring the admission of superhuman influence has been found." James H. Leuba, A Psychological Study of Religion, p. 272. And a fortiori such influence is not to be found in our non-religious experience. + Spengler (The Decline of the West) is most insistent that the parts of a culture are organically one; the various techniques, arts, sciences, and religious beliefs are all expressions of a single insight, or unique psychic principle. With this, and with his four stages of the development of a culture (stages which roughly correspond to mine in this chapter) I have no quarrel. But I cannot agree with his relativism, which makes each culture virtually a separate organism and a law unto itself. A civilization is born, says Spengler, when out of the primitive and perpetually infantile human mass a mighty soul arises, a bounded and temporal existence differentiated from the boundless and permanent; and this soul flowers on the soil of a country with precise boundaries, and remains attached to it like a plant. × Cf. Berdyaev, The End of Our Time, p. 58.

* Jacquetta Hawkes writes (in an admirable article printed in The New Statesman and Nation, Sept. 25, 1948) -- "Recently I lectured on early British history to a group of American post-graduate students. They were incredulous of the existence of a people who would live in skin tents and yet raise Stonehenge as a sacred building. 'It's not likely they'd take all that trouble. What would be the use when they were so poor?' they said." And with the virtual disappearance of the sense of holiness goes the denial of all superiority. "For two thousand years Christianity made possible the maintenance of a society like a tree, the roots and trunk one with the flowers that they lifted towards the sun. For two hundred years this society has been withering, changing from an organic to a crystalline structure. Deprived of the self-confidence that comes from the acceptance of degree, loyalties, and a scale of values ascending to divinity, human superiority and privilege have become intolerable. All must be equal and distinct particles." The fact that some Englishmen are still capable of enjoying superiority in others, is, in American eyes, very little to their credit.

appreciated best in such a country as France, which, lying in space and time somewhere near the centre of gravity of the system, retains something of the balance and completeness of the Renaissance; here, more than in most countries, the three phases co-exist.

It is not to the purpose of this inquiry, however, seriously to consider whether the star of our civilization rises in the East and sets in the West, and whether the star of the coming civilization is likely to take the same course. Our duty is clear enough. We must heal the wounds which history inflicts upon reality; we must reunite the angelic world of the first stage with the demonic world of the third; we must put together the broken Pairs. In other terms, we must temper our science with religion, our religion with science, and both with art; we must rediscover the goodness of the universe and its beauty, without sacrifice of the truth we hold; we must re-synthesize the values; † we must overcome time. All this we must do so that, by realizing the goods of our civilization and offering them as a worthy heritage to its successor, we may save our past from futility and our present from the evils of the merely contemporary. "We require not only a present-day, personal consciousness, but also a supra-personal consciousness which is open to the sense of historical continuity." ° And many of us are ill, Jung goes on to say, because we reject our own religious promptings, and the historical continuity which is inseparable from them. As I would say, a man is self-alienated in so far as he fails, by overcoming time, to share in the threefold insight of his civilization.

The danger, of course, is that we shall rush to the opposite extreme, substituting anti-scientific religion for anti-religious science, the faggot for the incendiary bomb, some sanguinary cult of the suprahuman for our present sanguinary cult of the infrahuman, × the holocausts of a latter-day Huitzilopochtli for those of U235. Organized religion, when it chains the intellect, can be at least as cruel as science which knows no moral law. The only safeguard is to hold fast to the time-transcending, tripartite whole. Our duty as individuals is to see that something of the intellectual honesty of the period that is now closing is carried forward into the new age of faith. At least let there be a leavening of men and women who stand for integrity and sanity, for all the hierarchical levels and the historical phases which are devoted to them; and who refuse to offer up the whole as a sacrifice to the part. Let there be some who, calling time's bluff, know that the real meaning of history lies neither in some ever-receding future goal nor in some impossibly golden age long past, but in this present moment, which holds all together in living simultaneity; for it is those men who can draw unlimited cheques upon the infinite capital of the Now, who possess the resources for ministering to its infinite practical needs. +

Apart from this Now, all human history, the history of the cosmos itself, is hopeless, tragic, and ridiculous. Its meaning, its underlying reason, all the values of which it is capable, are proportional to the observer's ability to weld its phases together into a present whole. Every item of value in the universe is the spoil of someone's victory over time; every shortcoming is a part of time's triumph ---- a triumph that is both a fact and illusory. The future does not lead to perfection; to the degree

† Cf. Gerald Heard: "Unless it is possible to understand that there is a goodness as objective, as detached, as comprehensive, and as timeless as are beauty and truth, and that these three apprehensions encored into a single comprehensive understanding of life, it is impossible for there to be a true sanction for civilization." Goodness is the central term which can bring beauty and truth together. <u>Man the</u> <u>Master</u>, p. 172.

° <u>Modern Man in Search of a Soul</u>, pp. 76-7. Cf. Whitehead: "A civilization which cannot burst through its current abstractions is doomed to sterility..." <u>Science and</u> <u>the Modern World</u>, p 73.

× Cf. William James: "It is true that superstitions and wild-growing over-beliefs of all sorts will undoubtedly begin to abound if the notion of higher consciousnesses enveloping ours, of fechnerian earth-souls and the like, grows orthodox and fashionable... But ought one seriously to allow such a timid consideration as that to deter one from following the evident path of greatest religious promise? Since when, in this mixed world, was any good thing given us in purest outline and isolation?... The sole condition of our having anything, no matter what, is that we should have so much of it, that we are fortunate if we do not grow sick of the sight and sound of it altogether... Without too much you cannot have enough, of anything." <u>A Pluralistic</u> Universe, pp. 315-6. See also Bergson, The Two Sources of Morality and Religion, pp. 256 ff.

+ I feel that the haste with which some writers are prepared to embrace the Catastrophe of the end of our time, is mistaken. The very interesting book <u>Renascence</u> by 'Nicodemus' is not free from this fault, which is largely due, I think, to an underestimation of the present moment. But if, adhering to the timeless, we believe that no good once realized is ever lost, we can never treat the present as mere means to the future, however brilliant; nor can we welcome disaster now for the sake of the good time coming.

* The Encyclopaedists were particularly blind to the need which the present has of the past. They resented history, and D'Alembert wanted to destroy it. Even Victor Hugo, a century later, in <u>La Légende</u> <u>des Siècles</u>, voiced the same opinion. (See J. B. Bury, <u>The Idea of Progress</u>, p. 171.) And indeed the timeless fruits of history owe much to people who deny the tree they grow on. that it destroys the past, it leads to all variety of evil. * Only a goal which all generations attain, from which no-one, past or present or to come, is barred, is worth striving for; the goal attained in some roseate millennium, at the cost of innumerable forgotten and humble sufferers, is not only immoral --- it is a mirage. The purpose of life is to learn the illusoriness of death; our task in time is to discover the timeless. Either we are all saved, or none. Progress which abandons the past to its fate is retrogression.

CHAPTER XXIV

THE ANGELS OF DARKNESS

For our wrestling is not against flesh and blood, but against the principalities, against the powers, against the world-rulers of this darkness, against the spiritual hosts of wickedness in the heavenly places.

<u>Eph</u>. VI. 12 (R.V.)

What wrath of Gods, or wicked influence Of Starres conspiring wretched men t'afflict, Hath powrd on earth this noyous pestilence, That mortall mindes doth inwardly infect With love of blindnesse and of ignorance, To dwell in darknesse without souenance?

Spenser, 'The Teares of the Muses'.

Pride is 'the beginning of all sin'. And what is pride but a perverse desire of height, in forsaking Him to whom the soul ought solely to cleave, as the beginning thereof, to make itself seem its own beginning?

St Augustine, The City of God, XIV. 13.

Thus Man by his own strength to Heaven would soar: And would not be Obliged to God for more.

Dryden, 'Religio Laici'.

Pride, like an eagle, builds among the stars.

Young, Night Thoughts, V.

The heart of man is the place the Devils dwell in: I feel sometimes a Hell within my self; Lucifer keeps his Court in my breast, Legion is revived in me.

Browne, Religio Medici, I. 51.

I was so weary of the world, I was so sick of it, everything was tainted with myself

I shall never forget the maniacal horror of it all in the end when everything was me, I knew it already, I anticipated it all in my soul because I was the author and the result I was the God and the creation at once; creator, I looked at my creation; created, I looked at myself, the creator: it was a maniacal horror in the end.

At last came death, sufficiency of death and that at last relieved me, I died.

D.H. Lawrence, 'New Heaven and Earth'.

Himself unto himself he sold: Upon himself himself did feed.

Tennyson, 'A Character'.

Divinity of hell! When devils will the blackest sins put on, They do suggest at first with heavenly shows.

Othello, II. 3.

How art thou fallen from heaven, O day star, son of the morning! How art thou cut down to the ground, which didst weaken the nations! For thou has said in thine heart, I will ascend into heaven, I will exalt my throne above the stars of God.... I will ascend above the heights of the clouds; I will be like the most High.

<u>Is</u>. XIV. 12-14.

His angels he charged with folly.... Yea, the heavens are not clean in his sight.

<u>Job</u>, IV. 18; XV. 15.

Behold a great red dragon.... And his tail drew the third part of the stars of heaven, and did cast them to the earth.

<u>Rev</u>. XII. 3-4.

Belial...can never resist the temptation of carrying evil to the limit. And whenever evil is carried to the limit, it always destroys itself. After which the Order of Things comes to the surface again.

Aldous Huxley, Ape and Essence, p. 148.

There is a limit of Opakeness and a limit of Contraction In every Individual Man, and the limit of Opakeness Is named Satan, and the limit of Contraction is named Adam.

Blake, Jerusalem, II.42.

The higher the ape goes the more he shows his tail.

George Herbert, Jacula Prudentum.

1. THE EVIL SUPRAHUMAN

The world above me is, like myself, evil as well as good.

For consider the grounds of belief in the suprahuman. First, there is tradition, and tradition insists as strongly upon bad angels as upon good ones. ° Second, there is the evidence of present intuition and introspection. * We seem to find in ourselves divine influences at work, memories or anticipations of happier and more splendid regions, assurances that the starry vault roofs a temple of surpassing life and no mausoleum. But do we not also discover hints of more-than-human wickedness at work in us, of exalted but evil regions, and satanic influence? × Third, there is the theoretical evidence. We extrapolate the curve of the infrahuman, through the human, into the suprahuman. But the known parts of the curve show that along with increasing power for good goes increasing power for evil. The educated man is in general more competent, more knowledgeable, more effectual, than the uneducated; and the uneducated man than the savage and the child; and these than the animal; and the animal than the cell; --- nevertheless competence may be, and often is, competence for self-seeking and ruthless cruelty; knowledge is often knowledge of how to do harm; effectuality is just as likely to be immoral as moral. Highly civilized men are notoriously prone to extremities of wickedness unknown amongst primitives and children, just as these are, in turn, prone to kinds of misconduct unknown amongst animals. Again, it may be said that the emergence of the living from the womb of inanimate nature was the ill-starred birth of pain, restlessness, interminable struggle, exacerbated sensitivity, loneliness, and every other kind of misery, out of the deep peace of the physical matrix. A nervous system is a very wonderful instrument, but its first operation is to cut off the user from his environment. The more elaborate and keen it is, the sooner it is turned on all the arteries and sinews which unite him with his kind; he bleeds from a thousand self-inflicted wounds. To say the least of it, then, evolution as far as man has not been all gain --- even when we discount all the obvious failures. Even when evolution seems to succeed, it would seem to be the unfolding of evil tendencies no less than of good. Indeed it is arguable that every gain is also a loss, or every advance a falling back. And I know of nothing to show that this tendency, which is painfully evident amongst men, does not extend to the region above them. \otimes

In short, practically every argument which I have used in support of good angels applies equally to bad ones. Apparently we cannot have Heaven without Hell, light without darkness, God without Satan. ° See, e.g., 2 <u>Cor</u>. IV. 4; <u>Eph</u>. II. 2 and VI. l2; <u>Col</u>. II. 20; <u>Gal</u>. IV. 3, 9. Latter-day Protestants, however, are as shy of devils as of angels. The exceptions include Bishop Gore (<u>The Religion of the Church</u>, 2nd Ed., p. 35) and of course Mr. C. S. Lewis.

* In 1945 I came across, in Colombo, a society that issued a monthly journal indicting the sun as "guilty of all our disasters": fluctuations in solar radiation cause every kind of calamity here below.

× "And if," writes Aldous Huxley, "in the psychic universe, there should be other and more than human consciousnesses obsessed by thoughts of evil and egotism and rebellion, this would account, perhaps, for some of the quite extravagant and improbable wickedness of human behaviour." <u>The Perennial Philosphy</u> p. 37.



Satan, from Master I. Cz's Temptation of Christ: 15th century German. Evil has, traditionally, two quite contrary hierarchical locations. According to the romantic doctrine (whose prophets include Rousseau and D. H. Lawrence) evil belongs to the higher, more conscious levels, rather than to primitive nature and the realm of the body. According to the idealist doctrine (to be found, for instance, in St Paul, Gnosticism, and Neoplatonism) evil is associated more particularly with matter and the body, and good with the non-corporeal, with the intellect and reason. (This is not to deny, of course, that St Paul recognized also suprahuman evil, or that the Gnostics believed in maleficent or left-handed stars.) In this chapter I agree with both sides; both the suprahuman and the infrahuman are evil in so far as they become divorced, and the Pairs are sundered. Cf. Reinhold Niebuhr's The Nature and Destiny of Man (i. pp 13 ff).

⊗ In other words, our hierarchical extension or growth often resembles that of the unfortunate lady in the nursery rhyme, who, having swallowed a fly, and then a spider to catch the fly, was obliged to swallow a bird to catch the spider, a cat to catch the bird, and so on.

2. EXTRAPOLATION: THE LAW OF DIMINISHING RETURNS

But this is not all. There is, it seems, a contradiction working at the heart of things, a doom which makes all optimism ridiculous. If it were simply a case of the parallel advance of good and evil, of the brighter light casting the darker shadow, then, on balance, at least there would be no loss. The fact is, however, that the light itself grows dim, and the balance alters in favour of the darkness. Let me make my meaning clear by examples.

(a) The extrapolation of knowledge. Knowing more is wondering less, and wondering less is knowing less. Knowledge itself is torn in two by a fatal contradiction. * I am amazed at the stars and filled with awe; as a result I begin to study them. And the more familiar they become the less wonderful they become. My increasing knowledge is increasingly theoretical, abstract, discrete. "A dreadful sophistry spreads microscopically and telescopically into tomes", and all it does is to "cheat men out of the simple, profound and passionate wonder which gives impetus to the ethical." ° For information without love, or astonishment, or reverence, or sympathy, becomes a specious but very damaging kind of misinformation, "the mischief of being wise". Nor can this self-destructive tendency be avoided at the high levels where it occurs: it is a defect inherent in knowledge itself --- Laius-like, mystery cannot help but father a patricidal science. × The only remedy is repeated return to the lower levels and their ignorance; or, in other words, repeated realization of that concrete in-filling of humble status, lacking which the higher units are empty shells. It is commonly said that those who have to do all the while with persons as persons, who are interested in unique human beings, get nearer to the heart of things than the profoundest thinker can ever hope to get in the seclusion of his study: clever and inhuman, he 'lives in a world of his own' and becomes progressively 'out of touch with reality'.† Spontaneous emotional life; the free play of the affections, the heart's knowledge as distinct from the head's --- to sacrifice these 'inferior' goods for the 'superior' goods of the intellect is indeed a tragic blunder. Blake and Keats had some reason for despising Newton, and D. H. Lawrence for calling all scientists liars. "My great religion", wrote Lawrence, "is a belief in the blood, the flesh, as being wiser than the intellect. We can go wrong in our minds. But what the blood feels, and believes, and says, is always true." +

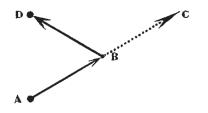
I do not suggest that we should rush, with Lawrence, from the fallacy of the mere suprahuman to the fallacy of the mere infrahuman. What I do urge is that every gain in knowledge is also a loss unless it is lightly held, and easily and often got rid of. Mental extensions should be treated like bodily ones, and amputated unceasingly, otherwise their owner becomes a monster, hideously hypertrophied. Information you cannot get out of your mind is like a claw or a wing you cannot shed from your body, in that it spoils you for new extensions called for by new occasions. Ingrown and undetachable knowledge is the worst form of ignorance. (I have, in the course of this book, given many examples of this rule --- for instance, we see our tools so clearly that we cannot see them as Page 620 * F. H. Bradley insisted on this contradiction: while introducing order into our confused impressions, thought destroys the tang and thrill of immediate experience, "divorces idea from existence, what from that", refers away from the present to the past and future. Thought has a self-destructive aspect, and requires to be combined with the immediacy of feeling. BAR168

° Kierkegaard, Journal. Cf. his <u>Unscien-</u> <u>tific Postscript</u>, p. 307: "Everywhere it is decisively concluded that thought is the highest stage of human development; philosophy moves farther and farther away from contact with primitive existential impressions, and there is nothing left to explore, nothing to experience."

× "They come to the lighted house;
They talk to their dear;
They crucify the mystery
With words of good cheer."
These lines from A.E's poem 'The Outcast' are surely the most rebuking and evocative he ever wrote.

† "The unhappy consciousness, the sense of the division between mind and the universe, and therefore between mind and itself, is <u>prima facie</u> rather intensified than set at rest by the vast material and intellectual advance of mankind." Bosanquet, <u>The Value and Destiny of the Individual</u>, p. 316.

+ See Aldous Huxley's Introduction to <u>The</u> <u>Letters of D.H. Lawrence</u>.

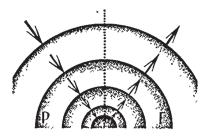


In terms of Chapter XIX, the laws of divarication and foetalization (which say that the over-developed, specialized, unchildlike type is barren, and the immature and still generalized type productive) apply not only to evolution stage by stage, but also to the broadest development of the hierarchy as a whole. If, arriving at B from A, we go straight on towards C, instead of turning sharply for D, we find ourselves in increasing difficulties. extensions of our bodies; we know too much about Earth's seeds to know anything about her life; our information about astronomers and their apparatus keeps us in ignorance of the fact that, through them, the Sun sees.) The know-all is an ignoramus; and the suprahuman is, by definition, a know-all. Perhaps there was, after all, some justification for the mediaeval idea that there are things it is not good to know -- unlawful knowledge which can be acquired only by intercourse with the powers of darkness × -- and for Plato's idea (in the Laws) that the evil world-soul was responsible for the false doctrines of the atomists.

(b) <u>The extrapolation of will</u>. An inflated man is an angel; a shrunken angel is a man. For he is stimulated, and he reacts; and both stimulus and reaction pass radially though <u>every</u> region. His status, then, is a question of which region he calls his frontier, of where the incoming stimulus leaves 'the world' and impinges upon 'himself', and of where the outgoing response leaves 'himself' and impinges upon 'the world'. 'From whom do I take this treatment, and to whom do I respond?' My answer to this question settles what I am. The suprahuman individual (I mean the merely suprahuman), ignoring the inner links in the two chains of events, picks a remote object: 'This', he says, 'is the one I have to do with; here is the real give-and-take; upon this region my concern is poured out.' He <u>overlooks</u> the nearer and humbler orders which make this remote give-and-take possible. In effect, he is hollow, and increasingly so as his status advances. And in important respects the hollow suprahuman becomes its infrahuman counterpart.

