

The DRAMATIC UNIVERSE

Volume IV

History



J.G.BENNETT

THE

DRAMATIC UNIVERSE



Volume Four

HISTORY

J. G. BENNETT

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PREFACE

This fourth volume of *The Dramatic Universe* completes, albeit only in the sense that the game stops when the referee blows his whistle, a task that has been with me for nearly fifty years. The task grew out of the conviction that nothing less than a total and consistent account of all our experience will ever give us peace of mind. Since a total explanation of an unlimited situation can never be achieved, the search for it must be unending. Peace of mind is not to be sought in the static security of an end-point reached, but rather in the dynamic satisfaction of knowing that one is on the way and will not abandon the pursuit. To pause from time to time in order to assess what has been accomplished is a necessary part of any undertaking; especially of one that has no end. To publish the results of such an assessment is hazardous for it suggests a claim to finality that is wholly unjustified. The dynamism of the search is inconsistent with the static character of the written word. This is painfully obvious when the publication of a work aiming at an unified presentation extends over many years. *The Dramatic Universe* is a quest for a total solution: for forty years this quest has continued and it is inevitable that discoveries made since the first volume appeared impose revisions and corrections that cannot be inserted where they belong—in the volumes already published. This has thrown some of the burden of rectification upon the last volume. It has also prevented me from including some results recently obtained, because their inclusion would involve very extensive revisions of the earlier volumes that I hope I may be spared to make one day.

In short, this is not a completed undertaking; nor would another ten years of hard and productive work make it so. The world is infinitely complex; and, even if some of the principles that govern its existence are simple, others, by their very nature, are so complex that no human mind could ever grasp them. One such principle—that of the uniqueness of the individual self—is of direct concern to our undertaking and this is one reason why attempts to construct simple and comprehensive 'Systems of the World' break down before the problem of explaining man himself.

I believe that the uniqueness of the Individual self is not an accident; but is inherent in the character of Will. Every will is a fragment of the Total Will and as such must be unique. Now, in Vol. III, I connected

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the Individual Will with the Present Moment. All experience is contained within the Present, so each separate will determines a Present Moment that is unique. It follows that there must be as many 'Systems of the World' as there are Individual Wills. By the principle that wills coalesce to form Greater Present Moments, systems of explanation can also coalesce; but they cannot be simplified, in the way that has been so often attempted, by reducing them all to a common denominator. This is why systems that start from universal principles alone, fail to give any satisfactory account of individual experiences, especially of individual wills. Pluralism of will is not inconsistent with a doctrine of evolution towards Unity: one moreover, that is not merely the compresence of many selves within a Great Self, but a coalescence of Wills that forms a Greater Self. These notions are further developed in this volume, and by their very nature, they must be incomplete.

Another factor that imposes incompleteness is the prodigious volume of data, accumulating at an accelerated rate, in every branch of Natural Science, in History and in the Social Sciences. Though the greater part of this material has little relevance to the task of finding a total explanation, it is not easy to tell without examining it whether a particular discovery is significant or not. This kind of difficulty does not arise for any specialized enquiry where the criterion of relevance is 'on the label' as it were. New light on the history of the Mongolian conquests in the thirteenth century may mean little to the biochemist who has made a decisive step in elucidating the replication of a chromosome molecule; but both discoveries may be very important for understanding the true character of the historical process: the main theme of the present volume.

The temerity of seeking for an explanation of all experience requires that some account be given of the genesis of the undertaking. It arose from the intense experiences that I shared with millions of others in the First World War. The waste and horror of the war convinced most young people that the static beliefs in which we had been nurtured were no answer to the problem of human foolishness and ineptitude. In my case, disillusion was tempered by my faith in natural science which, at that time, seemed to offer hope of answering ultimate questions. I could see clearly enough that the general belief that the laws of nature were absolute and inviolable conflicted with the equally general, but tacit, acceptance of human responsibility and hence of human free-will; but I also believed that even this intractable problem would yield to scientific research, and thought I knew where the solution would be found. For some reason that I have never been able to discover, I had

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from early youth been devoted to Non-Euclidean Geometry. My favourite reading in the trenches was Coolidge's Elements and I spent

most of my spare time in trying to acquire the power to visualize constructions not allowed in conventional space and time. In 1920, I found what seemed to me the way to remove the incompatibility of free-will and the laws of thermodynamics, by postulating a fifth dimension in which change is possible without increase of entropy; that is, without sacrifice of order. It was then that I conceived the plan of a great work that would harmonize natural and moral science in a complete synthesis of inner and outer experience.