Notice a second effect: the time-lag between stimulus and response increases, and with it the discrepancy between the received object and the projected object. ° Indeed, one measure of hierarchical status is this widening difference between the world-as-given and the worldas-willed. The higher the individual ranks, the greater the strain set up within his object: more and more its 'real' or past components are at war with its 'ideal' or future components. Cognition and conation advance in step, but their paths diverge more and more. The universe becomes less and less acceptable; all chance of rest goes. Evolution, the growth of consciousness, is the growth of dissatisfaction, of care. The animal takes the world almost as he finds it, and lives in the present moment; the child's criticism of his environment is negligible, and certainly he has no plans for world-reform; the adult knows better -- or worse -- and has any number of projects at heart. The more intelligent and responsible he is, the further he looks ahead, and the further he looks ahead the more trouble he is likely to see. A man is measured by his anxiety. The casual labourer lives from hand to mouth and from day to day, irresponsibly, with little foresight and few regrets. The thrifty, respectable citizen knows how to take care of his own old age, and make provision for his children: he takes thought for the day after tomorrow --- and pays the heavy penalty. Not content with such a burden, the intellectual takes on future generations, the remoter destiny of his country, of mankind, of the whole world. And the more tomorrows he takes thought for, the more he is be-devilled by the Time-prince of this world. "The stars that have most glory, have no rest." × Without rest, we go mad.

× Gerbert of Aurillac, for instance, a French Benedictine who in 999 became Pope Sylvester II, was widely believed to have got his very remarkable knowledge with infernal help. And of course there are the many versions of the Faust legend.



"We may not be doomed To cope with seraphs, but at least the rest Shall cope with us. Make no more giants, God,

But elevate the race at once! We ask To put forth just our strength, our human strength,

All starting fairly, all equipped alike, Gifted alike, all eagle-eyed, true-hearted

See if we cannot beat the angels yet!" Browning, 'Paracelsus', I.

° Cf. Whitehead: "Consciousness is that quality which emerges into the objective content as the result of the conjunction of a fact and a supposition about that fact ... It is the quality inherent in the contrast between Actuality and Ideality When that contrast is a feeble element in experience, then consciousness is there merely in germ, as a latent capacity. So far as the contrast is well-defined and prominent, the occasion includes a developed consciousness." Adventures of Ideas, XVIII. 5; cf. Nature and Life, pp. 92-3, Science and the Modern World, IX. But in that case consciousness, as Schopenhauer believed, is essentially tragic, seeing that its progress is measured by the gulf it discerns between 'the ideal world' and 'the world as it is'. Consciousness is almost synonymous with discontent; then God help the suprahumanly conscious!

It is almost universally assumed that the 'social morality' which devotes itself to the well-being of one's community, or country, or species, is altogether admirable. But John Macmuray (see <u>Freedom in the</u> <u>Modern World</u>, X) justifiably charges this morality with "falseness" --- nothing is right, nothing is to be enjoyed now, because all things and persons are means to ever-receding ends. Social service is a false ideal.

The higher I aim, the more I fall short of the mark. Thus my merely

animal desires are capable of a satisfaction which, though transient, is genuine while it lasts; my goal of wealth or fame or power, on the other hand, is unattainable, seeing that it recedes at least as fast as I advance; as for my pursuit of knowledge or moral perfection, the only trustworthy measure of success is awareness of failure. All experience goes to show that the more ambitious the plan is, the less likely its fulfilment is, without making some other and still more ambitious plan necessary. It looks as if these high regions were somehow unhealthy, or haunted, or even hopelessly damned; for here the universe goes wrong (or seems to) more quickly than it can be righted. Here Schopenhauer's gloom is fully justified --- "The satisfaction of a wish ends it; yet for one wish that is satisfied there remain least ten which are denied. Further, the desire lasts long, and demands are infinite; the satisfaction is short and scantily measured out ... It is like the alms thrown to the beggar, that keeps him alive today, that his misery may be prolonged till the morrow.... So long as we are given up to the throng of desires, with their constant hopes and fears, so long as we are the subject of willing, we can never have lasting happiness nor peace." °

Nor does experience suggest that increase of power, though doomed to reiterated frustration, is at least increase of freedom, of self-determination. To the extent that there is truth in the saying that power corrupts,× more power means less ability to use it in ways that are lastingly self-preserving. At first sight, the private citizen would seem to enjoy far less liberty than the authorities which control his life; yet often the boot is surely on the other foot --- the politician and the high administrator are notoriously at the mercy of immense forces beyond their control, forces that drive them against their will, or use them as blind instruments. + The very least we can say is that to bind others is no way to free oneself, and to assume authority is no way to rid oneself of automatism.

(c) <u>The extrapolation of value</u>. Higher creatures are, in general, sensitive to a wider range of stimuli, some of which are felt as unpleasant. Pain is, indeed, one of the most notable of evolutionary products. There are, for example, many indications (not, of course, proofs) that arthropods feel less pain than mammals, * mammals than primitive man, primitive man than ordinary civilized man, the genius than the ordinary civilized man. Most of us, no doubt, would rather be a starving human being than a gorged dog, and some of us would rather be Beethoven frantic and despairing than his servant happy; nevertheless it is plain that the price of enhanced sensitivity and awareness is, at least in the majority of instances, shockingly high. If it were only a matter of setting new agonies against new joys, new depths of despair against new heights of ecstasy, so that gain and loss were comparable, then something like a qualified optimism would be possible. But experience tells another story: much pain seems to be not only uncompensated, † but useless, even at the biological level, and its duration (if not its intensity) is nearly always out of all proportion to the fleeting delights which go with it.

Perhaps the price would not be reckoned too high if the goods were of the finest quality. In fact, their quality is terribly apt to fall off as the expense mounts. The saint whose life is a masterpiece of self-sacrificing goodness, whose virtue attains the rank of sheer genius, is, directly he re× Daniel, <u>History of the Civil Wars</u>, VIII. "In consciousness we stand upon a summit and childishly suppose that the way beyond leads to still greater heights above the summit. That is the chimerical rainbow bridge. But in order to reach the next peak we must first go down ..." Jung, <u>The Integration of the Personality</u>, p 110. The stone of Sisyphus always rolls back to the bottom of the hill. Greek mythology has numerous figures who, victims of <u>hubris</u>, aspire to heaven, and are flung down, only to rebound (as Jane Harrison says: <u>Themis</u>, p. 454) like divine indiarubber balls.

Will, looking to the unsure future, is wholly time-ridden; knowledge, looking to the sure past, is half free of time; love, looking to the present, is wholly free. Cf. Inge, <u>Personal Idealism and Mysticism</u>, pp. 15 ff. It is the Devil, says Aldous Huxley (<u>Ape and Essence</u>, p.) puts into our heads the idea that we can foresee in detail the results of our present actions: our hopes and fears poison the Now.

° Schopenhauer, <u>The World as Will and</u> <u>Idea</u>. (Haldane and Kemp), i. pp. 253-4. × Obviously there is <u>some</u>truth in Thomas Moore's lines from 'Corruption':

"To place and power all public spirit tends, In place and power all public spirit ends." + Gerald Heard (Pain, Sex and Time, p. 211) attributes the disastrous automatism of the modern State to its huge specious present of 5 to 10 years. Within this 'instant' we cannot swing these gigantic vessels out of their courses, and prevent their collision. To counteract the dangers arising from this too slow and lumbering mode of existence, says Mr Heard, we must realize a new mode that is correspondingly agile. (I think he over-estimates the specious present of the State; but the principle -- that, because our tempo changes as we ascend, the finer details of our behaviour become automatic -- certainly holds good.)

* For instance, a crab has been observed eating another crab, without noticing (as it seems) that it is itself being devoured by a third.

† According to Sir Charles Sherrington, (<u>The Integrative Action of the Nervous</u> <u>System</u>, p. 255), pain centres seem to be more primitive than pleasure centres.

"There is nothing more fatal than intentional virtue", says Chouang Chou. "Be virtuous, but without being consciously so." Lionel Giles, <u>Musings of a Chinese</u> <u>Mystic</u>, pp. 26, 102. "Is not Shame the soil of all Virtue, of all good manners and good morals? Like other plants, Virtue will not grow unless its root be hidden, buried from the eye of the sun. Let the sun shine on it, nay do but look at it privily thyself, the root withers, and no flower will glad thee." Carlyle, <u>Sartor Resartus</u>, III. 3. alizes as much, just that amount <u>worse</u> than the ordinary failing mortal who is only too conscious of his depravity. The Pharisee is a good man and the sinner a bad; but when they know it they have begun to change places. Indeed, one of the most difficult and crucial arts is the art of going in for goodness without disclosing to yourself what you are doing. Only by something of a miracle can more than ordinary self-effacement fail to become more than ordinary spiritual pride. "Holiness is a strong perfume, and a little of it goes a long way in the world" ϕ --- particularly when, by reason of self-consciousness, it becomes a most unholy stench. "There are", says Pascal, "only two kinds of men: the righteous who believe themselves sinners; the rest, sinners, who believe themselves righteous." ° How is it possible to practise asceticism, or good works, or spiritual exercises, without ever suspecting that you are rising above the dead level of human mediocrity? × And how, entertaining this suspicion, is it possible for you not to sink below that level?

The pursuer of beauty is scarcely less apt to trip himself. His goal is the thrilling Other, which he proceeds to make his own and so destroy. His progress becomes retrogression. Beauty leaving the world for the eye, and brain, and hand, of the beholder, is no longer beauty. "Every poet and musician and artist," writes Mr C. S. Lewis, + "but for Grace, is drawn away from the love of the thing he tells, to the love of the telling till, down in Deep Hell, they cannot be interested in God at all but only in what they say about Him.... They sink lower --- become interested in their own personalities and then in nothing but their own reputations." As for truth, this book is a set of variations on the theme of the native wisdom in man, which our systems of education do so much to suppress. The illiterate are proof against many of the countless varieties of unbalance from which the cultivated suffer. For really impressive, bigscale absurdities, go to the man whose one concern is the truth, to the thoroughly adult, in whom the child and savage are dead.

(d) <u>The extrapolation of society</u>. At every level from the lowest to the highest there is society, that network of projection and reflection which makes and is made by hierarchical individuals, and which is at once the ground and the consequence of an ascending series of qualities. The sociable inanimate becomes the vital; the sociable vital becomes the human. But as the credit side mounts up, so does the debit side. For one species that goes ahead in the great society of Life, a thousand mark time or fall back. As for human societies, there is much to suggest that, as the size and organization of the group increase, so also do the dysgenic effects: the native quality of the individual man almost certainly does not improve, and a number of authorities believe that it has already deteriorated. We cannot very well go on preserving our unfittest in peace and killing off our fittest in war, and in both peace and war reducing our birthrate except where it most needs reduction, without ill effects. And it is quite clear that our larger and more integrated communities fight larger and more devastating wars, which now threaten the whole species. $\boldsymbol{\varphi}$ To say that increase of knowledge and power and efficiency does not mean increase of wisdom and love, is a truism; some would add that, beyond a certain point, the organization of society means the disorganization of the values which it enshrines.

Cf. F. H. Bradley: "It is a moral duty not to be moral." Professed morality is worse than mere badness, for its adds hypocracy to the tale. Nevertheless for the 'good' man to become 'bad' again, and then to be driven forward to morality once more, is no solution. <u>Appearance and Reality</u>, p. 436.

 ϕ W. Macneile Dixon, <u>The Human Situation</u>, p. 14.

° <u>Pensées</u>, .

× To say nothing of congratulating yourself in advance after the manner of Oliver Wendell Holmes' "Build, thee more stately mansions, O my soul, As the swift seasons roll!"

+ The Great Divorce, p. .

"What is the world, O soldiers? It is I: I, this incessant snow, This northern sky; Soldiers, this solitude Through which we go Is I." Walter de la Mare, 'Napoleon'.

"We are grown old with sinning; our Father is younger than we" --- the traditional picture of God as a greybeard is the projection of our own senility.

Maeterlinck says truly: "We are there in life, man against man, soul against soul, and day and night are spent under arms. We never see each other, we never touch each other. We see nothing but bucklers and helmets, we touch nothing but iron and brass." (The Treasure of the Humble, 'The Invisible Goodness') And are not these words truer of civilized individuals than of the relatively uncivilized, of large communities than of small? In his Essays on Contemporary EventsJung suggests that when democratic institutions do not give full scope to the domestic quarrels called 'political life', the thwarted aggressive tendencies devolve upon the State, which becomes externally violent as a compensation for the enforced unity within. And, if it is true that we mustbehave aggressively, how much better to do so at those 'lower' levels at which we have been more or less disarmed!

 ϕ We owe the character of modern war, <u>interalia</u>, to the bloated units of our society, to the bloated egos of certain men, and to bloated atoms: Hahn was working on transuranic elements when he discovered nuclear fission. The procedure is manylevelled. As we ascend the scale, the tendency seems to be towards growing disharmony in social relationships. * Certainly it would be rash to assume that life at exalted hierarchical levels is harmonious, a delightful symphony of love and understanding. Tom o'Bedlam's song:

"I see the stars At mortal wars In the wounded welkin weeping"

is possibly not so mad after all. Nor, according to St Paul, are we neutrals in these cosmic struggles: suprahuman battles are being fought in us against an evil hierarchy, against "the hosts of wickedness in the heavenly places." ° It is not only for Zoroastrianism and Manichaeism that the forces of good and evil are drawn up in battle on a cosmic scale: Christianity has often told the same story, adding that for evidence of this titanic conflict man has only to look in his own heart. Here on earth and in us the revolt of the angels gathers force. "Our project", Anatole France makes one of them say, "is a vast one. It embraces both Heaven and Earth. It is settled in every detail. We shall first bring about a social revolution in France, in Europe, on the whole planet; then we shall carry war into the heavens..." ϕ The suprahuman is anything but pacific. Seemingly our good angels are put on their mettle by our bad angels; and, if ecclesiastical art is any indication, an angel without a devil for sparring-partner becomes a flabby and altogether feeble creature. Rilke* had, I think, some reason for : "It certain that if my devils were driven out my angels would also receive a slight...shock." Must we then remain permanently bedevilled?

3. THE FAILURE OF EXTENSION

It is my nature to want to grow. Everyone, as Schopenhauer tells us, "desires everything for himself, desires to possess or at least to control everything." + Other writers, while admitting this expansive tendency, point out that it is inadvisable (and in the long run impossible) thus to inflate our own limited selves; instead, we should identify ourselves with wider and higher units, finding in them our true selfhood and satisfaction. Thus Kahlil Gibran addresses "Our God, who art our winged self", says to man "In your longing for your giant self lies your goodness: and that longing is in all of you." × In many fields it has been taken almost for granted that expansion of this kind is what we most need. If only we could sink our differences (it is said); if only we could unite or federate; if only Europe, or the democratic States, or (better still) the whole of mankind, could come together in a single super-State --- then our worst troubles would be over. If only we could get everyone to take an intelligent interest in politics, or to develop a social conscience, or to find their true selves in the service of some philanthropic cause --- then we should be a happier and better people. In short, we must grow --- grow up and grow out.

I have perhaps said enough to show that this faith in the superiority of the big to the small, and of the high to the low, is ill-founded. When I sink my hatred of other men, and my fears for my personal safety, in * "Could we forbear dispute, and practise love,

We should agree as angels do above", wrote Edmund Waller ('Of Divine Love', III), forgetting for the moment that to 'agree as the angels' is to disagree, with suprahuman violence. "And there was war in heaven: Michael and his angels fought against the dragon; and the dragon fought and his angels..." <u>Rev.</u> XII. 7.

° <u>Eph</u>. VI. 12.

The (very minor) Victorian poet J. Stanyan Bigg has, in 'Night and the Soul' a lurid description of heavenly bodies that "stream'd like wandering hell across the sky" ---"The awful stars, through the red light, Glinted at one another wickedly, Throbbing and chilling with intensest hate..."

The religion of later antiquity paints a very similar picture; probably at no time since then has the tradition of "the bad revolting stars" (<u>I Henry</u> VI. I. 1) been quite inactive.

φ <u>The Revolt of the Angels</u>, p. 160. * <u>Selected Letters</u> (trans. R. F. C. Hull), p. 205.

+ Cf. Maritain: "Man, separated from God, claims and demands everything for himself as if it were all due to him; as if he were (as indeed he is, but precisely on condition that he does <u>not</u> make himself his own centre), the heir of God." <u>True</u> <u>Humanism</u>, p. 16. McDougall (<u>The Group</u> <u>Mind</u>, p. 165) describes patriotism as the <u>extension</u>, to the national level, of the individual's self-regarding sentiment, by way of the family.

× <u>The Prophet</u>, pp. 78, 82.

Aristotle pointed out that a great city is not to be confounded with a populous one, and that the latter is rarely well-governed. (Politics, VII. 4) Recent writers in favour of smaller social units and decentralization include Lewis Mumford (The Culture of Cities, etc.) and Aldous Huxley (After Many a Summer, etc.) Huxley goes so far as to say (Grey Eminence, p. 247) that the quality of moral behaviour varies in inverse ratio to the number of people involved. He describes Father Joseph as without ambition for his human self, but with a boundless ambition for France --an ambition which enabled him to indulge his egoism on a magnified scale, yet without feelings of guilt. Herder increases the scale still further: "The flower of humanity, captive still in the germ, will blossom one day into the true form of man, like unto God, in a state of which no man on earth can imagine the greatness and the majesty." This is the frog trying to puff himself up till he matches the ox; and unhappily he is often prepared to do anything to anybody now, in order to advance his glorious schemes for the future.

my hatred of other nations and my fears for this nation's safety, nothing is gained. The news page of my daily paper is more 'grown up' than the sports page, but it does infinitely more damage on that account: it ensures that I shall be frightened and resentful on the largest possible scale every breakfast-time. National egoism is still egoism and still mine; not its fundamental character, but only its scope and effectiveness, have altered. Our capacity for hiding our motives from ourselves is here very great: Niebuhr ° well says that "the interests of the self cannot be followed if the self cannot obscure these interests behind a facade of general interest and universal values". Defeated on lower levels, the egoistic impulse finds expression higher up, "so that a man's devotion to his community always means the expression of a transferred egoism as well as of altruism." One of the commonest and most dangerous heresies of our time is that big-scale vices are virtues, and that evil at high levels is good. But in fact the harm which the grossly sensual man can do is microscopic compared with that which the disciplined ascetic, utterly espoused to some high cause, is liable to commit. Suprahuman sin is impossible without suprahuman courage, fortitude, intelligence, patience, foresight, loyalty. Thus man exchanges the natural law of self-indulgence for the moral law of the community, "binding together individuals and the generations into a tradition and a mission, suppressing the instinct for a life enclosed within the brief round of pleasure in order to restore within duty a higher life free from the limits of time and space; a life in which the individual, through the denial of himself....realizes that completely spiritual existence in which his value as a man lies." • The most effective commentary on these words is the career of their author --- Benito Mussolini.

To sum up this chapter so far, whether we pursue knowledge or power, goodness or beauty, the welfare of society or mankind or of any 'higher self', we are likely, after a certain point, to find ourselves moving away from and not towards our goal. We cannot climb to God. The ladder looks all right from below, but it becomes increasingly unsafe as we mount it. In other words, we cannot, by refining and extending our virtues, and contracting our vices, get to Heaven. Instead, we find ourselves in regions that look very much like Hell. It is not only that there is something the matter with us when we rise above our ordinary human station: there is more than a suspicion that the suprahuman itself is in some way infected, or a mistake. What we took for angels of light turn out to be angels of darkness.

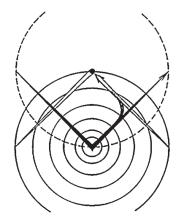
4. THE REMEDY --- A CHANGE OF DIRECTION

Our extension into suprahuman realms does not work, or it works our undoing: the curve of our development cannot satisfactorily be extrapolated. Yet the suprahuman is certainly real, and the shrine of a perfection we cannot help but long for. What, then, is to be done? The answer is: we must find a new Centre. Instead of prolonging the radii that diverge from <u>this</u> Centre, we have to discover and pursue the radii that converge upon another. We need to change direction; for the infrahuman and hu^o "<u>The Nature and Destiny of Man</u>, i. p. 36; <u>Moral Man and Immoral Society</u>, pp. 40-1. Niebuhr commends Marxism for pointing to the dishonesty of reason's pretence that our 'higher' activities are not self-seeking.

Writing on 'The Essential Buddha', Dr N. V. Banerjee remarks: "Since the ethical end is undoubtedly the universal good, it cannot be conceived as the realization of the individual self (jivatma) inasmuch as this conception would obviously be egoistic. If the conception of the true ethical end cannot thus be referred to the individual self, no better result would follow if it were referred to a higher or more enlarged conception of the self. Let the social self be substituted for the purely individual self in this connection, and the consequence would merely be the replacement of individual egoism by social or national egoism." Along these lines, Buddha attacked the problem of the reality of the individual soul, human and suprahuman and infrahuman. Hibbert Journal, Jan. 1950, p. 143.

• 'The Doctrine of Fascism' in <u>Enciclope-</u> <u>dia Italiana</u>,1932, quoted by M. Oakeshott, <u>Doctrines of Contemporary Europe</u>, p. 164.

Mr C. S. Lewis makes Weston (who is Devil-possessed) declare: "The majestic spectacle of this blind, inarticulate purposiveness thrusting its way upward and ever upward in an endless unity of differentiated achievements towards an ever-increasing complexity of organization, towards spontaneity and spirituality, swept away all my old conception of a duty to Man as such. Man in himself is nothing. The forward movement of Life -- the growing spirituality -- is everything... I worked first for myself; then for science; then for humanity; but now at last for Spirit itself..." <u>Perelandra</u>, p. 102.



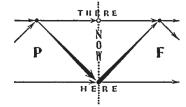
man, when continued upwards along the same lines, is more and more immersed in the realm of outer darkness; and only by turning inwards again is it possible to come to the realm of light. \times

This solution is as old as religion itself. Though in essence simple, it has numberless aspects and formulations. I give here, as briefly as possible, a few of them.

The further apart we draw, the higher our mutual status tends to become; on the other hand, we get progressively 'out of touch'. What you are at this moment, in and to yourself, becomes more and more irrelevant and beyond my reach: we live in different worlds. No signals can pass between us as contemporaries. What your <u>past</u> is doing to me now, and the <u>future I am now preparing for you as a consequence, are as much of you as I can find room for; and your <u>present</u> condition over there is at most a futile spectre haunting my 'absolute elsewhere'. My relations with you take the form of incoming knowledge-about-you and outgoing will-to-modify-you. There is no love lost between us --- or rather it is all lost. We know only how to use each other. The present living person -the adorable, terrible, utterly mysterious <u>presence</u> of him -- becomes the lifeless instrument to be exploited or broken. The Centre has dropped out of him, leaving only a shell.</u>

There remains the love which restores the world's life, the love which, placing itself instantaneously at the other's Centre, bridges the time-gulf. Love is of the present; love is now. But just because love unites itself with the present loved one, it belongs to faith, not sight: the words "Whom having not seen, ye love" ° are true of all our loves; for love, having its own mode of timeless vision, has no need of the eye of the body or the light of the sun. Whenever we place ourselves in the other man's shoes, feel for him, try to see things from his angle, treat him as a sacred end in himself, then -- to use the terms of Chapter XX -- we are adopting that ultimate and timeless mode of recapitulation which belongs to the highest level; in fact, all recognition of other persons as such transcends the level at which it occurs, and has in it something of the divine. "For love is of God." × To the Greeks God was divine knowledge, to the Hebrews divine will, to the Christians divine love. The first looks to the past, the second to the future, the third to the present; and the third is the greatest. Not to love anyone --- that is the real atheism. "He that loveth not his brother abideth in death." + In effect, he is a fratricide: for to know and to act towards your brother without loving him is to deny him present existence, so that he shall become the appendage of your past and future.* In a sense it is true, as Miguel de Unamuno says, that "to be the whole of myself is to be everybody else", but everything depends upon how I go about realizing the fact. Do I place these other selves at my periphery, or do I place myself at their Centre? In the writing of this book, for instance, have I not very often failed in sympathy and imagination, and refused to feel my way to the heart of the thinkers whose opinions I reject? "Get at the expanding centre of a human character", writes William James, "by living sympathy, and at a stroke you see how it makes those who see it from without interpret it in such diverse ways.... Place yourself similarly at the centre of a man's philosophic vision and you understand at once all the different things it makes him write or say. But keep outside, use your

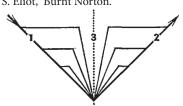
× Cf. 'Nicodemus', <u>Renascence</u> p. 133: "The Cross means the death and rebirth of consciousness, not its expansion, evolution, emergence, transcension or fulfilment." True personality, says Mr C. S. Lewis, will not be had by developing from within outwards. (<u>Transposition</u>, p. 42.)



In <u>I and Thou</u>, and <u>Between Man and</u> <u>Man</u>, Martin Buber says that the great sin is to treat persons as things, to remain outside them, and, indifferent to their real being, recognize only their surfaces. Even 'inanimate' things (I add) should not be used as mere extensions of our personality: for instance, the good craftsman says 'Thou' to his material. The child and the savage, who find blood-stirring 'Thous' everywhere over against them, teach us that there is nothing with which we could not enjoy the 'I-Thou' relationship, if only we were good enough.

° I <u>Pet</u>. I. 8. Kierkegaard passionately insists upon the element of <u>uncertainty</u> in the apprehension of the object -- that doubt or misgiving without which our apprehension lacks inwardness and intensity. "I must constantly be intent upon holding fast the objective uncertainty, so as to remain out upon the deep, over seventy thousand fathoms of water, still preserving my faith." <u>Unscientific Postscript</u>, p. 182. × I John IV. 7.

"Love is itself unmoving, Only the cause and end of movement, Timeless..." T. S. Eliot, 'Burnt Norton'.



+ I John III. 14.

* In <u>The Screwtape Letters</u>, C. S. Lewis points out (pp. 76 ff.) that whereas most of our vices are rooted in the future, love is concerned with the present moment. The Devil does his best to occupy us with visions of the good (or the bad) time coming. Somewhat similarly, Dr K. R. Popper writes: "Do not allow your dreams of a beautiful world to lure you away from the claims of men who suffer here and now. Our fellow men have a claim to our help; no generation must be sacrificed for the sake of future generations, for the sake of an ideal of happiness that may never be realized." Hibbert Journal, Jan. 1948, p. 114. In brief, Heaven is now and Hell is future, but the utopian planner is apt to reverse the order.

post-mortem method, try to build the philosophy up out of the single phrases and of course you fail. You crawl over the thing like a myopic ant over a building, tumbling into every microscopic crack or fissure, finding nothing but inconsistencies, and never suspecting that a centre exists." ϕ Not even a book -- not even this book! -- can be understood without something like a timeless love for its author.

What has been the history of science, of our civilization itself (from its first or theological to its third or scientific stage) but a movement away from persons to things, until, at the cost of immense exertions, the Central noumenon is abolished, and the peripheral phenomenon is supreme? † We have chased every competing 'Thou' out of the universe. But to no purpose: for, as St Paul says, we are nothing if we have not love. Nor, in the long run, can we truly know or effectively influence that which does not engage our affection. "Want of love is a degree of callousness; for love is the perfection of consciousness. We do not love because we do not comprehend, or rather we do not comprehend because we do not love." ° Either knowledge as to the past, and will as to the future, culminate in present love, or they are self-stultifying; for love yields inside information, and knows how to win. The ultimate ignorance is not caring what others think, and the ultimate powerlessness is not caring what others want. And in absolute reality, McTaggart argues, the knowledge of other selves will always have the quality of love: the direct perception of other selves will involve loving them. \times

But a serious difficulty arises here. Notoriously love is blind, and incapable of objective or impartial estimation of its object. Further, it may be said that love, along with less respectable emotions, belongs in the nearer and warmer regions of our human and infrahuman life, while only intellect can survive in the pure but ice-cold regions of the suprahuman. Accordingly the God of Aristotle, of the Stoics, of Philo and the Alexandrine Fathers, of Spinoza +, is superior to feeling and desire: He is without emotions, not liable to Pathos. For the God-intoxicated Spinoza, to be set free is to rise from the life of the emotions to the higher life of understanding or reason; any kind of experience -- even pity, sympathy, humility, and repentance -- which is not conducive to dispassionate knowledge, is vicious. What a contrast to the teaching that God is love, the Father who pities His children, who shares all their sorrow and care, who comes down and suffers the ultimate agony to win their hearts!

How is it possible to resolve such a violent contradiction? The answer suggests itself when we examine the highest choir of angels --- the Seraphim who love, the Cherubim who know, and the Thrones who act. According to the Greek formula, Cherubim take precedence; according to the Dionysian, they take second place: but in either case we find that, at this exalted level, the hot red flame of seraphic love does not consume the cold blue flame of cherubic intelligence, or disturb the exercise of divine power and majesty. Rather they comprise a whole, in which each component supports the other two by being only itself. Regarded in one way, these starry regions combine extremes of physical temperature (the temperature of interstellar space approaches absolute zero); regarded in another, they combine extremes of 'psychical temperature'. And this is possible because the highest regions are one with the lowest, * because

φ <u>A Pluralistic Universe</u>, pp. 262-3.

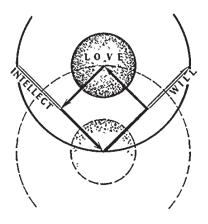
† This development is described by Renouvier in <u>La Nouvelle Monadologie</u> <u>Le Personnalisme</u>. Cf. Edward Caird, <u>Hegel</u>, p. 191: man learns to regard objects as determined from outside and not by themselves. But, "regarding the universe as one in which, strictly speaking, there is no self present whatever, the intelligence is, as it were, estranged from itself and the world." Even Spencer realized that religion is needed to restore to the universe and to objects their mysterious core. <u>First</u> <u>Principles</u>, 30.

° Tagore, <u>Sadhana</u>, p. 106.

"We do not see a man, if by <u>man</u>is meant that which lives, moves, perceives, and thinks as we do: but only such a certain collection of ideas, as directs us to think there is a distinct principle of thought and motion like to ourselves, accompanying and represented by it." Berkeley, <u>Of the Principles of Human Knowledge</u>, CXLVIII. Cf. Bergson, <u>Introduction to</u> <u>Metaphysics</u>, I; <u>Creative Evolution</u>, p. 157; and Inge, <u>Studies of English Mystics</u>, (1906), pp. 227-8.

 \times <u>The Nature of Existence</u>, 459, 470-8.

+ On God as free from passions, see Spinoza's <u>Ethics</u>, V. 17; on the 'remedy for emotions' consisting in 'a true knowledge of them', see V. 4.



"Reason and love may be fancifully described as the two wings of the human spirit. Flight is not possible with one wing alone. With love and no reason the saint becomes amiably ineffective and superstitious, With reason and no love the sceptic becomes a clever cynic. The perfect man would be a sceptical saint." Olaf Stapledon, <u>Saints and Revolutionaries</u>, p. 60. they are Paired, because the good suprahuman, instead of merely extrapolating the curves of human knowledge and power, changes direction and makes for a new Centre, in respect of which it is content to become infrahuman. Thus each higher region is rectified by union with its inferior counterpart. Suprahuman knowledge and will, becoming more and more devilish as they diverge from this Centre, are saved and sanctified by the love which converges upon the other Centre: now they can grow because it ungrows. The ever-widening gap between centrifugal intelligence and activity, is filled by centripetal love, and all three are realized. The bad suprahuman is only itself, and therefore not itself; the good suprahuman is itself because it is its opposite, because it has found Another.

5. THE NEW DEMONOLOGY

The bad angel deals in half-truths; he over-simplifies, and over-simplification is the guiding principle of all evil. Having no use for paradox, unwilling to face the real complexity of things as they are, he denies that to grow he must diminish, that to know he must become ignorant, that to gain power he must surrender it, that to hold he must let go, that to succeed he must give up straining after success, that to become good he must abandon all idea of his own goodness, that to live he must make room for other life. In short, he dare not or will not acknowledge the difficult truth that there is nothing worth doing in the world that does not require you to do also its very opposite. Even Heaven, if it is only Heaven, is Hell.

The bad suprahuman is brilliantly clever; the good suprahuman is also simple. The bad suprahuman is strong-willed; the good suprahuman is also acquiescent. The martyr's will is firm because be has no faith in his own power: the secret of his strength is that it is not his. "My strength is made perfect in weakness.... when I am weak, then am I strong." Beware of him who has nothing to lose, says the old proverb. Even love is not free from the necessity to contradict itself: to care more, one must care less. ° Complete attachment requires complete detachment, for affection to remain itself must be ever new, a fresh stream rising continually from the abyss of indifference. Possessive love which will never let its object go, which always cares, soon ceases to be love at all, and becomes a kind of vampirism. The saint to whom the only reality was God and Spirit and Love, and never inexorable, resistant, thwarting matter, who was always on intimate terms with the Whole, would be a monster, incapable in the end of any love for and knowledge of the Whole. The path of true love never runs smoothly along at one level, but forks into a road leading down to the valley of separation, and into a road leading up to the summit of union with its divine object. And this duality is inescapable, seeing (on the one hand) that the love which seeks identity with the loved one seeks to destroy itself; and seeing (on the other hand) that the love which seeks remoteness only is not love.

What and who, then, are the bad angels? "If we make an angel of ourselves we are that", says Boehme, "if we make a devil of ourselves we * In fact, the Seraphim were, for the early Semites, serpent-like demons, and distinctly infrahuman. Conversely, the gods of the heathen were commonly degraded by the early Church to the rank of demons, and accepted in that capacity. Comparative religion shows many instances of deities who hover uncertainly between the regions above man and the regions below him.

"The business of learning is one of day by day acquiring more, The business of the Tao one of day by day dealing with less. Yes, dealing with less and less, Until you arrive at inaction." Tao Te Ching, 48. "That thou mayest have pleasure in everything, seek pleasure in nothing. That thou mayest know everything, seek to know nothing. That thou mayest possess all things, seek to possess nothing." St John of the Cross, Subida del Monte Carmelo, I. 13. "He (the sage) does not display himself: thus it is that he is brilliantly displayed. He does not count himself right: thus it is that his rightness is made manifest. He does not fight his own cause: thus it is that he is victorious.... He alone does not strive with men: and thus it is that all men are unable to strive with him." Tao Te Ching, 22. ----To the bad suprahuman, this higher and very practical realism is nonsense.

"We do not display greatness by going to one extreme, but in touching both at once, and filling all the intervening space. But perhaps this is only a sudden movement of the soul from one to the other extreme, and in fact it is ever at one point only, as in the case of a firebrand. Be it so, but at least this indicates agility, if not expanse of soul." Pascal, <u>Pensées</u>, 353.

[°] The essential duality of love is brought out in Father M. C. D'Arcy's <u>The Mind and</u> <u>Heart of Love</u>. Animus is self-regarding, dominant, masculine; Anima is passive, gives rather than takes, is recessive and self-sacrificing. "The two serve each other's ends, and bring it about that perfect love is mutual giving and taking, possessing and being possessed."

are that." \times Are the evil ones, in that case, nothing more than our own tendencies projected on to the cosmic screen? Are they 'tendencies' or 'complexes' or at most 'fragmentary personalities'; or are they objectively real enemies of the good, stationed at the various hierarchical levels?

The answer has already, in effect, been given. It is unnecessary to go far afield to find at least one thoroughly concrete exponent of evil at each of the more exalted hierarchical levels --- to find a selfish man, a species ready to sacrifice all others to its own interests, a geosphere at war with its neighbours, a planet dreaming of expansion and conquest, a star without reverence or wonder, who treats his companions like dirt --- dirt much too hot to live. + As for small-scale demons, the rank-and-file in the forces of the Lord of Flies, we have Mosquitos, Fireflies, Hellcats, Helldivers, Spitfires, Airacobras, Midnite Maulers, and all the rest: if we did not know them by their works, at least their names should instruct us. † Of course there is also the other side --- saints do occur; aircraft fly on errands of mercy; mankind is not incapable of admiring and preserving another species for more or less unselfish reasons; geospheres are not at war all the time; our Copernican planet finds a new Centre in the sun, and our Sun in community of stars; indeed our Sun begins to suspect that thousands, if not millions, of his galactic companions are potentially alive, or at any rate potentially infested with life.

If we take, then, that cross-section of the upper levels which is open to our inspection, we find at each level the good and the bad. ϕ For reasons which I have already given at length in similar contexts, I propose to take this sample seriously, as a rough guide to the remainder. In that case the universe contains, at this moment, vast numbers of extra-terrestrial 'men' and of species, of planets and stars and galaxies, some of which are as good or as bad as it is possible for them to be, and the rest of which -the great majority, perhaps -- fall somewhere between these extremes of devilish self-centredness on the one hand, and angelic unself-centredness on the other. This is not to say, of course, that the very bad are irredeemably lost and reprobate, or that the very good are incapable of falling; such evidence as there is suggests rather that (short of the very highest level) moral change, and indeed a certain rhythm, is the rule. The foregoing chapters have hinted that the normal sequence, at each level above and including man, is (1) a primitive Thou-relation with one's fellows, (2) an intermediate or adolescent It-relation with them, and (3) a mature Thou-relation, combining (1) and (2): or, in other words, (1) a paradisial stage of innocence, (2) a fallen stage, and (3) a saved or regenerate stage; though instances of arrested development may well be very common. Thus I see no reason for, and several against, separating the fallen angels absolutely from the unfallen, or either from the 'saints' or regenerate human beings: all are members -- whether to honour or to dishonour -- of the one hierarchy, which the law of economy forbids us lightly to duplicate. The Christian tradition, it is true, usually makes a sharp threefold distinction between devils and angels and men; but in many places the boundaries are blurred --- scripturally, angels are often called men, and men have their guardian angels; + on the other hand, men are possessed of the devil, or sons of the devil, or even devils. \times Again, in the early Church, saints in Heaven are described as angels. ° Admittedly the bad.

× Incarnation, II. ix. 14. Cf. Whichcote: "As Intemperance and Sensuality make us Beasts; so Pride and Malice make us Devils." <u>Aphorisms</u>, 87. Even H. G. Wells in the end found human behaviour so incomprehensively perverse that he was inclined to attribute it to evil suprahuman influence.

+ In <u>Enoch</u> XVI. 3, God says to the fallen stars: "You have been in heaven, but all the mysteries had not yet been revealed to you, and you knew worthless ones..." According to <u>Rev</u>. XII. 4, a third part of the stars fell. The Earth-goddess was in the early Greek religion a maiden who becomes a mother as summer comes on; to the Gnostics this loss of virginity connoted sin or a 'fall', and Earth is sometimes described as a temptress, a whore, or a female devil. See Gilbert Murray, <u>Five Stages</u> of Greek Religion, IV.