When I returned to England in 1921, I tried to interest mathematicians, including Sir Joseph Larmor and Professor Hobson, and biologists, including J. B. S. Haldane, J. Huxley and T. H. Morgan, in the undertaking, but soon realized that I had to do far more work myself before I could hope to win the cooperation of scientists, who were still looking for a solution in the conventional space-time world, even as modified by Einstein and Planck. I was surprised to find so little recognition of human ineptitude; the more so as I had, about that time, met Gurdjieff and Ouspensky and had rapidly become convinced that Gurdjieff was right in asserting that man is asleep and neither knows himself nor what he does. I was, moreover, greatly impressed by evidences of a Traditional Wisdom, that Gurdjieff claimed to have discovered in Central Asia, whose custodians knew the secret of transforming people from 'machines' into 'men'. Personal experiences, the validity of which I could not doubt, had convinced me that there are regions of experience inaccessible to the senses and the mental processes of ordinary man. Though extraordinary insights might occur spontaneously and unpredictably to anyone, I accepted Gurdjieff's assertion that what is really necessary is transformation of the entire nature and that this is possible only by rightly conducted 'Work upon Oneself'. Admitting that the techniques of transformation might have been known in the past and might even yet be preserved in 'Schools of Wisdom', I could see that they would stand little chance of being adopted and applied in the modern world, unless the principles on which they are based could be restated in terms acceptable to scientific thought of the twentieth century. This gave a new turn to my own undertaking. I realized that it would be of little interest to find a theoretical explanation of our experience, if this very experience is itself inadequate and incomplete owing to the lack of practical techniques for transforming it.

In this fourth volume, I shall start with the concept of the Present Moment as the locus of all forms of thought and expression as well as all

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decisions and actions. The present moment is in a constant state of flux. It changes in content and form, as well as in extent and duration,

under the influence of elements that enter it from different directions. It is the scene of unending strife between order and disorder, between freedom and determination, between evolution and degeneration. The outcome of these conflicts is uncertain on the scale of our own experience; and, so far as we can tell, it is so upon the universal scale also. This uncertainty gives the Universe its Dramatic character and it also makes our own individual lives significant and purposeful.

It is hard, indeed impossible, to make sense of all the conflicts and contradictions of our experience within the fixed framework of space and time in which human speculations about Reality have been imprisoned for centuries. This brings us to one of the central themes of this work: the hypothesis of a Six-Dimensional Universe with its three time-like conditions that I have called Time, Eternity and Hyparxis. The changing content of the present moment derives from sources of three kinds. The influences of what we call 'past' and 'future' are but one of these sources. Our present moment is such that it always discloses its dependence upon what is 'not-present'. The 'not-present' must be also a Greater Present within which our own present is contained together with those of all other centres of experience like ourselves. One way of describing the state of 'total explanation' would be to call it the vision of all time and all existence; thus bringing our task into line with that of Plato's philosopher. Two of the differences between our approach and that of Platonism and its derivatives are that the notion of the Present Moment preserves both Individual and Universal significance, while the properties of time, eternity and hyparxis make our scheme through and through historical.

This is why this last volume is devoted to History. I examine the principles of history under the picturesque and not wholly misleading title of the 'War with Time'. I then apply the results, first to the origin and evolution of Life on the Earth, and then, to the origin and development of Mind. The Dramatic Universe is an historical universe. The human drama is the drama of history. The present moment with its immensely rich and complex content cannot be understood without reference to the content of the Greater Present Moment. But more important still is the enlargement of our world picture beyond simple 'past, present and future' to include other modes of existence that I have called the Eternal Fields and the Hyparchic Past and Future. With these, I postulate Higher Intelligences able to appreciate and act within a Present Moment of vastly greater duration and depth in all

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dimensions than that of the human mind. I have tried in this volume to show that as body evolves towards mind, so does mind develop towards Intelligence and Intelligence towards some still higher Principle that we can scarcely conceive. Conversely, this evolution and this

development depend upon help and guidance from Higher Intelligences and Powers that are 'already there'. The main theme of this volume is the role of Higher Intelligences in history, and here I include both human and non-human agencies operating on a higher level of understanding, and within a Greater Present Moment, than those of ordinary men and women. Closely connected with this theory is the Doctrine of Transformation, according to which all men have the potential for attaining the Higher Intelligence and so of participating consciously and responsibly in the direction of the evolutionary process.

The main thesis and its corollaries are unfashionable, chiefly because they appear to be a return to a doctrine of providential history that disregards the Laws of Nature. This is certainly not true for the scheme I have put forward. The operation of human Intelligence does not violate the Laws of Nature, even when it results in changes in the course of events. The Higher Intelligences that I have postulated must work in the same way, though on a far greater scale of time and space. If this postulate proves to give us a satisfying account of the traces of the past that we call 'history', it should also guide us in our expectations of the future and in framing our decisions for action within the present moment. In view of the breakdown of non-intelligent schemes of explanation, the postulate of 'Intelligence in History' deserves to be far more carefully examined than it has been in recent centuries. Intelligence differs from mind in that it requires cooperation and not passive submission. We can act upon material objects by reason of our mental powers and our superior will, but a Higher Intelligence can act only by evoking a response from the intelligence latent within the field of its operation. Thus Intelligence in human history must mean intelligent cooperation between man and the Higher Intelligence that seeks to help him. This must be understood in the light of what I wrote earlier in this Preface about the uniqueness of the Individual Present Moment. A two-way communication must be established between the intelligence—perhaps still unawakened—in our own small present moment and those Greater Intelligences that can see and understand and operate within a far greater Present Moment than our own. If this work, notwithstanding its incompleteness and imperfections, succeeds in drawing attention to this theme, it will have served its purpose.

It would have been still less complete and worse riddled with im-

D.U. IV—I*

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perfection!, but for the help I have received from many friends and especially the students and members of the Institute for the Comparative Study of History, Philosophy and the Sciences with which I have been connected for more than twenty years. This last volume in par-

ticular owes much to three of my colleagues, Messrs. Anthony Blake and John Bristow, both Research Fellows of the Institute, and Mrs. Dorothy Chalmers, Editor of the Western Tradition. All three are historically minded and have done much of the research that has given some substance to the chapters on the History of Mind. Mr. Ian McCoig who has redrawn the many diagrams used in this and the third volume has done so with an insight into their purpose that contributes much to their clarity. There are many others who have earned my gratitude during the twenty years since I began to write the Dramatic Universe.

I must acknowledge my debt to my publishers whose patience in waiting so long for the completion of so hazardous an undertaking must surely be rare. It was in 1946 that I first met Mr. Paul Hodder-Williams, recently returned to the family business from the Second World War, and to my surprise and delight found that he was prepared to sponsor the publication of a work that was most unlikely to have a commercial success or even a *succès d'estime*, at least, within our lifetimes!

The four volumes make hard reading and I am well aware from correspondence that very few readers have been prepared or able to make much of them. I am all the more grateful to those who have not only read, but grasped their significance and have drawn the attention of others to the themes developed. I need hardly say, in conclusion, that I take no credit for anything of value that the book may contain. It would be like a visitor to the mountains taking credit for the beauty of the scenery that unfolds itself to the onlooker.

J. G. Bennett

1st May 1966

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INTRODUCTION

This last volume of our survey of the Dramatic Universe is devoted to history, and especially to the history of the human mind. In a very significant sense, History is the content of the mind; for all that has happened since the world began is present to the mind, notwithstanding that only an infinitesimal part can be discerned in any detail. Conversely, it can validly be said that without mind there would be no history—nothing but an endless array of meaningless transformations of matter and energy.

The intimate connection between Mind and History is made in the Present Moment. The present moment is the totality-of immediate

experience both actual and possible. All that is experienced is present, but it does not follow that what is not experienced is not present. As we read a book only one page is directly experienced; but all the rest are present and so too are the other unnoticed books on the shelves behind us. The Present Moment is the one immediate certainty of our experience and yet it is vaguely outlined and its content varies in many different ways. Moreover, the 'present moment' of one person is different from that of another. Much the same can be said of both mind and body. There are separate minds, partial minds, collective minds, and there are also 'other' minds.

We are accustomed to associate history with the 'past' and indeed as a convenient mode of description this works well enough. But we do not directly experience the past, except in rare states of consciousness when it appears to be present. The 'past' is a verbal fiction that, when likened to refer to some actual object, can be very misleading. Without mind, no meaning could be assigned to the word 'past', as all events would have an equal status within the 'Absolute World'. For mind, the situation is totally different; so different indeed that mind cannot conceive mindlessness, but unfailingly projects itself into the entire content of its own experience. This makes it hard to realize that historical reality is substantially different from the simple sequence of events. Thus we fall into the two-fold illusion of supposing that we can contemplate history without mind and mind without history. This involves us in the further error of supposing that we can contemplate anything at all except the content of the present moment.