† Milton's flying "squadrons" of bad angels "limb themselves" as they please, and equip themselves with firearms to fight Michael's host; our own weapons of war, Milton suggests, are not unconnected with these devilish prototypes. (<u>Paradise Lost</u>, VI. 501 ff.) Indeed it ill becomes us to laugh at our ancestors for peopling the air with infernal beings: <u>they</u> believed in them without seeing them; <u>we</u> see them without believing in them.

 φ In 'Song at Sunset' Walt Whitman exclaims:

"To be this incredible God I am!" And in the poem 'To Think of Time': "You are not thrown to the winds, you gather certainly and safely around yourself,

Yourself! yourself! yourself, for ever and ever!"

At the sidereal level this complacence is matched by W. Macneile Dixon's: "Stars do not look around, take note of themselves, or admire themselves. They are incapable of knowing...and do not even guess that they are there on view." On the other hand we know "more about the stars than ever they knew, matters of which they are wholly ignorant, and will be, for all their superb proportions, till their dying day." <u>The Human Situation</u>, pp. 385, 157.



Ezekiel's Vision, from the 12th century Winchester Bible. The four faces -- a man's, a lion's, an ox's, and an eagle's -- did duty for the Four Evangelists. Here the hierarchy is indeed telescoped.

+ <u>Mark</u> XVI. 5; <u>Luke</u>, XXIV. 4; <u>Acts</u> I. 10; <u>Gen</u>. XVIII, XIX. 1; <u>Judges</u> VI. 8ff, XIII. 6. Page 629 angels are regarded as beyond hope, and the good ones as now in no danger of falling; but in one sense this belief is, I think, profoundly true: it is of the essence of a self to be self-centred and therefore 'lost', and it is of the essence of other selves to come to the rescue of this self and save it from itself. Salvation does not mean the destruction of what is saved, or a telescoping of the planes which are part of its essential structure. When a man is saved by the Other, his unregenerate self is repudiated rather than wiped out, for it remains as the indispensable basis alike of his moral life and of his uniqueness or 'separate individuality'. Without evil to overcome, goodness is unthinkable. * The paradox is that, on the one hand, Hell is necessary to Heaven, and devils are as incapable of reform as the good angels of degeneration; on the other hand, this permanent vertical framework is required so that, in actual fact, Hell and its inhabitants may be altogether saved by a Heaven that is truly heavenly, and has real saving power. In other words, the myriads who are bedevilled into thinking or acting as if their selves or souls or personalities were distinct diamond-hard substances, incapable of fission or fusion, only think or act or exist at all because they are in fact united in Heaven, and one in reality; and if this were not so, Heaven would be Hell. For the man or angel or God who cuts himself off from the damned is himself damned. The angelic being who looks upon devils, or lost souls, or any kind of creature whatsoever, as beyond the pale of love and sympathy, as wholly severed from himself, is in fact devilish; and conversely, the devil who, believing and trembling, recognizes that (though he is for ever lost in himself) he is somehow fulfilled in others more worthy than himself, is in fact saved and angelic. • Hating Satan is being Satan. °

6. INFRAHUMAN EVIL

Evil is a kind of premature monism, or common-sense denial of our double nature. It may be described as failure to superimpose upon the inverted pyramid of the self the pyramid of the not-self; or, more briefly, as hierarchical asymmetry. Thus the suprahuman is evil when it denies its infrahuman counterpart, + and the infrahuman is evil when it denies its suprahuman counterpart. The former denial is seen as pride, and the sins of the mind; the latter as lack of control, and the sins of the flesh, or as brute matter removed from the direction of the higher levels.

"The whole strength of man's creative forces had lain in the discovery of a deep, superhuman and divine principle animating his life. But once he had repudiated this principle and severed all connection with it, he shattered his own image and increasingly emptied himself of content and his will of purpose.... Thus the denial of the higher principles makes man inevitably subservient to the basest infrahuman principles." \otimes Science's marvellous conquest of the world below man is no conquest at all, but his miserable defeat by the irresponsible forces of the infrahuman, so long as he fails to match against each downward step its ascending complement. We learn how to titillate deliberately this or that bodily organ, and how to make plans for its satisfaction; but this new power requires that we shall learn also how to subordinate our undisciplined cravings Page 630 × <u>John</u> VI. 70, XIII. 2; <u>Acts</u>, XIII. 10; I <u>John</u> III. 8. ° <u>Martyrdom of Polycarp</u>, II. 3; <u>Hermas</u>, Vis. II. ii. 7, and Sim. IX. xxv. 2.

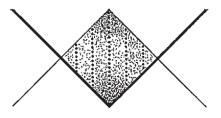
* Cf. William James: "Regarded as a stable finality, every outward good becomes a mere weariness to the flesh. It must be menaced, be occasionally lost, for its goodness to be fully felt as such. Nay, more than occasionally lost. No one knows the worth of innocence till he knows it is gone for ever, and that money cannot buy it back... Not the absence of vice, but vice there, and virtue holding her by the throat, seems the ideal human state." <u>The Will to</u> <u>Believe</u>, p. 169.

• The soul which, having lost Heaven, exclaims:

" 'Tis well !

Lose who may --- I still can say, Those who win Heaven, blest are they!" has in fact found Heaven. (The quotation is from Browning's 'One way of Love'.)

^o "Hate the deed, it is often said, but not the doer. Better advice is "Resist not evil" but "overcome evil with good" (<u>Mat</u>. V. 39; <u>Rom</u>. XII. 21) Cf. Berdyaev: "Our attitude towards evil must be free from hatred." (<u>Freedom and the Spirit</u>, p. 182) Also Allan W. Watts, <u>Behold the Spirit</u>, pp. 119, 150-2.



+ The evil suprahuman cannot afford infrahuman weaknesses. Thus Anatole France's Lucifer "was the most beautiful of all the Seraphim. He shone with intelligence and daring. His great heart was big with all the virtues born of pride: frankness, courage, constancy in trial, indomitable hope..." <u>The Revolt of the</u> <u>Angels</u>, p.164.

 \otimes Berdayev, <u>The Meaning of History,</u> 154-5.

There is, in the doctrine of Plotinus concerning evil, an instructive ambiguity. For him, Matter is sometimes mere 'absence of good' or 'absolute poverty'; at other times it appears as the principle of evil. to the welfare of our bodily life as a whole, and to the welfare of our families and larger communities. Similarly birth control, which comes into effect at the cellular level, itself needs control from the level of a high-principled eugenics, if it is not to contribute to racial deterioration. Again, it is all too evident that the study and exploitation of ever smaller physical particles, in abstraction from their suprahuman counterparts, becomes increasingly dangerous. For instance, to be able to control and use well our chemical knowledge, we need to rise to the unity of the living Earth, as well as go down to the multiplicity of her 'dead' molecules. Still less does it do to cultivate the atom without realizing that we are all one in that large-scale and immensely alive Atom, the Sun. To refuse to compensate for our descent by equal and opposite ascent, to harness the low, not to the high, but to the middle-grade, is to conduct the most disastrous experiments in practical evil. Here indeed is witchcraft and sorcery at its most powerful, and most malign.

The true grounds for cosmic optimism lie, not in the denial or the alleged unreality of either infrahuman or suprahuman evil, but rather in their incompatibility, in their failure to cooperate. The "weak and beggarly Elements" are rebellious servants -- and in the end no servants at all, but implacable enemies -- of the bad angels. The good angel is on friendly terms with his own inferior aspect: he welcomes and relies upon his own littleness; but the bad angel is unreconciled to this side of himself, which turns upon him and destroys him. In the first case opposites tend to unite organically; in the second, to cancel out. For instance, we plan to invade the Moon, and other planets, and eventually other stars, by means of atom-powered space-ships; ° but this seemingly formidable Sun-atom combination does not appear at all likely to work, for already the atom threatens the very life of the Sun. The truth surely is that the bad suprahuman, having no reverence or love for others of equally exalted rank, and treating them as things to be exploited, tends itself to revert to mere thinghood, to be forced down to the level of its infrahuman counterpart; × whereas the good suprahuman, by making way for others, by being content for their sake to go down, is maintained at its original high level.

In its proper hierarchical setting, and duly subordinated, matter is not evil; on the contrary it is the potentiality, the receptacle, and in a sense the basis, of all good. Only when it ceases to be directed by (or is taken in abstraction from) the good suprahuman, does it work destruction. It needs the suprahuman as a safeguard against the mischief of aimlessness, while the suprahuman needs it as a safeguard against the mischief of pride; together, and on good terms, they make for good; apart, and on bad terms, for evil. Thus the medicine which, treating the patient's organs and cells and molecules, ignores his universe -- his cosmology, his ethics, his social circumstances -- is liable to prove somewhat worse than futile: * for it is an empirical and altogether practical fact that the forgiveness of our sins makes all the difference to our ability to take up our beds and walk. Observation also suggests that the democracy which denies transcendent reality is not for long democratic --- no fatherhood of God, no brotherhood of man. Again, physics without ethics is suicidal. The solar atom that owes no allegiance to the Sun of Righteousness,

Inge writes: "Plotinus' Matter is the absence of order, which when isolated by abstract thought becomes the foe of order... He is careful to point out that though Matter in itself would be evil, if it could exist by itself, yet Matter as we know it has the promise of good. It is 'potentially all things'; its being consists in what it may become." Enneads, I. viii. 3; II. iv. 16; II. v. 5; and Inge, The Philosophy of Plotinus, ix. pp. 134-5. Cf. Spinoza: "Whenever, then, anything in nature seems to us ridiculous, absurd or evil, it is because we have but a partial knowledge of things, and are in the main ignorant of the order and coherence of nature as a whole." Tractatus Politicus, II. To which may be added the reflection that evil is as much a fact as the misapprehension or dissociation from which it arises.

The subjugation of the infrahuman by the suprahuman is celebrated in the stories of Apollo and the Python, Bellerophon and the Chimaera, Perseus and the Sea-monster. Christ harrows Hell; Michael casts Lucifer out of Heaven and binds him; St George's Dragon, wounded and subdued, is led like a dog; St Margaret is swallowed by the Devil, but emerges whole, with the Devil underfoot or (in some representations) at the end of a string. ° At the end of the last century Ziolkowski pointed out that the only method of propulsion suitable for space-travel is

the rocket. Since then much research has gone into the design of rockets and space- ships. See, e.g., Robert Esnault-Pelterie, <u>L'Astronautique</u>; P. E. Cleator, <u>Rockets Through Space</u>; Arthur Wilcox, <u>Moon Rocket</u>. One of the chief problems is how to minimize the amount of fuel to be carried: atomic fuel would seem to be the answer.

× C.S. Lewis has good reason to castigate "the idea that humanity, having now sufficiently corrupted the planet where it arose, must at all costs contrive to seed itself over a larger area: that the vast astronomical distances which are God's quarantine regulations must somehow be overcome. This for a start. But beyond this lies the sweet poison of the false infinite -- the wild dream that planet after planet, system after system, in the end galaxy after galaxy, can be forced to sustain, everywhere and for ever, the sort of life which is contained in the loins of our own species --- a dream begotten by the hatred of death upon the fear of true immortality, fondled in secret by thousands of ignorant men and hundreds who are not ignorant." Perelandra, pp. 91-2.

* This fact has, of course, been realized by a long line of healers, having such diverse points of view as Jesus, Paracelsus, Mary Baker Eddy, and our contemporary practitioners of psychosomatic medicine. nuclear fission unbalanced and uncompensated by the communion of saints, the laboratory which has nothing whatever to do with the church --- these have their memorial in the hundred thousand <u>autos-da-fé</u> of Hiroshima. + The low has no unity but the high, without which it runs amuck: the bonds which prevent its explosion are not at its own level. Only the One can pacify the Many; or rather, only the One <u>is</u> the peace of the Many. ϕ

7. EVIL AND THE WHOLE

The way of escape from "the law of sin which is in my members" † (and my members include innumerable atoms) is to rise to the law of love which unites them on a higher plane. To tread underfoot the humble creatures of the world, using them as stepping stones to higher things, is the method of the bad angel for whom other selves are so much expendable material; and in the end it does not work. For he deceives himself who thinks he can get to Heaven without his brother, and looks upon others as obstacles along the path or as mere fellow-travellers, instead of as essential parts of the goal itself. God is the only End, to stop short of whom is to make no real progress; but to attain that End is to attain it through and with and for all other selves. For the journey is such that one can only proceed to the next stage of it in the company (whether by anticipation, or in present fact) of all those who are at this stage: indeed salvation which required us to abandon for ever the mass of the unsaved, or even a single sentient being no matter how depraved, would be the worst kind of perdition. ° When Browning's Johannes Agricola declares

> "No suns and moons though e'er so bright Avail to stop me; splendour-proof I keep the broods of stars aloof: For I intend to get to God"

he is well on his way to Hell --- the Hell whose ghastly wretchedness was incapable of interrupting (as he supposed) his own bliss. If God is love, He is not love of a select few, or love of the lovable, but love of the unloving, of the whole world; and the only way to Him is through this universal love, from which no creature is excluded. The whole groaning and travailing creation -- stars and animals and men -- is caught up together and united in a common salvation. Here, at the highest level, the ever-widening gap between our knowledge as to the past, and our will as to the future, is perfectly and timelessly closed; here the actual and the ideal at last become identical; here all strife ceases, for each is realized in the other and divine love has put an end to all selfishness. Here, in God alone, is all our goodness, and here all our evil is finally overcome. For only He is generous enough to love all without any reservations, and only He is lofty enough to abase Himself beneath all His creatures, × descending by <u>every</u> route from the summit to the base of the hierarchy.

Evil is overcome when the world is turned upside down, and the precariously poised pyramid of the self is replaced by the altogether stable pyramid of the divine Other. + The bomb dropped on Hiroshima on August 6th, 1945, is estimated to have killed 60,000 and to have injured 100,000. See John Hersey's <u>Hiroshima</u>. Present-day bombs are very much more powerful.

φ Milton draws a strong distinction between sex before the Fall -- before the rejection of divine authority -- and after. The character of the lower functions is changed when higher control lapses; only then, indeed, are they really 'low'. <u>Paradise</u> <u>Lost</u>, iv. 741 ff., ix. 1011 ff. Cf. St Augustine, <u>City of God.</u> XIV. 17.

† <u>Rom</u> VII. 23.

Andrew Marvell, in his 'Dialogue between The Resolved Soul and Created Pleasure, makes Pleasure sav: "Thou shalt know each hidden Cause; And see the future Time: Try what depth the Centre draws; And then to Heaven climb." To which the Soul replies: "None thither mounts by the degree Of Knowledge, but Humility." I cannot forbear to tell here W. Macneile Dixon's delightful story of the little girl who asked whether, if she were very, very good in Heaven, she might sometimes be allowed to have a little devil up to tea. The reply, I suggest, might well have been: if devils are not regularly asked up to tea, be sure you are not in Heaven at all, but in a Hell that imagines it is Heaven. Goethe's Mephistopheles, indeed, had a standing invitation.

° "Thou mayest bar thy door against Divine Love and yet leave it free for Human Love; but if thou deniest it to Love Human, expect no visit from Love Divine." Richard Garnett.



St Margaret (Lucas van Leyden)

× "Only the Greatest of all can make Himself, small enough to enter Hell. For the higher a thing is, the lower it can descend --- a man, can sympathize with a horse but a horse cannot sympathize with a rat. Only One has descended into Hell.... There is no spirit in prison to whom He did not preach." C. S. Lewis, <u>The Great Divorce</u>, p. 114. Cf. I <u>Pet</u>. III. 19; Ps. CXXXIX.

All of which, says common sense, may sound very fine, but is quite powerless to subtract a tear or a sigh from the frightful tale of suffering and wickedness. It is so easy, when you are fairly comfortable yourself, to say that evil is not really real in the end, but comes of the partial view. Consider a microscopic selection of the actual horrors --- the ingenious atrocities of Caligula and Nero, the mass crucifixion, following the revolt of Spartacus, of six thousand slaves along the high road from Capua to Rome, the Albigensian Crusade, the eight or nine thousand autos-dafé in Spain alone, during the eighteen years of Torquemada's tenure of office as Grand Inquisitor, Tilly's sack of Magdeburg in 1630, the slave trade, Belsen, Hiroshima and Nagasaki, the countless iniquities of our bloodstained civilization..... The catalogue of human wickedness and misery is inexhaustible. And even the Nature below man is full of what is surely unnecessary pain and squalor. The cat's way with the mouse, the dental abscesses, and arthritis and osteo-myelitis, of many wild animals, the liver-fluke's life-history, the raven pecking out the eyes of the living lamb --- these are samples of what kind Mother Nature carries in her bag. Nor are these to be dismissed as growing pains, the price of evolution: in many respects man is worse off (and certainly worse) than the animals, and (if the foregoing argument is substantially correct) the merely suprahuman is worse off than the merely human. Such is the universe we are born into, and to gloss over the fact is a stupid and cowardly evasion, or unmanly sentimentality. ° Anyone who wears a permanently beaming expression is either a fraud or a fool. And if evil on such a scale is the inevitable accompaniment of good, the question arises: is the good worth it? It was all very well for William James to say that the world is all the richer for having a devil in it, so long as we keep our foot on its neck: \times the point is that the devil is always wriggling free, and planting its cloven hoof on our neck. Moreover to admit the facts, and yet to say with Leibniz that all is for the best in the best of all possible worlds, is to indulge in that complacent humbug which Voltaire so rightly held up to ridicule. To console the starving with arguments about the abstractness of hunger and the ultimate unreality of what their children suffer; to offer the tortured some neat theory of the marriage of Heaven and Hell, with proper scientific illustrations; to comfort the lately bereaved with a well-worded discourse on the nature of time --- only a monster could bring himself to do such things. And the monster himself, with his pitiful denial of evil's reality, will be found out in the end, when similar miseries fall upon him. No, the problem of evil can only be a problem to those who have so far managed to avoid its full impact. To the rest of us, evil is a mighty fact, and nothing that can be said is capable of conjuring away any of it, or turning it into something else. The only genuine 'problem' is a practical one --- what can be done?

All this is true, and it is a bad day for us when we forget it. For most of the time, and with most of ourselves, we must be working dualists. If we underrate the enemy he will plainly disprove our theories about his unreality, and if we are not very actively engaged upon the plane where evil is at least as factual as good, we shall hardly attain to a higher. All the same, there <u>is</u> a higher plane, and good-evil dualism does not have the last word. It is possible to distinguish three broad notions as to how the world's evil may be annulled. (1) The first, or optimistic, is the Worst of all, perhaps, is the fact that so impressed Schopenhauer: good news is no news and passes unnoticed, whereas the most trivial item of bad news at once attracts our attention. We never enjoy good health till we lose it, or consider a hundred blessings outweigh a single misfortune. Pain positively asserts itself; well-being is only conspicuous by its absence. See, e.g., Parerga und Paralipomena, II. 150. Spinoza does not hesitate to say that the more we understand particular things, the more we understand God. (Ethics, V. 24) Appropriate here is W. Macneile Dixon's comment on Bishop Gore's similar statement (that in knowing more about the world he was learning more about God) -- "Well, he was learning many and terrible things of which he never spoke." The Human Situation, p. 260.

° Some optimism is only repression, of which the effects are likely to be damaging. The <u>Tao Te Ching</u> (71) points out "it is only by seeing sickness as sickness that one can cease to be sick. The sage is not a sick man; and it was because he saw sickness as sickness that he ceased to be sick."

× <u>The Varieties of Religious Experience</u>, p. 50. Somewhat similarly, Coleridge (<u>Table Talk</u>, April 30th, 1830) describes the world as not a goddess in petticoats, but a devil in a strait waistcoat. Again, it must be added that he seems to have slipped out.

To Schopenhauer, optimism seemed not only absurd, but a wicked way of thinking, a bitter mockery of the unspeakable suffering of mankind. <u>The World as Will and</u> <u>Idea</u>, iii. pp. 390 ff.

Philosophers, from the Stoics to Hegel and his followers, have been all too anxious to drop the safety- curtain of the Absolute, or the Whole, on the disturbing scene. "The extreme of hostility implies an intenser relation, and this relation falls within the Whole and enriches its unity." "Ugliness, error, and evil, all are owned by, and all essentially contribute to the wealth of the Absolute." (Bradley, Appearance and Reality, pp. 488-9.) And no doubt ill things do in the end work together for good; meantime, however, it is necessary to carry one's cross, and learn the truth of Thomas A'Kempis' saying: "If thou bear the cross gladly, it shall bear thee, and lead thee to a desirable end, where an end shall be of suffering --- though it be not here." The Imitation of Christ, II. 12.

doctrine that, since evil is essentially privation or partiality, + all is well once wholeness is restored: what is evil is not all there. Quite literally, the universe grows out of its defects. "Harmony is incompatible with restriction and finitude. For that which is not all-inclusive must by virtue of its essence internally disagree." On the other hand, "by growth the element becomes, more and more, a consistent individual, containing in itself its own nature; and it forms, more and more, a whole inclusive of discrepancies and reducing them to a system. The two aspects, of extension and harmony, are thus in principle one, though.... for our practice they in some degree fall apart." * (2) The second, or pessimistic doctrine -- whose exponents include some Buddhists, Schopenhauer, and von Hartmann † -- makes desire the root of all evil, and particular existence the product of desire or will: the pain-racked universe as we know it is conceived to be a colossal mistake that must be painstakingly undone. Whereas Bradley says 'Go on to the End', Schopenhauer says 'Go back to the Beginning'. The one advises growth, the other ungrowth. (3) The third doctrine advises both. Evil, it declares, can only be overcome by simultaneously undoing it and making it good, by repentance and restitution together, by the concurrent annihilation and completion of the universe. Growth and ungrowth are equally necessary --- that is the keydoctrine of this book. ° Only because all things are brought to naught at the Centre can they work together for unmixed good at the Circumference. On the one hand is the man whose heart is so torn at the sight of the world's unspeakable suffering that he would see the whole calamitous system unmade; on the other hand is the man who is so much in love with the universe, so thirsty for its life, so enraptured with its startling and improbable beauty, so stricken with surprise and admiration, that he would not see it altered, or reduced by a particle of a particle. × It is necessary to be both men.

Futile theory? Futile indeed, if it is only theory; but immensely effective, as many great lives show, if it is daily and hourly practice. The only technique capable of breaking down and solving the problem of evil is a way of life -- a two directional way, or a way of double life, -- the intellect alone cannot grasp the problem, much less furnish the answer. The solution is paradoxical, an affront to our common sense, but it proves itself in practical terms. The universe can be made good because it is good. Until I am certain that evil is already overcome, I am a half-hearted or frightened champion of the good. \oplus Who, in fact, are the stoutest fighters but those who have nothing to lose, who have let go and faced utter annihilation, yet who are sure of ultimate victory, who see the other side already broken, and time and the stars in their courses fighting with them? The courage born of total despair is too reckless, and the courage born of certain victory too confident; but together they win through. To say that the only success worth having is also unrelieved failure, and the ungrudging acknowledgement of defeat, may outrage common sense, but who cares a pin for common sense when it comes to the great matters of our life and our death and our destiny? A paralogism that works is worth here a library full of impeccable but inert ratiocination.

If we struggle with some success against evil, that is only because evil is already beaten at the highest level and the lowest. But this is far from + Athanasius (The Incarnation of the Word of God, I. 5) says that the creature who loses all knowledge of the God who called him into being loses existence, for evil is non-being. Augustine (The City of God XI. 23) says the universe is beautified by sinners, as a picture by shadows, though by themselves they are sad blemishes. Origen, Plotinus (Enneads I.viii.3ff), Gregory of Nyssa and Dionysius (The Divine Names, IV. 18 ff.) are a few of the many who have held the privative doctrine of evil. Even the devils, says Dionysius, are not positively evil: they lack virtue. The paradoxical truth, according to Gregory, is that moral evil has its being in non-being.

* Bradley, <u>op. cit.</u>, pp. 363-4. Cf. Tennyson's famous lines from 'Morte d'Arthur': "That which I have done

May He within Himself make pure!" † <u>The Philosophy of the Unconscious</u>. The function of Reason is to free itself from the domination of Will, which makes for nothing but misery; when, enlightened by Reason, Will becomes will-<u>not</u>-to-live, the universe will disappear, and the Unconscious relapse into quiescence.

° Cf. William James' observation that we may find peace by reducing pretensions, as well as by increasing success. <u>Textbook of</u> <u>Psychology</u>, p. 187.

× For instance, Traherne, when he writes: "For all things were God's treasures in their proper places, and I was to be restored to God's image. Whereupon you will not believe, how I was withdrawn from all endeavours of altering and mending outward things."<u>Centuries of</u> <u>Meditations</u> III. 60. And Henry More the Cambridge Platonist:

"Purge but thy soul of blind self will, Thou straight shall see God doth no ill." 'Resolution: the Song of Hylobaris concerning Divine Providence'

⊕ Indeed it has often been said that all moral action in time is vitiated, unless it proceeds from the contemplation of a realm which is beyond both action and time. Thus St John of the Cross taught that well-meaning people who engage in action without having acquired by contemplation the power to act well, accomplish little or nothing at all, if indeed they do not do actual harm. Aldous Huxley has treated this topic at some length in <u>Grey Eminence</u>, pp. 238 ff. meaning that our struggle is a sham fight, with telescopic swords and stage wounds and simulated death agonies, and that the final curtain will presently rise on the whole smiling company, happy and unharmed. On the planes where it is being fought -- that is to say, on all of them except the extreme ones -- the battle is everything, and the supreme illusion is to believe the strife illusory. Moreover the Whole as such -- as the final union of intellect and will in timeless love -- though standing eternally above the levels of strife and multiplicity, is involved in them all, and comes down through them all. The universe is essentially tragic, and its Author is more deeply involved in its tragedy than any of his creatures are, * if only because all their tragedies are His own, and His sympathy and humility are absolute. † "The kingdom of God is for none but the thoroughly dead", says T. S. Eliot, and in it the measure of love's joy is the measure of what love has suffered: or rather, even though "the sufferings of this present time are not worthy to be compared with the glory which shall be revealed in us", ϕ yet they are interdependent. There is nothing cheap or easy or superficial about the delights of Heaven: for them the highest of all prices has been paid.

The price is altogether too high, we, are apt to say, implying that we, in God's place, would have got the same results less extravagantly. But are the sublimest things we know -- the love that is willing to pay <u>any</u> price, the faith that does not wait on sight, the courage that the world calls cowardice, the loyalty that the world calls treachery -- are these conceivable in a kinder, prettier, cosier, milder universe than this? ° If there is a better vale of soul-making possible, then it is time we were advised of its topography, and told just how Lear, and the Divine Comedy, and the Ninth Symphony, and War and Peace, or their equivalents in value, could be created there. Common sense retorts that no doubt it is difficult for us, the spawn of this universe, to specify in detail a better one, or to imagine how goodness and beauty and truth might be induced to shine forth except against the black background of their own shadows; but surely God is under no such disability. What we can think vaguely, He can think clearly, and think into existence. The answer seems to be that there are some things even God cannot do. Certainly it would not help if we were all the while in the mood to admit, with Marcus Aurelius, that "the dreadful hiatus of a gaping lion, and all poison, and all hurtful things, are but (as the thorn and the mire) the necessary consequences of goodly fair things." × The good of evil is that we should strenuously find no good in it; its merit lies in our practical denial that it has any merit whatever.

I think that evil becomes more, and more mysterious, and less and less capable of any 'explanation', the more we feel the full force of it in our lives. But two facts become, or should become, gradually plainer. The first is that we do not need any such explanation in order to know how to act well; the second is that we do need, for this purpose, an experience which is immeasurably more convincing and satisfying and final than any verbal solution or formula could ever be -- an experience which I can only call a confession of utter ignorance, coupled with an act of unconditional surrender, when confronted with the ultimate Mystery of the One who Is. In one sense, the more a question is worth asking the * Berdyaev described the tragic conflict in the Divine Life as a sign of its perfection. Though the Absolute stands above all division, yet within the Absolute the sublime tragedy of the Trinity -- the divine mystery-play of Boehme -- is enacted. <u>The</u> <u>Destiny of Man</u>, pp. 37.ff.

† "Humility is not merely a human virtue. But there is a humility that is in God Himself. Be ye humble as God is humble. For love and humility walk hand in hand, in God as well as in man." Thomas A. Kelly, <u>A</u> <u>Testament of Devotion</u>, p. 56. Cf. <u>Phil</u>. II.

φ. <u>Rom</u>. VIII. 18.

° "Bosanquet points out (What Religion Is, p. 60) how difficult it is to think of actual evils whose non-existence would not involve the non-existence of some good. The truth, in Bagshot's words, is 'that we could not be what we ought to be, if we lived in the sort of universe we should expect'. For instance, it is essential to the moral life that we should <u>not</u> in this life of time and sense, always see virtue rewarded, and justice done, and faith justified: how can there be goodness in a world that is only good?

Every artist has to resist the urge to work up and beautify the part as part. The only perfection which the part may properly boast belongs to the whole; its own 'perfections' are more likely to be blemishes. Yet we expect each part to be, not a part, but a miniature whole. Josiah Royce (The World and the Individual, ii. P 385) wrote: "The very presence of ill in the temporal order is the condition of the perfection of the eternal order." And McTaggart: "In so far as we do not see the perfection of the universe, we are not perfect ourselves." (Studies in the Hegelian Dialectic, 153) But the working validity of such statements is inversely proportional to our insistence on them: the perfect eternal order requires that we take with utmost seriousness the imperfect temporal order.

× Meditations, VI. 33. "Without Contraries is no progression,' says Blake, in 'The Marriage of Heaven and Hell'. 'Attraction and Repulsion, Reason and Energy, Love and Hate, are necessary to Human existence." Heraclitus' doctrine of opposite tensions, the Chinese Yang-Yin, the Hegelian doctrine that an idea contains and implies its contrary, and is nothing without it, are further instances of the view that everything is two-sided. According to Boehme, the spiritual universe itself is the scene of an immense conflict between good and evil, and out of this primeval struggle our similarly divided world is born; only the eternal Matrix, the Abyss, lies beyond all strife. Mysterium Magnum, VIII. 27; Aurora, 84.

less it is answerable; in another, it is only these ultimate questions which really can be <u>answered</u> at all, or settled in a way which does not leave two questions where before there was one. Indeed, if we profess to know <u>how</u> "sin is behovable, but all shall be well and all shall be well and all manner of thing shall be well" + then we are not likely to know in our hearts <u>that</u> such is the case. The character of knowledge itself varies with its object. If, all undeserving, we are sometimes granted that overwhelming intuition of a Goodness which neither underestimates nor leaves untransmuted the least particle of the world's evil, then we begin to know what knowledge can be: for here is information in the light of which all the rest is misinformation, the vaguest and vainest and most dubious of imaginings.

8. THE HEAVENLY COMMUNITY

Only God is good, for He is the completion, the healing remedy, of every finite self. By being the Whole that He is, He saves us from being the miserable fragments that we are. He is what we want, what we live for, and we are not ourselves without Him. We are lost till we are lost in Him. He is the Love we yearn for in every love, the Home we seek at home, the Goal of all goals, the Grand Harbour for which all ships set sail; He is the Subject of every painting, the inspiration of all music, the End of every search for truth. But if this were the whole story there would be no story to tell. The cure would eradicate the patient along with his disease. And indeed the Absolute that only absorbs, that demands the merging of every self with itself, is nothing else than the Devil, the leader of the bad angels who say of God: "We want to suck in, He wants to give out. We are empty and would be filled; He is full and flows over. Our war aim is 'a world in which Our Father Below has drawn all other beings into himself: the Enemy (that-is, God) wants a world full of beings united to Him but still distinct." The wonderful fact is that God Himself, more than any of His creatures, subjects Himself to the rule that it is not enough to find oneself in others: the others must be free and in no way coerced, new and independent Centres and not radii proceeding from one's own Centre. He is the guarantor of our distinctness from Himself and from one another; each of us is for ever unique and inviolable, for He needs every member of the grand hierarchy of Heaven and Earth to be himself and no other, and to enjoy the freedom proper to his rank. Evil is the price of this freedom. Of course if we were overruled and invaded, we could all be saved at once and without any more nonsense; but the fruits of such a victory would not be worth having. The only real obedience is voluntary, and no foregone conclusion; the only real love is spontaneous and may very well be withheld; the only real virtue is achieved by persuasion and not force. Not even God can have friends without incurring the risk, or rather the certainty, of the bitterest unfriendliness. Creatures incapable of sin, and sustained in every perfection, would be mere extensions of Himself; and His love of them would be self-love, which is the essence of evil. Of necessity, then, love individuates its object. And it lies in the nature of the God who is love that no finite self shall be submerged in His

+ Julian of Norwich, <u>Revelations of Divine</u> Love, XIII. "There be deeds evil done in our sight, and so great harms taken, that it seemeth to us that it were impossible that ever it should come to good end. And upon this we look, sorrowing and mourning therefor, so that we cannot resign us unto the blissful beholding of God as we should do. And the cause of this is that the use of our reason is now so blind, so low, and so simple, that we cannot know that high marvellous Wisdom, the Might and the Goodness of the blissful Trinity. And thus signifieth He when He saith: Thou shalt see thyself that all manner of things shall be well." See Olaf Stapledon, Saints and Revolutionaries, pp. 57-8, 149, 161, for a contemporary statement of the ultimate rightness of the Whole, in spite of all appearances to the contrary.C. S. Lewis, Screwtape Letters, p. 46. Boehme's Lucifer "imagined himself in himself", and Goethe (Dichtung und Wahrheit, VII) describes him as "believing that he found himself in himself".

It is, of course, the vice of the West to resist the unity of selves; of the East, to resist their separateness. But the best thinkers and contemplatives, whether Western or Eastern, insist equally on both, and refuse to oversimplify. Cf. Tagore: "This joy, whose other name is love, must by its very nature have duality for its realization The lover seeks his own other self in his beloved. It is the joy that creates this separation, in order to realize through obstacles the union. The amritam, the immortal bliss, has made himself into two. Our soul is the loved one, it is his other self." Sadhana, V. But even here I think L. T. Hobhouse's criticism applies: "A man's God is a crystallization of certain elements in his own nature. It is therefore a limited being, narrower than the man himself:" Mind in Evolution, p. 390. A universe that adapts itself to me, that dilutes itself to my strength, is no good to me. A Whole easily understood and approved, incapable of shocking or overwhelming us, an intimate, bowdlerized thing, cleaned up and watered down to comply with our drawing-room or prayer-meeting standards, is not even a useful fiction. When we are at our best we are thankful that this glorious and terrible Reality is just what it is, and the fact that it is mysterious beyond telling and altogether unlike our design for it, is precisely what makes it so adorable. As Tersteegen says, "A God comprehended is no God." In Hell we know one another only too well; in Heaven we never get over our astonishment at one another. Hell is full of expert theologians and psychologists.

depths, but shall on the contrary find in Him eternal support and preservation. So far from God threatening our selfhood, He stands guard over it, as a thing most precious.

In what does our freedom consist? Not in our ability to erect barricades between our immense past and the present which that past now determines, nor in our ability to fence off the self of this human level from its hierarchical subordinates and superiors: that way lies only the illusion of freedom. The wires enable the puppet to say there are no wires. No; our freedom consists in our wholehearted acknowledgement of all the wires and the hands that move them, in our refusal to cut ourselves off from what determines us. As I have tried to show at length, we are free when we accept responsibility, not only for all we do, but also for all that makes us do it. So long as anything forces our hand, exerting a merely external pressure upon us, we are partially automatic. In brief, we are wholly free when we are wholly free of self-will, and assimilate our wills to God's will. For. God alone is by His own nature free, seeing that He alone is subject to no outside influence; but He has made it possible for us to share in His freedom, by uniting ourselves to Him. To the degree that we separate ourselves from Him we lose our liberty, and approach the condition of mere material in His hands. We have the free choice of His freedom, or our bondage. Nor is our independence of Him, seeing that it depends on Him, an illusion. We all have first-hand experience, in our measure, of the stubborn objectivity, the waywardness, the self-assertiveness, of our creations --- whether they are the characters in the novel we are writing, ° or the actors in our dreams, or anything else we make. The evidence suggests that at every level of 'projection and reflection' this independence of the object is indispensable, and that it becomes more and more pronounced as we rise in the hierarchy, till at the summit it is complete. In the bad hole, which is only itself, all barriers are torn down, all selfhood violated, all freedom forbidden; everything is absorbed, and the result is total annihilation. But in the good Whole, which comes down and is united to every Centre, every distinction is eternally drawn as well as eternally annulled; every self is eternally distinct as well as eternally merged; every assertion of freedom is eternally respected as well as eternally surrendered. \times

This is a mystery, not an absurdity. For the union of separateness and oneness is everywhere apparent. In the branches the trunk becomes many; in the trunk the branches become one. Without the many branches the one trunk is not a trunk; without the one trunk the many branches are not branches. My hand is no hand if it is only a hand. Growth and education and adult experience increasingly define me, marking me off from all others; yet all this is accomplished by joining me to them. I become distinct by the appropriation of what is common to all men. By surrendering to the Whole I acquire something to surrender.

And so are fulfilled the conditions of love. Love demands that the loved one shall be entirely himself and entirely free; and love demands union with the loved one. + In the world of time these requirements are incompatible, and love is always destroying itself by destroying the conditions of love. But in the timeless world they are realized together ---- the perfection of independence and of togetherness do not cancel out:

The external pressure is there to become internal, yet without ceasing to be external. Our act of acceptance, of submission to Providence and, to a will higher than ours, is the making of that will our own. But this is not done once and for all: our submission to the higher level must be constantly repeated, seeing that we never leave the lower level. Our freedom requires that we acknowledge everything that curtails it.

° See Douglas Fawcett, <u>Zermatt Dialogues</u>, p. 508, and Dorothy Sayers, <u>The Mind of</u> <u>the Maker</u>. Miss Sayers points out that a competent novelist's characters gain some independence of him, a life of their own which he is bound to respect.

× On the one hand is the Absolute which is 'a night in which all cows are black', or 'a lion's den to which all tracks lead, and from which none emerge'; on the other is that of which Bradley wrote: "it would be experience entire, containing all elements in harmony. Thought would be present as a higher intuition; will would be there where the ideal had become reality; and beauty and pleasure and feeling would live on in this total fulfilment. Every flame of passion, chaste or carnal, would still burn in the Absolute unquenched and unabridged...." <u>Appearance and Reality</u>, p. 172.

^{+ &}quot;I put out my hand in the night, one night, and my hand

touched that which was verily not me.

It was the flank of my wife whom I married years ago

at whose side I have lain for over a thousand nights

and all that previous while, she was I, she was I;

I touched her, it was I who touched and I who was touched."

D. H. Lawrence, 'New Heaven and Earth'; see also his poem 'Manifesto', on the sane theme.

they reinforce each other. In Hell I am bent on finding myself in myself, but time destroys me; in Heaven I am bent on losing myself in Another, but eternity preserves me.