If we put aside this last error and accept that all experience is in the

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THE DRAMATIC UNIVERSE

present moment; we have to choose between solipsism, or the doctrine that only 'my' present moment is real, and coalescence, or the belief that the present moments of separate selves can be united within a Greater Present. In the present volume, we shall adopt the second alternative and take it as the foundation of a view of history that treats the real world as a Chinese nest of present moments containing, and contained by, others. This view agrees with our private experience that is always 'of the present moment and yet is constantly varying in extent, duration and content. The apparent incongruity of treating history as if it were contained in the present moment, is due to the habit of thought, prevalent for thousands of years among speakers of the Indo-European group of languages, of treating experience as a linear sequence of events. 'Time', according to this habit of thought, appears as an independent reality in which 'before and after' and 'past, present and future' have objective meaning apart from the experience they qualify. It is not easy for those who are conditioned by linguistic form to enter into the experience of others who, though also conditioned by their own

modes of thought, are free from the illusion that the nature of time is adequately expressed by the past, present and future tenses of the Indo-European verb. The sense of the Present Moment is conveyed with great force in the Semitic languages, which have no intrinsic verbal forms for expressing the flow of time.

We cannot abandon our native languages, but we can seek to remedy their defects. The habit of treating time as an objective reality has been to some extent cured in modern physics by relativity and quantum theory, which help us to put aside the illusions of an absolute time and of continuous process. Experimental psychology has shown that the duration and extent of the present moment can be measured for different forms of experience and that it combines, dissociates and changes with variations in mental state. We use forms of speech that affirm the universal significance of 'here and now', such as when we say 'at the present moment' or, more rhetorically, 'we who are privileged to share in this present historic moment'. The intuitive awareness that present moments can coalesce into a greater present is no illusion but, on the contrary, of great positive significance. The present moment does undoubtedly change, contract, expand, divide and coalesce, and yet it always remains unique and unlike any other kind of situation. The point is that all actual experience is contained in the present moment and it is not to be found elsewhere.

The usage of the term 'present moment' refers to periods of time which vary from seconds to centuries and from the transient states of

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a single person to the common experience of many, even millions. We must therefore look for some common feature and this we find in the connection between the 'present' and the 'Will'.

The peculiarity of the present moment consists in that its uniqueness does not imply singularity: but, that it is always experienced as the only one of its kind. In this respect it resembles a formal property like roundness. There is nothing like roundness—it is the only one of its kind and therefore unique. But it is not singular for we meet with many instances of roundness. This may give us the key to grasping the character of the present moment. Just as roundness is the property common to all round objects, so is the present moment the property common to all centres of experience. We cannot write 'selves' for centres of experience, because we have seen that the present moment can be shared by many. We can write Will, but the justification for doing so cannot be developed here. It has been suggested in Vol. II in connection with Individuality and Self-hood and it was reinforced in Vol. III in connection with Human Societies. As the purpose of this Introduction is to indicate the lines we propose to follow in our account of history, we

shall make the assumption that the apparent contradiction of the uniqueness and non-singularity of the Present Moment is due to a property of the Will that is not recognized in our usual modes of thought.

With this assumption we can say that the Will determines the extent and character of the Present Moment. All that is outside the sway of any particular will is also outside its present moment. It follows that the present moment is perpetually being invaded, enriched, weakened, strengthened, by the influx and efflux of elements extraneous to the will. Among these elements are traces and memories that we refer to the 'past'; expectations, fears, foresights, that we refer to the 'future'; forms and patterns that we relate to eternity and acts of separation and coalescence conditioned by hyparxis. These various elements are all experienced within the present moment, but they originate outside it. An important group of these elements that enter and leave the present moment gives rise to the experience that we interpret as Time. We do not question the authenticity of the experience of successive changes in the content of the present moment, nor the validity of the distinction between traces and memories on the one hand and expectations on the other. We do, however, question the common assumption that memory refers to experiences that 'no longer exist' and expectation to experiences that 'do not yet exist'. If the present moment is enlarged a memory becomes a present experience. It can also happen that an expectation becomes a present experience—for example in the pheno-

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menon of pre-cognition. Since enlargement and contraction of the present moment may occur to any degree—at any rate we know no limits to the possibility—there is no justification for saying that there is an absolute past or an absolute future or even that 'before and after' can always be predicated of two events. Situations that, for our small present moment, appear to be separated by the relation of before and after may, for another and greater will than ours, all be here and now. The same argument applies to separation in space. That which on one scale is 'at a distance', on another scale is 'here'. My own house is here and now for my personal life and other houses are 'at a distance'. But for my life as a member of a community all houses in the village and all its inhabitants are here and now. Such modes of coalescence are familiar to us, but we do not recognize that they depend upon acts of will. They are transformations of extent and content of the present moment brought about by a shift of the interest or attention. This is, whether conscious or unconscious, an act of will. The man who has no will to be a citizen does not belong to the present moment of the city and is not even aware of it.