St Margaret and the Dragon Church of St John, Malta

APPENDIX

ON DIAGRAMS, AND SOME ASPECTS OF SYMBOLISM

A practice that is of great advantage in creative thought is working up the imagination as nearly as possible to the state of vision. To those who are already visualizers this will present no difficulties.

Rosamund E. M. Harding, An Anatomy of Inspiration, p. 27.

The oldest mandala known to me is a palaeolithic so-called "sun-wheel", recently discovered in Rhodesia.... Things reaching so far back in human history naturally touch upon the deepest layers of the unconscious and make it possible to grasp the latter where conscious speech shows itself to be quite impotent. The unconscious can only be reached and expressed by the symbol, which is the reason why the process of individuation can never do without the symbol. The symbol is, on the one hand, the primitive expression of the unconscious, while, on the other hand, it is an idea corresponding to the highest intuition produced by consciousness.

Jung, The Secret of the Golden Flower, p. 105.

Those who have a relatively direct vision of facts are often incapable of translating their visions into words, while those who possess the words have usually lost the vision. It is partly for this reason that the highest philosophical capacity is so rare: it requires a combination of vision with abstract words which is hard to achieve, and too quickly lost in the few who have for a moment achieved it.

Bertrand Russell, The Analysis of Mind, p. 212.

If we examine the autobiographies of successful scientists, we find that productive thinking must have a close relation to artistic production.

Jaensch, Eidetic Imagery, p. 41.

I fail to arrive at the full conviction that a problem is fairly taken in by me, unless I have contrived somehow to disembarrass it of words.

Galton, 'Thoughts without Words', Nature, May 1887.

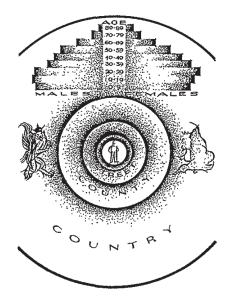
A whole essay might be written on the danger of thinking without images.

Coleridge.

1. ON THE USE OF SYMBOLS

There are four ways of representing an object graphically: (i) by reproducing it to scale (e.g., a map of England); (ii) by using a conventional symbol (e.g., a lion); (iii) by devising a diagram which displays a set of relations similar to, a set of relations within the object (e.g.; a diagram to show how the population of the country is distributed in respect of age and sex); (iv) by combining (i) and (iii), so that some of the spatial relations within the object appear also in the diagram, but with various modifications (e.g., a diagram of the 'regions' in which an Englishman finds himself °). This book contains instances of all four kinds, but the' third and fourth are what chiefly concern me here.

Now such diagrams have two uses: (a) to focus the attention, and to aid the imagination by bringing out in a striking way some peculiarity of the object; and (b) to arrive at, or at least to suggest, some new truth about the object \times . That is to say, they may be expressions of the known, or gropings after the as yet unknown, or both at once. Consider this example: I observe the behaviour of the train in which I am travelling, then set down a number of marks on a piece of paper, and (forgetting all about the train) proceed to elaborate them according to certain rules;

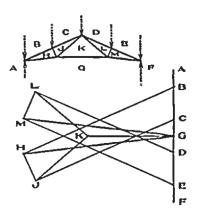


° Kekulé's benzene-rings furnish another example of this mixed type.

× In his <u>Treatise on the Universal Algebra</u>, Whitehead describes mathematics as "the organization of a series of aids to the imagination in the process of reasoning." Cf. Dorothy M. Emmet, <u>The Nature of</u> <u>Metaphysical Thinking</u>, p. 6. at length, reverting to the subject of the train, I confidently announce that it will get to the Scottish border at about four o'clock. When I find that this prediction proves correct, I conclude that the little world on the page of my notebook, though in no way suggestive of wheels and rails and steam; is nevertheless very intimately related to them. Again, when I design a roof-truss, I distribute the material in the actual members according to the relative lengths of certain lines in a force-diagram; and my faith in the analogy between the forces (measured in pounds, say; or in tons) in the truss, and the lines (measured in inches) in the diagram, is so sure that I am ready to stake upon it not only my own life, but the lives of all who venture to go under the roof. Similarly, the ordering of our lives with their countless needs is conducted in the belief that there is a very detailed and trustworthy parallelism between a sequence of noises in certain large buildings and the complex of events outside, though it would puzzle the makers of the noises to explain the nature of the link between the laws of syntax and those of, say, economics and social psychology. Even the sentence which questions the soundness of analogy as a method is itself recklessly analogical: it assumes a proportionality between itself and an aspect of reality.

In fact, some of our most telling and useful analogies are double or even treble. Thus the terminology of much philosophy and psychology involves a series of sounds or of marks on paper, which stand for patterns in space, which in turn stand for what is non-spatial. ° Such spatial terms as 'transference', 'introjection', and 'repression', indicate that much of the procedure of modern psychology involves three steps at least --- a verbal, an eidetic, and a relatively abstract. Their order and prominence depend partly upon whether I am giving vent to my own notions or learning another's, and partly upon whether I am what is called a visual or a verbal type.

The point is that these round-about approaches do get us there, and are indeed the only way. "The creation of signs", writes M. Maritain, "is a mark of the pre-eminence of the mind, and the instinct of the intelligence quickly informed man that symbols make him enter into the heart of things --- in order to know them." × What is so indispensable and so workable is no second best, no pis aller, no curse laid upon our thinking, but belongs to the very essence of thought. * In the phraseology of this book, thought itself, in all its manifold modes of operation and expression and communication, is subject to the law of elsewhereness: the direct method is banned. You can only think about (a) by means of (b) and (c); indeed it may be said that your thought about (a) will never be complete till it includes everything but (a). Consider the poet's procedure. In a sense, Jeremy Bentham was right to call all poetry misrepresentation; for, as Aristotle noticed, it is essentially a mode of diction which delights in metaphor. But the oblique and fanciful methods of the poet, his surprising worlds in which anything may happen so long as it does not remain itself, only misrepresent reality in order to present it all the more pungently and faithfully: so that Wordsworth was entirely justified in calling poetry "the breath and finer spirit of all knowledge". And one of the chief reasons for this unique effectiveness and penetra-



H. L. Hollingworth (<u>The Psychology of</u> <u>Thought</u>, pp. 4 ff.) defines thinking as the use in problem-solving of symbols standing for the real objects and processes which enter into the problem. The symbols may be words, numbers, letters, diagrams, or actual objects representing the object and processes thought about.

° Nor can it be fairly objected that though the <u>expression</u> is doubly or trebly metaphorical, the <u>experience</u>, or real meaning for the speaker, is nothing of the sort. As Croce and Cassirer and Urban have, in their different ways, insisted, there is no duality of expression and experience: the symbol is not an external tag. We do not know 'the true nature' of things apart from language or symbols, so that we can challenge our symbols <u>en bloc</u>. See Urban, <u>Language and Reality</u>, and Cassirer, <u>Substance and Function</u>.

\times <u>Redeeming the Time</u>, p. 305.

* For a most illuminating discussion see Dr I. A. Richards' <u>The Philosophy of</u> <u>Rhetoric</u>, particularly the chapters on Metaphor and The Command of Metaphor. Dr Richards, agreeing with Shelley's view that "language is vitally metaphorical", makes the metaphor "the omnipresent principle of language". "Thought", in fact, "is metaphoric, and proceeds by comparison, and the metaphors of language derive therefrom." In the non-exact sciences, the chief difficulty is to discover and control our metaphors. For "we think increasingly by means of metaphors that we profess <u>not</u> to be relying on." tion is that poetry exploits to the full, besides the law of elsewhereness, the law of recapitulation or (in the old phrase) of 'signatures': + each hierarchical level epitomizes the others, † (and more particularly the other member of its own 'Pair') so that the poet, finding Earth in Heaven and Heaven in Earth, is the Columbus of them both --- the Columbus who found the West Indies by looking for the East Indies. And what is true of poetry is true, in some measure, of all our verbalized experience: except that, whereas in poetry our metaphors are patent and deliberate, in other fields -- notably in science and philosophy -- they are for the most part concealed.

I do not say that there is no such thing as direct apprehension: the artist, the lover, and the mystic undoubtedly do come very close to the ideal of immediacy. But the way up to the peaks of their ineffable experience, and the way down from it to the lower planes of discursive thought and of communication, are paved with symbols, analogies, metaphors. To pretend otherwise, to imagine that we think more directly than we do, is to stultify thought. What we have to do is to discover the kind of 'diagram' best suited to the business in hand, and to supplement this kind with as many others as possible, for the sake of clarity and mutual correction. For it is plain that each mode -- whether verbal, mathematical, graphic, or any other -- has its own way of misleading us, and can do with all the help and correction the others can give. Bertrand Russell points out, for example, "how necessary it is to avoid assuming too close a parallelism between facts, and the sentences which assert them. Against such errors, the only safeguard is to be able, once in a way, to discard words for a moment and contemplate facts more directly through images. Most serious advances in philosophic thought result from some such comparatively direct contemplation of facts." ° Symbol-systems are our instruments, and they are only faulty when we misuse them, trying to saw with hammers and hammer with saws. We cannot build the ark of truth with a screwdriver: every tool in the kit is needed. ×

2. ON VISUALIZING AND VERBALIZING

There is a well-worn controversy concerning the part that imagery (olfactory and gustatory, motor and kinaesthetic and thermal, as well as visual and auditory) plays in thinking; some, indeed, go so far as to say that thought is possible without any images at all. * I think it is, however, fairly clear that there are wide differences between the types of imagery which are naturally employed by different persons under similar external circumstances --- every kind of sensation has its corresponding imagery, and in each there are specialists.

In late childhood many of us have an astonishing power of 'seeing' absent objects as vividly as if they were present, but this eidetic imagery as a rule fades out during adolescence. \oplus Authorities tend to look on the predominantly visual kind of imagery and thought as a primitive mode proper to savages and children and dreaming adults --- a mode

+ We dismiss as fantastic the doctrine of signatures propounded by the school of Paracelsus and Boehme, but what is our science but a more thorough exploitation of the same principle? If the stars and nebulae do not write legible signatures in our observatories, all our astronomy is invalid.

† On the 'epitomization' of one level by another, see Appendix B of George P. Conger's <u>A Course in Philosophy</u>.

"In God alone", writes Maritain, "intellectual life makes no use of signs. He knows Himself, and everything, by His own essence." For us, on the other hand, "the sign is the keystone of intellectual life." <u>Redeeming the Time</u>, pp. 194-5.

"It is in and through Symbols that man, consciously or unconsciously, lives, works, and has his being", says Carlyle. "In the Symbol proper.... there is ever, more or less distinctly and directly, some embodiment and revelation of the Infinite; the Infinite is made to blend itself with the Finite, to stand visible, and as it were, attainable there. By Symbols, accordingly, is man guided and commanded, made happy, made wretched.... What is man himself but a Symbol of God; is not all he does symbolical?" <u>Sartor Resartus</u>, III. 3.

° <u>The Analysis of Mind</u>, p. 212. Cf. Wittgenstein's <u>Tractatus Logico-Philosophicus</u> for a classical discussion of the link between syntax and external facts, and the ineffability of the latter apart from some such mediation.

× Cf. Herbert Read, <u>Education Through</u> <u>Art</u>, p. 54: "The higher in the scale of inventiveness or originality such (conceptual) thought rises, the more readily it seems to resort to imagery, excepting always the purely abstract consideration of 'universals."

* Around 1900, Alfred Binet threw doubt on the doctrine that thinking necessarily consists in the manipulation of images; later, the researches of K. Bühler tended to confirm Binet's 'imageless thoughts'. A number of psychologists have come to the conclusion that images appear only when thinking is in difficulties.

⊕ The images, says Jaensch, "are always seen in the literal sense. They have this property of necessity and under all conditions, and share it with sensations." <u>Eidetic</u> <u>Imagery</u>, p. 2. Pioneer work on this subject was done by Galton (<u>Inquiries into Human Faculty and its Development</u>); see also G.Murphy, <u>Historical Introduction to</u> <u>Modern Psychology</u>, pp. 437 ff; McDougall, <u>The Energies of Men</u>, p. 248; Charles Fox, <u>Educational Psychology</u>, p. 86. that in the normal waking civilized person has been superseded by verbal procedure, at least to a great degree. This is doubtless true in the main, but allowance has to be made for the fact that many (if not most) philosophical and psychological writers are abnormally 'verbal': they are word-users by inclination and professional habit, and it is not unlikely that their practice of abstract thinking has impaired such visualizing faculty as they once had. † In that case it would be idle to expect from them a fair appreciation of the creative role which visual thinking plays, or could play, in every field --- including their own. "I hazard the conjecture that Eddington is an inveterate visualizer", wrote Susan Stebbing, much as if she were accusing that great man of drug-addiction, or some worse sin. ϕ At least she might have considered the possibility of some connection between Eddington's confessed habits of thought ° and his undoubted genius. For there are, after all, many similar cases, of which the best known is that of Lord Kelvin, who admitted that he could understand nothing of which he could not make a model. It may well be that, as Miss Emmet has suggested, \times the scientific innovators are for the most part given to concrete rather than abstract thinking. Amongst artistic creators of the first rank the eidetic tendency is no less marked. Dr Rosamund Harding + has shown that Shelley, Coleridge, Charlotte Brontë, Dickens, Thackeray, and Elgar were all much given to visual imagery --- and imagery so vivid that it sometimes amounted, in Shelley's case, to hallucination; as for Blake, Gilchrist records that he could summon Moses or David or Julius Ceasar to sit for him, and would draw them just as if they had been actually present. Possibly Jaensch exaggerates when he says that those who retain the primitive eidetic disposition in adult life will tend to belong to the 'integrate' class (who do not distinguish sharply between percepts and concepts) --- a class of persons which includes all the mentally creative types, artistic and scientific; * but at the very least it is safe to say that eidetic imagery, and visualizing methods of thought, though doubtless primitive and of limited application, are indispensable tools in all the main fields of human endeavour. ϕ

Mr Bertrand Russell tells us that when he wants to remember a face, he has to describe it to himself while he is looking at it, so that later, by recalling the words of his inventory, he may recall the face. † It would seem that visual imagery abstracts from vision, and verbal imagery from visual imagery, while some would have us go on to a still more attenuated third stage, where thought is purified of all images whatever. There can be no doubt, of course, that for many purposes language and number have as great advantages over the more primitive and concrete modes of picture-thinking as a hammer has over a bare fist; but neither is there any doubt that, as the hammer needs the hand and by no means supersedes it, so verbal ways of thinking rely upon and do not replace the visual. The ideal is a primitive unspecialized hand, grasping a modern and exquisitely adapted tool in such a way that they act together as a single organ. In much the same way the most adequate kind of thinking is, like its practitioner, as out-of-date as it is up-to-date, as behind the times as it is ahead of them.

† See H. Wildon Carr, <u>Changing Back-</u> <u>grounds in Religion and Ethics</u>, pp. 133 ff, for an unusual prominence given to vision and visualizing by a philosopher: but Carr came to philosophy from the City. Again, Mr Wyndham Lewis says (<u>Time and Western Man</u>, pp. 7, 8) that it is "in the service of the things of vision" that his ideas are mobilized. He defines his philosophical position as "an occupational one", appropriate to a painter.

φ Philosophy and the Physicists, I. 3.

° For example: "When I think of an electron there rises to my mind a hard, red, tiny ball..." (<u>The Nature of the Physical</u> <u>World</u>, Introduction.)

× <u>The Nature of Metaphysical Thinking</u>, p.88.

+ <u>An Anatomy of Inspiration</u>, pp. 27 ff.Cf. J. E. Downey, <u>Creative Imagination</u>, and Herbert Read, <u>Education Through Art</u>, pp. 42 ff. The latter writes: "What is now suggested, in opposition to the whole of the logico-rationalistic tradition, is that there exists a concrete visual mode of 'thinking', a mental process which reaches its highest efficiency in the creation of the work of art." (p. 70) "When you describe a thing", Tchekhov wrote to Gorky, "you see it and touch it with your hands. That is real writing."

* Eidetic Imagery, pp. 108-9.

φ See <u>British Journal of Psychology</u>, xv, pp.99 ff; xviii. p. 1 ff; for an account of eidetic imagery by Gordon W. Allport, and a discussion of the role of the visual image in thinking, by T. H. Pear.

† Outline of Philosophy, p. 195.

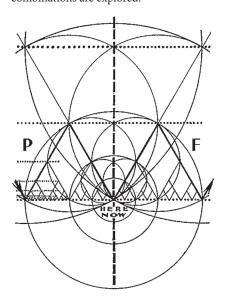
In The Psychology of Day Dreams, J. Varendonck makes the use of words a measure of consciousness: visual imagery is a mark of less conscious states. This is true, I think, only on the average. For example, my wife reports that, when she is falling off to sleep but at no other time, she can 'see' flowers, landscapes, and so on, with the utmost vividness. On the other hand, of course, words do play an important part in many dreams. "I believe that a serious study of the best method of developing and utilizing this faculty (of visualizing), without prejudice to the practice of abstract thought in symbols, is one of the many pressing desiderata in the yet unformed science of education." Galton, Inquiries into Human Faculty, p. 114.

3. THE GRAPHIC METHOD APPLIED TO PHILOSOPHY

From one point of view, this book may be described as an experiment in the application of graphic methods to a limited series of problems in epistemology and cosmology. Those of my readers who are predominantly verbal will hardly be interested in the diagrams, but the rest will, I hope, find them useful if not illuminating. In any case, whatever merits this book may have are very largely due to the tools with which it was constructed: it has been my experience that the diagram is an instrument rewarding sensitive use, and well worth respect and study. Frequently I have been astonished to find that what at first seemed to be a flaw in the tool was really ineptitude in its user. On the one hand, I found that an aspect of the facts which I could not incorporate in the diagram was likely to prove invalid anyhow; on the other hand, I found that an awkward or irrelevant feature of the diagram was likely to prove a broad hint at some aspect of the facts, which I had hitherto neglected. (For instance, the pyramidal figure, at first no more than an obvious and indeed commonplace means of indicating the relationships of whole and part, of subordinate and superior organizational levels, revealed on further study all manner of unexpected subtleties. It lent itself to, and even hinted at, (a) the double route of hierarchical intercommunication, though a common superior, and the lowest rank of inferiors; (b) the principle of numerical limitation; (c) the regional disposition of mutual observers according to hierarchical status; (d) their temporal relationships; and so on. Such experience suggests that some of this book's defects may be due to timidity in the use of its own methods, rather than any undue boldness.)

It is not for nothing, then, that the sculptor Henry Moore calls one of his pictures <u>Drawing as a Means of Generating Ideas</u>. I see no reason why the graphic method should not (subject to all proper checks and safeguards) develop a more definite logic of it own, and become a new, if only a supplementary, organon. ° Certainly there is no <u>a priori</u> way of settling the question: only by making a serious and prolonged attempt to develop the instrument can we hope to discover what its possibilities really are. After all, numbers were in use millenniums before anyone suspected that they had any relevance to, say, the difference between red and yellow, or to the general economy of nature. And who could have foreseen that the hissing and grunting and squeaking and bellowing of proto-man was destined to develop into the divine language of Plato and Shakespeare, or provide a pass-word to the sublimest regions of the universe? Perhaps, in thousands of planets of other stars, the language of shapes has already advanced as far as our language of noises.

If the present attempt to put the graphic method to new uses were an isolated one, it might well be dismissed as an idiosyncrasy. In fact, however, it is part of a widespread movement. Recently there has been a great awakening of interest in visual aids, particularly in education and publicity. The beautifully designed and ingeniously applied Isotype symbols are deservedly famous: × they can show at a glance what in verbal description would fill pages of print, and by their means otherwise dreary facts and figures become striking and memorable, as well as a delight to the eye. A very different example of successful spatializing is the use of Of course diagrams, like words and numbers, become seriously misleading or absurd when too much is expected of them. A celebrated instance is Raimon Lull's <u>ars</u><u>magna</u>, or universal art of discovery by such mechanical methods as the reduction of the different kinds of substances and attributes to alphabetical symbols, which are then manipulated with the help of geometrical figures and colours, and revolving pasteboard circles: in this way all possible combinations are explored.

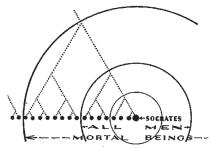


° Doubtless such a development would mean that the spatial symbol became increasingly remote from the concrete fact. Cassirer (Substance and Function) distinguishes three stages in the development of signs: (1) the Representative --- the word or sign is a magical duplicate of the thing; (2) the Analogical --- the sign is a kind of model; (3) the Symbolic --- the sign, no longer a model, has altogether broken loose from the thing. And this last is the scientific ideal. But (it may be added) man does not live by science alone, in a world which prides itself on its dilution and emptiness. What he needs is the greatest possible variety of symbols, having all degrees of detachment from the fact or thing. He likes his universe strong as well as weak, neat no less than diluted.

× See Otto Neurath, <u>International Picture</u> <u>Language, the First Rules of Isotypes</u>, and <u>Modern Man in the Making</u>; also Lancelot Hogben, <u>From Cave Painting to Comic</u> <u>Strip</u> -- a history of communication by visual symbols. filing cards, punched in various patterns, for recording statistics of many kinds, in such a way that the cards can be machine-sorted: again, much time is saved. The value of the diagram in the teaching of grammar, formal logic, * and other non-visual subjects, is being recognized, and in the last decade or two there have been many experiments in the diagrammatical illustration of popular books on all manner of subjects. Nor are there wanting examples of the kind of diagram which particularly concerns me here. Bergson's lively prose, itself so rich with spatial metaphor and simile, is further reinforced with some illuminating figures to show the relationship of sensation, memory, the body, and so on. + Dr Stanley Cook, in his Rebirth of Christianity, illustrates a number of the processes of history and of individual development by a series of simple patterns, which do no more than make explicit the imagery we naturally use: thus, in addition to the cycles of history, there are its spirals, where the old reappears in a new and higher form, its periodical waves, its swings of the pendulum again; concentric systems, and the branching tree-pattern, give natural expression to processes of genetic and logical development. J. W. Dunne also, in a rather different way, reduced temporal order to spatial order in a series of diagrams. ° The structure of the Jungian psyche has been translated into a series of somewhat elaborate diagrams, which have the blessing of Jung himself. × And even God is not immune: Miss Sayers has with remarkable success confirmed and extended the usefulness of the ancient triangular symbol of the Trinity. There are plenty of other instances. As W. Macneile Dixon says, the intellect wants to see things: its language about itself is that of vision. "The visible and the intelligible are, indeed, virtually interchangeable and synonymous terms." The light of reason or the intellect illuminates, making lucid and clear that which was obscure or in darkness. "Since geometry deals in figured spaces, in sharp outlines, in pictures, diagrams and patterns, the clearest mental life is that of the geometer, to which all science and philosophy aspire..." "The human mind is not, as philosophers would have you think, a debating hall, but a picture gallery. Around it hang our similes.... The prophets, the poets, the leaders of men are all of them masters of imagery, and by imagery they capture the human soul. Nor does science escape from this entanglement." •

The history of cosmological picture-making goes back to Palaeolithic times, and includes the concentric or spiral patterns which Australian aborigines inscribe on their churingas --- objects which contain the primeval ancestor and the souls of the unborn; the similar spiral sand-drawings of the Pima Indians of Arizona, said to represent the emergence of their ancestors into the physical world; † the mazes and labyrinths of a number of ancient peoples; the elaborate cosmic symbolism of the Vedic Fire Altar; ϕ the sacred diagrams of the Chinese <u>Book of Changes</u>; the ritual planning, not only of Chinese cities \Diamond and temples and palaces, but of every detail of the Emperor's routine, on cosmical principles; the graphic lore of witchcraft, magic, and astrology.....

(But stranger and no doubt more ancient than any human diagrams are those of bees. Professor von Frisch has described how a worker bee, having found a source of nectar, informs the other workers as to its * E.g., the syllogism: 'All men are mortal; Socrates is a man; therefore Socrates is mortal' implies the regional schema: ---

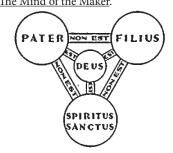


+ See <u>Matter and Memory</u>, pp. 128, 170, 184, 197, 211. In his <u>Introduction to</u> <u>Metaphysics</u>, Bergson advocates the use of a wealth of spatial imagery, to help us back from words to immediate experience.

° <u>The Serial Universe</u> × Jolan Jacobi, <u>The Psychology of C. G.</u> Jung: the following is a specimen of Dr Jacobi's diagrams ---



Key: 1 Sensation, 2 Feeling, 3 Intuition, 4 Thought; I Forgotten material, II Repressed material, III Emotions, IV Irruptions from V, V that part of the collective unconscious which cannot be made conscious; A. Sphere of Consciousness, B. Sphere of the Unconscious. ⊕ The Mind of the Maker.



• <u>The Human Situation</u>, pp. 65-6, 306. † W. H.Matthews, <u>Mazes and Labyrinths</u>, pp. 153-4.

φ <u>Satapatba Brahmana</u>, VI-X.

◊ E.g., Pekin, as planned in the 15th century. In the centre of the rectangular main city was the Imperial City for the Emperor's officials, in the centre of the Imperial City the Forbidden City, in the centre of the Forbidden City the Dragon Throne where only the Son of Heaven could sit, the nucleus not only of the concentric city, but of the whole Empire. Besides all this, the siting and orientation of the city were settled in accordance with the rules of geomancy, and every detail of its planning had occult significance. whereabouts. The bee performs, on the vertical wall of one of the combs, a dance in the shape of a figure-of-eight. The inclination of the figure relative to gravity indicates the direction of the nectar-source relative to the sun; while the speed of the dance, the number and size of its loops, and the distance that parts them, are signs of the distance of the nectarsource from the hive. The honey bee, it seems, used an elaborate and very practical diagram-language long before the first word was spoken on earth.)

4. DIAGRAMS AND PSYCHOLOGY

It is a common experience that, in the seemingly trivial or absurd picture-symbol, are undisclosed but inexhaustible meanings, great psychic potencies, undefined truths which are somehow captured and securely held as if in a magical and miniature prison. Θ Who has not felt the fascination of 'magic squares' and their peculiar mathematical properties, of the pentacles of esoteric tradition, of the mystical rites of Euclid --- that indescribable thrill of apprehending a world of truth condensed into a formula, like a vest-pocket edition of the Encyclopaedia Britannica? It is a curious fact, yet a very understandable one, that tradition should make the Pythagorean tetraktys of the decad one of the most precious gifts of the ancients to mankind. ° The explanations which the devotees of mystical diagrams have to offer are peculiarly lame; indeed psychological efficacy and overt intellectual content are here often inversely proportional. Who, not excepting their author, can make much sense out of Yeats' account of 'The Great Wheel' and the other figures of <u>A Vision</u>; and who would deny that they are of a piece with the poet's genius? × Most instructive is Joanna Field's account of certain spontaneous drawings which seemed to shed light on the dark places of existence. She writes: "Images would emerge that had a peculiar feeling of depth and stability, and which banished all longing for the past because they made me feel I still possessed it." These images bridged the gulf between concrete experience and abstract knowledge; they held "the glow and reality of lived experience" without its isolation; they linked past and present. "I never had to stop and say, this is all very true and interesting but what has it got to do with me? --- for in some curious way they were me." * We are under a psychological necessity to find our own vital images. Miss Field's experience was that, while deliberate efforts to think out life's problems failed, "it was the despised images that made a sensible and ordered life possible, not reasoning at all". +

We stumble on such life-rectifying patterns, discovering their power 'by accident'; and there is a certain virtue in this freedom to produce from the depths of the psyche those variations upon the universal symbols which suit our condition as individuals. The East, and Buddhism particularly, leaves less to chance, is more systematic. Magic -- both white and black -- involves the use of many kinds of diagram; and extremely elaborate concentric patterns, known as kyilkhors or mandalas, are important accessories of religious contemplation. In the Tibet of our

θ Yeats was once taking Indian hemp with a set of people in Paris, when a man ran up to him "with a piece of paper on which he had drawn a circle with a dot in it, and pointing at it with his finger he cried out, 'God, God!' Some immeasurable mystery had been revealed, and his eyes shone." Essays, p. 349. Elsewhere in the same book, Yeats writes: "All Art that is not mere story-telling, or mere portraiture, is symbolic, and has the purpose of those symbolic talismans which mediaeval magicians made with complex colours and forms, and bade their patients ponder over daily, and guard with holy secrecy; for it entangles, in complex colours and forms a part of the Divine Essence." (p. 183)



The tetraktys of the decad: as 16 is the square of 4, so 10 is the triangle of 4. ° See Burnet, Early Greek Philosophy, pp. 100 ff. It is said that the tetraktys was particularly venerated because it represented the mode of progression from the One. In that case it is no accident that so many of this book's diagrams should resemble it. × The Metaphysicals were particularly fond of 'poetical geometry', after the manner of Donne's "Let man's Soule be a Spheare..." ('Goodfriday, 1613. Riding Westward') and Vaughan's famous lines: "I saw Eternity the other night Like a great Ring of pure and endless light".

Cf. Christopher Hervey (<u>The School of the</u> <u>Heart</u>, X):

"Only the Trinity that made it can Suffice the vast triangled heart of Man"; and Thoreau (<u>Walden</u>, 'Economy'): "The stars are apexes of what wonderful triangles!"

In one of his cosmological diagrams, Robert Fludd has the Sun as the apex of a hierarchical pyramid, representing the Sun receiving the "pyramidal exhalation" of things below, and feeding them in turn with its own vital substance. See Denis Saurat, Milton, Man and Thinker, p. 265. * An Experiment in Leisure, pp. 151 ff, 190 ff, 233. Miss Field further describes such images (p. 194) as "those two-faced gods who bridge the gulf between what is spoken and what is felt, between the seen and the unseen, between spirit and flesh, bridge it because they are an outward and visible sign of an inner and private experience."

+ But Jung points out "that the mere execution of the pictures is not all that is required. It is necessary besides to have an intellectual and emotional understanding of them; they must be consciously integrated, made intelligible, and morally assimilated." The effect is a change own generation the novice spends years learning the art of making and using mandalas. † And indeed, once we look for it, there is a slender but perennial branch of the same tradition in the West. The circle as the image of the divine appears in Plato, Aristotle, St Augustine, and many others; and famous Western 'mandalas' include St John's vision of the Holy City and Dante's Mystic Rose. The vast concentric emanation-systems of the Neoplatonists and the Gnostics, and the mystical schemas of such writers as Dionysius the Areopagite, ϕ have the same general configuration; while amongst later European mystics Boehme, ø Benet of Canfield, \otimes and Blake provide examples. More significant still is Jung's discovery that modern Europeans, who know little or nothing of these traditions, tend not only to dream repeatedly of the mandala pattern, but also to attach to it the greatest significance: often it evokes feelings of "the most sublime harmony". Jung has studied many hundreds of these spontaneous mandalas -- they are his "almost daily concern" -- and he believes that they assist and express an important stage in the integration of the psyche. The patient's own account of the diagram is usually vague: it seems to stand, in some undefined way, for the wholeness of man, and for the union of the microcosm with the macrocosm. It is felt to be cosmological. Persons who can no longer accept uncritically the traditional religious picture of the universe, but who are nevertheless lost and miserable without something of the kind, are enabled by means of these numinous diagrams to find themselves and make their peace with the universe. Though there may be no thought of linking the outermost circle with the transcendent God, or the Centre with the immanent God, though no explanation at all is offered, yet the psychological concomitants are not altogether lacking. Thus Mr Herbert Read found that, of a number of mandala patterns produced spontaneously by schoolchildren, the more organized patterns proved to be the work of the more integrated children.°

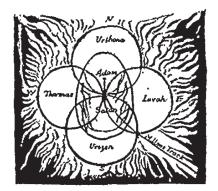
I have no doubt that there is here a tendency for us to read more of our cherished theories into the facts than is justified; but when all deductions have been made on this score, the cumulative evidence for the potency of these diagrams remains impressive. In my view they are psychologically valid because they are cosmologically valid: they are subjectively powerful for no other reason than that they are objectively true. For their function is precisely to express the most intimate union of the microcosmic self with the macrocosmic not-self. (Edward Maitland's vision provides an unusually explicit instance: "I found myself traversing a succession of spheres or belts.... the impression produced being that of mounting a vast ladder stretching from the circumference towards the centre of a system, which was at once my own system, the solar system, and the universal system, the three systems being at once diverse and identical.") * Indeed this book may be described as an attempt to show that the mandala has a sound factual basis (which modern science has done much to strengthen) and that it is capable of ministering to the needs of the head no less than to those of the heart. Or, to speak more personally, this enterprise of mine is a fairly thorough 'rationalization' of certain images arising from my 'unconscious': only it must be added that neither the images nor their source are private property. Their universal

in the conscious personality, a change which "heightens the feeling for life and maintains the flow of life". <u>Modern Man in</u> <u>Search of a Soul</u>, pp. 82-3.

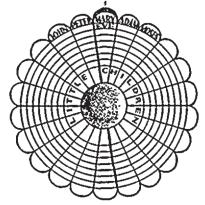
† Heinrich Zimmer, <u>Kunstform und Yoga</u> im Indischen Kultbild; David-Neel, With Mystics and Magicians in Tibet, pp.158, 225, 241; Wilhelm and Jung, <u>The Secret</u> of the Golden Flower, pp. 96 ff; Jung, <u>Col-</u> lected Papers on Analytical Psychology, <u>The Integration of the Personality</u>, and Jacobi, <u>The Psychology of C. G Jung</u>, for numerous illustrations; also Jung, <u>Psychology and Religion</u>, pp. 66 fff, 72 ff, 106. φ <u>The Divine Names</u>, V. 6.

θ <u>Answers to the Forty Questions of the</u> <u>Soul</u>.

⊗ <u>The Rule of Perfection</u>, containing a diagram of three concentric circles, showing three degrees of the divine will: the circles represent the active life, the contemplative life, and the life of super-eminence.



A sketch of Blake's illustration To Milton, II. 38. It is practically identical with some of the earlier diagrams of this book: ° <u>Education Through Art</u>. pp. 184 ff.

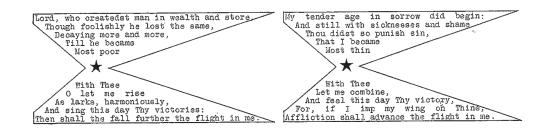


An interpretation (after Gardner) of the Mystic Rose of Paradise, from Dante's <u>Paradiso</u>. On the right are the Blessed of the Old Law; on the left the Blessed, of the New Law; at the centre the Yellow of the Semp-iternal Rose. Children occupy the innermost ring, and the greatest saints the outermost: here, once more, status is a matter of range.

* Edward Maitland, <u>Anna Kingsford, Her</u> <u>Life, Letters, Diary, and Work</u> (quoted in Wilhelm and Jung, <u>The Secret of the</u> <u>Golden Flower</u>, p. 102). importance is due to the fact that they belong to those hierarchical levels where we are all one.

(There is one class of diagram which everybody uses, namely writing. According to graphologists, handwriting, besides providing a key to a man's overt tendencies, is relevant also to the many-levelled range of his total personality: it is hierarchical, and indeed cosmological. + Three zones or layers are distinguished --- (1) the upper, containing for example the loops of b and h and l; (2) the middle, containing the rest of these letters, and the vowels; (3) the lower, containing the loops of g and j and y. The middle zone is said to correspond to the sphere of everyday reality and social relationships. "In writing upper lengths we reach up above the everyday sphere, in writing lower lengths, we reach down below its domain... The meaning of these three zones in handwriting corresponds to the division of the human personality into mind, soul, and body; and of the universe into heaven, earth, and nether regions." × According to this formula, when the upper zone is emphasized the writer's tendency is towards the intellectual or spiritual; and when the lower zone is emphasized his tendency is towards the sensual or material or instinctive part of his nature. The ideal is symmetry --- the suprahuman upper zone well balanced against the infrahuman lower zone, and each of the three receiving its due. A further complication is that a forward slope, or any feature tending markedly to the right, is taken to indicate that the writer concentrates upon the future and the outer world; conversely, a backward slope, or any feature tending to the left side of the page, indicates a tendency to withdraw from outer reality to the self and the past. In short, it seems that the primary illustration of this book was the script itself, in whose configuration my diagrams were already implicit.)

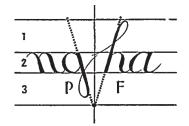
Perhaps most interesting of all is that characteristic 17th century conceit, George Herbert's 'Easter Wings', prototype of the many pyramidal diagrams of this book ---



Or, in my language, man must needs be reduced to nothing at the Centre, so that he may be filled out again with the Whole that is not himself.

5. THE HIERARCHY AND COLOUR SYMBOLISM

In respect of their colours, things are strikingly subject to the law of elsewhereness: they lose all that they claim, and have all that they give. No wonder the Devil's colour is black, for a black surface absorbs light of every tint and gives out none; and no wonder God's colour is white, for a + See, for further details, H. J. Jacoby, Analysis of Handwriting; R. Saudek, The Psychology of Handwriting, and Experiments with Handwriting. My remarks here are not intended to describe the technique of graphology, which takes into account all manner of characteristics that I do not mention. And I am unable to say how far the graphologist's claims are justified. They have often been ridiculed; perhaps the most effective answer is that a number of large British firms use the services of a graphologist to select, by examining the written applications for a post, those candidates who are suitable for interview. × H.J. Jacoby, <u>op. cit</u>.,p. 89.



Other instances of 'vertical symbolism' are (1) man's diurnal rhythm (horizontal sleep, vertical waking); (2) his life cycle (prostrate babe, crawling infant, upright man, bowed old man); (3) his types (the thin aesthete and saint, the pear-shaped gastronome); (4) his ancestry (belly-creeping invertebrate, mammal propped up on four stilts, primate on two). white surface is all colours because it keeps none of them for itself. Black is the colour of the sin that has nothing because it clutches at everything; white is the colour of the goodness that has all things because it presents them to others. And, of course, the same rule of elsewhereness holds for every colour: this ink is blue because blue light is the one sort which it does not hug to itself at the Centre, and this pen is green because it is content to be green in me instead of in itself. The only way to be coloured is to paint the universe.

The white light of the Whole breaks up into the spectrum of particular colours, hierarchically graduated. In the psychology of most Europeans, according to Jung, blue (the colour of the heavens) stands for intellect, yellow (the sun's colour) for intuition, green (Earth's colour) for sensation, and red (the colour of the blood) for the primitive emotions. ° The more conscious symbolism of art, as well as popular tradition, bears out this scheme more or less +. Blue is the dominant colour of Gothic stained glass, the colour of the Cherubim and the Virgin; \times it is also the colour of aristocratic blood and of the politics that favour aristocratic traditions. It represents all that is exalted, remote, deiform. The Buddha is often given blue eyes, and the whole body of the lord Krishna is blue. Bushell * writes of the Temple of Heaven at Pekin: "During the ceremonies inside everything is blue; the sacrificial utensils are of blue porcelain, the worshippers are robed in blue, even the atmosphere is blue, venetians made of thin rods of blue glass, strung together by cords, being hung down over the tracery of the doors and windows." To use the terminology of this book, blue stands for the suprahuman, the upper levels of the hierarchy, in abstraction from the other levels, and the first or theological-aristocratic state of our European civilization. At the other end of the spectrum, red stands for the infrahuman, the lower levels taken by themselves, the blind urges of the flesh •. It is the colour of war, of danger, of passion and rage (as when we 'see red'), of bloody revolution; it is, in Lawrence's stirring words, "the colour of glory...of the wild bright blood....the red, racing right blood, that was the supreme mystery' ×; it colours the base of our pyramid, and this the final stage of our civilization. Between these extremes lies green, the colour of spring and the life of the earth, restful and refreshing, modest, content to be spared the polar cold of blue Heaven and the equatorial heat of red Hell. It is the colour of the hierarchy's temperate zone, of the go-signal, of hopeful moderation: what could be more sweetly unstrenuous than "a green Thought in a green Shade" ϕ

Confirmation comes from unexpected quarters. Tibetan Buddhism has a spectroscopy of its own, whose prism is not the less effective for consisting of the hierarchy itself, instead of a lump of glass: each of the six syllables of the famous mantra <u>Aum mani padme hum</u> (Brahma, the jewel in the lotus) represents both a colour and a grade of sentient being

AUM	MA	NI	PAD	ME	HUM
Gods	Demigods	Men	Animals	Inferior Beings	Inhabitants of Purgatory
WHITE	BLUE	YELLOW	GREEN	RED	BLACK

Of the immense appeal of colours to children, and to adults who are not yet immersed in the grey shades of the prisonhouse, much could be written. It prompted Goethe's researches into colour-theory, and such remarks as: "Men in general experience a great joy in colour... That healing powers were ascribed to coloured precious stones may have arisen out of the deep feeling of this inexpressible pleasure." And Ruskin: "The purest and most thoughtful minds are those which love colour the most." "Of all God's gifts to the sight of man, colour is the holiest, the most divine, the most solemn." I think part of this delight arises from the fact that colours stand for the different hierarchical levels, and their harmonies for the union of the exalted and the lowly, of Heaven and Earth. Also there is a sense in which every colour is the 'white radiance' of the Whole, seen through our tinted and selective spectacles. Even the colour of every visible creature is (to adapt Erigena's saying) a theophany.

° See Jacobi, <u>The Psychology of C. G. Jung</u>, p. 93; Jung, <u>The Integration of the Person-</u> <u>ality</u>, pp. 48, 194.

+ See, e.g., Jameson, <u>Sacred and Legendary</u> <u>Art</u>, i. pp. 35-7.

× That is to say, the colour of her mantle; but in pictures of the Assumption she wears white.

* Quoted by D. A. Mackenzie, <u>Myths of</u> <u>China and Japan</u>.

Yeats (Essays, p. 187) reports a vision of exalted beings in blue robes.

• It is said that the victims of tarantism, the epidemic dancing mania common in Italy in the 16th and 17th centuries, were fascinated by red and were strongly averse to blue: they were also attracted to the sea, which is generally regarded as a symbol of the unconscious. (Cf. Jung, <u>The Integration of the Personality</u>, p. 103.)

× Apocalypse, p. 173.

E.I.Watkin, in The Bow in the Clouds, links the spectrum with the ladder of being, ranging from mere matter to the beatific vision; only he reverses the usual schema, for reasons which are not clear to me. Yet the doctrine of region-reversal would seem to suggest he is justified. φ Andrew Marvell, 'The Garden'. It is significant, or at least very appropriate, that lawns and pleasure gardens were virtually a Renaissance discovery. For it was in the second stage of our civilization that man's attention turned inwards from God's circumambient blue Heaven to his own green Earth, before penetrating to the blood-red core of the body.

Man himself is, or rather contains, the entire spectrum. + He wears a Joseph's coat of many colours; or, as the Upanishad ϕ puts it, "there are in his body the veins called Hita, which are as small as a hair divided a thousandfold, full of white, blue, yellow, green, and red". His well-being does not lie in denying the red and cleaving to the blue, but in the discovery and acceptance and harmonizing of the entire range of colours, in the recognition of the fact that every one of them contributes to the "white radiance of Eternity", and so to his own being. Newton's wheel is a mandala of profound significance. The ethereal and starry-eyed idealist looking at the world through sky-blue spectacles is no better than the sans-culotte who wants to paint it red --- if not with his own blood, at least with other people's. As the jet of ignited gas sheaths its cold blue dagger in a hot red scabbard, as the blue Cherubim are lost without the fiery Seraphs, so man must go for both ends of the spectrum at once: for his highest is not merely high, but the union of high and low. Traditionally, it is a condition of our 'going to heaven' -- "above the bright blue sky", as the children's hymn says -- that we shall first be washed whiter than snow in the red blood of the Lamb: a familiar and hierarchically symmetrical colour-scheme, reflected in so many of our national flags.0 Most of us, it is true, are partially colour-blind, and look either for a monochromatic universe or for some pale-tinted, washed-out, ladylike water-colour of it. I suggest that an important part of the painter's function is to help us towards hierarchical completeness, firstly by giving symbolic expression in colour to all the parts of our personality, and secondly by harmonizing them. In the fullest sense he can "wing our green to wed our blue" † Of course this is not to say that he would paint better if he discerned the cosmological significance of his palette, but only, that his art (and all art) is valid and compelling because it has universal affiliations: it is no merely human enterprise, but the work of all the levels to which it refers.

The savage and the young child are largely unconscious of the most exalted hierarchical levels. It is, therefore, not surprising that young children are responsive to red and relatively indifferent to blue, that Palaeolithic and Bushman drawings are in red, yellow, and black, and that in our own times many primitive peoples have no words for blue. • (On the other hand bees are responsive to blue, and indeed can see further into the ultra-violet end of the spectrum than we can. Add to this the perfection of their social organization and of their dance-language, and we are struck with the possibility that here is an evolutionary venture which, though vastly different from our own, is not without access to the higher levels. To be quite sure, because the manner of this access is hidden from us, that it cannot exist, would be mere parochialism or poverty of imagination.) *

6. THE HIERARCHY AND MUSIC

In the ancient Chinese <u>Record of Rites</u> \times it is written: "Music expresses the harmony of Heaven and Earth, Ritual the hierarchic order in F.W.H. Myers fitly compared the mind to a spectrum, in which the infrared corresponds to unconscious organic processes, visible colours to the conscious, and the ultra-violet to the inspiration of prophet and poet.

+ David-Neel, <u>With Mystics and Magi-</u> <u>cians in Tibet</u>, p. 237.

φ<u>Brihadaranyaka Upanishad</u>, IV. iii. 20; of. Chhandogya Upanishad, VIII. vi. 2. A Chinese religious text runs: "A dragon in the water covers himself with the five colours; therefore he is a god." (De Visser, The Dragon in China and Japan p.63) The alchemists believed that when the cauda pavonis, the rainbow coloured peacock's tail, appears, the opus is nearing completion. In many paintings of the higher ranks of angels the iridescent 'eye-spots' of the peacock embellish their wings. Traditionally, the significance of a colour depends largely on its context. Red with black is the colour of Hell and the Devil; but Christ and the Virgin wear the red tunic as well as the blue mantle -- the red, offset by the blue, represents heavenly love. Again, black by itself denotes sin and night and death; along with white, it denotes purity and humility, In short, hierarchical symmetry tends to be the ideal: a Pairing of the colours.

θ Including those of Chile, Costa Rica, Cuba, Czechoslovakia, France, Holland, Iceland, Liberia, Norway, Panama, Paraguay, San Domingo, Siam, U.S.A., and Yugoslavia.

† Meredith, 'Wind on the Lyre'. See also his magnificent 'Hymn to Colour'.
A small proportion of Europeans see no blue in the spectrum, but the defect as a rule passes unnoticed. Commoner, or more often discovered, is the inability to distinguish red from green.

• This was noticed, many years ago by Max Muller (<u>The Science of Thought</u>, p. 299). In <u>Cosmic Consciousness</u>, Dr Bucke made increasing sensitivity to blue one of the marks of the development of consciousness towards a higher or mystical awareness.

* For Bergson, animal life realizes its inherent possibilities by dividing into <u>two</u> ascending movements -- intelligence and instinct. We men head the former, the hymenoptera the latter; and without them we are, so to say, half missing. (<u>Creative</u> <u>Evolution</u>, pp. 140-4, 182-9)

× <u>Li Chi, Record of Music</u>, I. (Hughes, <u>Chinese Philosophy in Classical Times</u>, pp. 277-8.) In violent contrast is the view typical of our age: "There is no music in Nature, neither melody nor harmony. Music is the creation of man." H. R. Haweis, <u>Music and Morals</u>, I. 1. To us, Carlyle's "See deep enough, and you see musically; the heart of Nature being everywhere music, if you can only reach it" is only his usual windy rhetoric. And Byron's Heaven and Earth. Since there is this harmony, the hundred (species) of things (in Nature) are evolved. Since there is this order, these things as a whole are distinguishable among themselves. (Thus) the creation of music originates in Heaven, whilst Earth gives to Ritual its law of control.... With the myriad things (in Nature) so scattered and diverse, in the heavens above and the earth beneath, Ritual has its field of action. With (all Nature) in increasing flow and (the myriad things) coming together and being changed in themselves, Music has its sphere of development.... Thus it was that sage men created (our) music as a response to the heavens and framed (our) ritual as a partnership with the earth; and this ritual and music in their splendour of perfection are under the governance of Heaven and Earth." --- A somewhat confused statement, which nevertheless leaves us in no doubt as to the author's conviction that music has a cosmological basis as well as cosmological significance. Ritual and music do more than signify the existence and the harmony of the great society of Heaven and Earth: they are its own many-pitched language. Music is no more strictly human than science is. Θ In the west, Pythagoras -- and he is said to have got the idea from Egypt -- associated the seven strings of the lyre with the seven planetary spheres, making the innermost sphere (that of the Moon) correspond to the note of highest pitch (Nete or D), and the outermost (that of Saturn) to the note of lowest pitch (Hypate or E). ϕ Thus at the very beginning of musical history we find a regional or cosmological distribution of notes according to their pitch: the musical and the hierarchical scale are in some degree assimilated. The sequence is one of a kind that this inquiry has made familiar --- first, the music of the spheres is not distinguished from our music; then it becomes unearthly, ineffable, a kind of reedy tremolo pitched far too high for mortal ears; then it goes the way of "the young-ey'd cherubims" † and the universe is as silent as the grave -- as the mass-grave into which the tiered angelic choirs, or cosmic orchestra, have been unceremoniously thrown. Doubtless in withdrawing the distributed harmonies of the universe end concentrating them here at the centre, we have made them more explicit to ourselves (it Is no accident that the dissolution of the angelic orchestra should proceed pari passu with the organization of the human \times), and the centripetal movement is necessary to the composition as a whole. But so also is the redistribution, the centrifugal movement which restores not merely life and mind to the universe, but music with them. The time has come for us to say, with Sir Thomas Browne, that music is "an Hieroglyphical and shadowed lesson of the whole World.... such a melody to the ear as the whole World, well understood, would afford the understanding". O It gives us insight and entry into every storey of the hierarchical structure. Indeed our finest music is no transposition of cosmic themes, but the real thing; and the only instrument capable of sounding its grandest chords is the hierarchy itself.

While other arts may reveal the Ideas, says Schopenhauer, music reveals the universal Will --- the august thing-in-itself. The bass notes sound forth the lowest grades of the Will's objectification, unorganized nature, crude matter; higher notes proclaim the world of plants and of beasts; the highest belong to the intellectual life that is in man. * The phenomenal world and music are two manifestations of the same vital

"There's music in all things, if men had ears" has 'only poetic truth'. But there are still many who, in our own age, feel that music is nothing if not universal, and that it belongs at least as much to the stars as to man. "Level roads run out from music to every side", says Goethe; but the main highway is sharply graded, for (as he says elsewhere) "The demonic in music stands so high that no understanding can reach it, and an influence flows from it which masters all, and for which none can account." θ Newman (Sermons before the University of Oxford, XV) refused to believe that musical notes, with all their power to move the soul, belong only to earth: they have escaped from a higher sphere, and are the voice of angels. Fraser (Adonis, Attis, Osiris, i. pp. 52 ff suggests that the moving influence of the lyre or harp was set down to the direct inspiration of a deity; and certainly music has everywhere accompanied prophecy and communication with the spirit world. (Cf. Dawson, Religion and Culture, p. 68.) We still speak of inspired music, and even of heavenly or divine melodies. φ But Boethius (De Institutione Musica) makes Nete signify the string with the lowest note, and Hypate the highest: by a curious but significant error, he 'reverses the regions'.

† <u>The Merchant of Venice</u>, V. 1: here is the second stage -- even the smallest orb sings like an angel, but alas we are too gross to hear.

On the music of the spheres, see Plato, <u>Republic</u>, 617, and Hippolytus, <u>Refutatio</u>, 1. 2. Our equivalent is radio-noise -- unlovely but audible.

 \times The great period of European musical development and achievement was 1590-1900. The universe was silenced, and man became articulate. It is now for him to perceive that the universe is the orchestra as well at the auditorium. Though the glorious heavens do not speak the language of men, yet, says the Psalmist, their voice is heard. (Ps. XIX. 1-4) For he is their instrument, as they are his.

 There is, for instance, the profound lesson of the fact that the melody that gives unity and meaning to a piece is usually found in the high notes, while high and low are alike needed for the full effect.

• This is no more than sober truth: when I consider what is involved in 'playing the piano' -- air, gravity and light, trees and metals, and so on indefinitely -- I soon find that no hierarchical level can be excluded from the performance.

Some otherwise normal persons claim that the sounds they hear are coloured. It would be interesting to know whether the higher notes are in their experience linked with the blue end of the spectrum, and the lower notes with the red end. See Woodworth, <u>Psychology, A Study of Mental Life</u>, p. 351. * <u>The World as Will and Idea</u>, i. pp.333 ff

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urge, and the composer's sound-patterns express the immense richness of nature in all its grades and individual differences, seeking to bring them all into harmony. Accordingly music ministers, as Plato and many after him have observed, to the health of the soul. It reconciles the heights in us with the depths: it is an endless series of exercises in the loss and restoration of hierarchical symmetry. Eschewing the abstract unity that sacrifices multiplicity, it builds a sublimely harmonious whole out of an endless cacophony of parts, without injury to one of them. Beethoven called it "the mediator between the spiritual and the sensual life". Its vertical harmony reunites us with the Whole that is, its horizontal counterpoint with the Whole that was and shall be. "When I hear music", says Thoreau, "I fear no danger. I am invulnerable. I see no foe. I am related to the earliest times and the latest."

The peculiar and many-sided fitness of music to furnish unlimited 'hierarchical diagrams' is no mystery. (1) Though unfolded in time, it gets the better of time: in true hierarchical fashion, it is both temporal and supertemporal. (2) Its manifold and interwoven rhythms make audible the pulses which beat in us; and (3) Its ascending and descending scales, both major and minor, proclaim the vertical processes which unite the whole system. (4) Its form -- notably the symphonic -- consists of Exposition, Development, and Recapitulation, in which the subject is first announced, then complicated and obscured, and finally recovered; and this triadic procedure (under such titles as Paradise, the Fall, and Heaven) is characteristic of our human-hierarchical development. (5) Its detailed procedure is along similar lines: accumulating dissonance, with accompanying psycho-physical tension, is periodically resolved by consonance and the relaxing of tension; and the value of the final resolution cannot be separated from the clash of the elements that precede it. (6) The 'contrary movement' typical of the New Organum, and found everywhere in later music, may be called an exercise in hierarchical symmetry; but in music as in life nothing could be duller than Pairs which never come apart --- vertical balance cannot be found without first having been lost. (7) Music is markedly diagnostic. Thus our own polytonal and atonal music are audible symptoms of our hierarchical condition --- the Martian listener might well interpret them as the groans of our agonized planet. With ruthless disregard for all the old rules of vertical organization, Arnold Schönberg, Alban Berg, and their followers put all the twelve semitones in the scale on an equal proletarian footing; and the result for most ears un-musical anarchy and uproar. Even the hierarchy of the keyboard must be levelled, and the world of sound atomized. \times

But the main point of this appendix is that hierarchical diagrams, whether musical or otherwise, owe their force to the fact that they are, in the end, true functions of what they stand for \bullet Neither angel nor man nor demon is anything else than the active totality of the 'diagrams' and symbols, of the evidences and the regional workings, which constitute his presence in his companions, and theirs in him. The commercial traveller is a partner in the firm, all of whose members are out on the road. The thing is not itself without each peripheral manifestation: because it is an indispensable part, the symbol can do duty for the other parts. The

A. E. <u>The Candle of Vision</u>, 'The Language of the Gods', pp. 120 ff) has a somewhat fantastic variation on this doctrine. Perhaps the most elaborate and artificial scheme is that of Hugh of St Victor (<u>Didascalicon de Studio Legendi</u>) which having distinguished the music of the worlds, of humanity, and of instruments; proceeds to further triadic divisions and subdivisions.



The first part of Dr Dykes' hymn- tune 'Almsgiving' --- an instance of horizontal as well as vertical symmetry.



The opening bars of Vaughan Williams' 'Towards the Unknown Region', to show 'contrary movement'; 'similar movement' and 'oblique movement' are of course common also.

× It is said that Beethoven declared music to be "the one incorporeal entrance into the higher world which comprehends mankind but which mankind cannot comprehend". Were he alive nowadays he would perhaps add (I think truly) that it also has a back-door, or trap-door, opening into the pandemonium which man comprehends, but which cannot comprehend him.

It is indeed sober truth, as Boehme declared, that "there is a real, intelligible, distinct sound and speech used by the angels" (<u>Confessions</u>, p. 124); the level -- infrahuman, human, and suprahuman -- to which we refer the sounds we hear, depends on us. Conversely, what we are depends on the range we accord it.

• Cf. Maritain, <u>Redeeming the Time</u>, pp. 193 ff; I. A. Richards, <u>The Philosophy of Rhetoric</u>, 130-1.

large opening theme of the Schumann E flat Symphony momentarily resembles (says a famous contemporary) "a remote glimpse of majestic beings in some other world" *, let it be added that without that same glimpse, that particular theophany, something would be lacking from them. The music which can

"Dissolve me into extasies, And bring all Heav'n before mine eyes" is not other than Heavenly, a true function of the celestial. * <u>The New Statesman and Nation</u>, July 23, 1949: an article by Mr J. B. Priestley.

R. A. Nicholson (Rumi, Poet and Mystic, p. 32) describes the theory of the music of the spheres as "almost a commonplace in Moslem philosophy and poetry. Our own melodies, say the Pure Brethren of Basra, are echoes of this heavenly music. The Sufis link the uplifting influence of music with the pre-existence of the soul; in it they hear again the Voice of God and the anthems of the Heavenly Host." Compare C., F. Raanuz (<u>The Triumph of Death</u>, x) "Beyond all lands there is perhaps the Land ... where we have in common a Father and a Mother, where the universal parenthood of men is half-perceived for an instant. For it is to a new perception of this that all arts tend, and to nothing else; to this it is that musical notes tend, and to nothing else ..." And Yeats: "All sounds, all colours, all forms, either because of their pre-ordained energies or because of long association call down among us certain disembodied powers ..." Essays, pp 192-3.