The connection between space-like coalescence and will is not hard to recognize. That which arises in time-like experience is harder to accept.

And yet it should be obvious that a 'past' moment can become 'present' if we accept its present reality and do not thrust it away from us. We live in a small world because we have a small will. Development and evolution in the true sense involve coalescences of will, and so the enlargement of the Present Moment. Coalescence of the will comes by its exercise and this is possible because it is opposed by a disintegrating or disordering tendency that invades the present moment. Here we meet the true character of Time. Time is the name that we give to the disruptive influence that enters our present moment. In so far as we succumb to this influence, we find past and future separated from us and from each other. We do not readily grasp that the disruption is due to the weakness of our own will. Hence we treat time as an objective reality and the temporal sequence as independent of man or of any other mode of existence.

In the present volume, we shall start with an examination of the various ways in which the present moment seeks to preserve its identity against the disruptive influences that enter it. We refer to these collectively as the War with Time.

Within the present moment, there is a state of change or flux. This is of at least two kinds, that can be called causal and purposive. We can distinguish also insignificant and significant change. The first kind is

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unrelated to the will that characterizes the present moment, while the other stems directly or indirectly from acts of will. These two kinds of change correspond to 'happening' and 'history'. In this way, we pass from the study of experience as the given totality to the discrimination of direction and purpose transcending the immediate present.

Significance cannot be predicated of a situation that has no recognizable order. And since significance is certainly relative, there must be more orderly and less orderly situations. The hierarchy of order corresponds to the series of multi-term systems introduced in Vol. II and more fully developed in Chapter 37 of Vol. III. With the help of the results obtained we shall set up a Systematics of History in Chapter 43. In this way, we shall connect history with the present moment and the struggle between Order and Disorder that we have called the War with Time.

Having laid the foundations of our historical studies, we shall examine the story of this earth and the appearance and evolution of life to the point where the organization of sensitivity in the higher animals made possible the arising of Mind. The seven chapters of Part 17 will be devoted to the History of Mind until it reaches the Present Moment shared by the writer and the readers of this book. We shall end with

a survey of 'expectations' that will take us beyond the present situation into the future of mankind.

The concept of the present moment as the total situation accessible to the operations of a 'will' is decisive for understanding the Universal Drama and its projections into the life of man. The concept is exceedingly hard to seize and it is irreducible to simpler terms. In Vol. II we devoted five chapters, 27-31, to the study of will. At that stage, we identified will and relatedness, so making the triad the characteristic system for the operations of the will. We do not find it necessary to modify in any radical manner the conclusions then reached—particularly those referring to Self-hood and Individuality—but the emphasis should not be so exclusively placed upon the triadic property of relatedness. Will manifests in every structure as the principle whereby the structure is structured. In the tetrad, it is the principle of order and directed activity. In the pentad, will means the principle of significance whereby the present moment seeks to expand into the un-present. The six-term system of the will is the form of its coalescence. A coalescence is an element of the historical process: it is directed, purposive and structured. In coalescence, the present moment realizes its own pattern and coalescence means a concerted and complex act of will.

From these notions, we come to that of progress as the transformation

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of the present moment from a state of lower order organization to a state of higher and more stable organization. The difference between this view of progress and those commonly held is that it does not distinguish between subjective and objective order. The entire present moment subject to the sway of the will is the field of the ordering activity. Inner and outer order are separable in theory but not in practice. In this light, history acquires a unique significance as the self-realization of will. That which was fragmented and therefore transient, is in process of coalescence whereby its unity will be restored. This coalescence brings together fragments of will and builds them into a complex, organized structure. The history of mind shows us how this process operates. Understanding of the Historical Process resolves the enigma of the Dramatic Universe and provides an answer to our initial question as to the meaning and purpose of human life on the earth. The study of history is thus the best and even the only possible final stage of the enquiry to which these four volumes have been addressed.

Chapter Forty-two THE WAR WITH TIME

16.42.1. The Present Moment

We live within the present moment. So far as we can have any direct perception and sure knowledge, this present moment is all that there is. Because its content changes, we tend to think of it as impermanent, a state of 'perpetual perishing' as Locke expressed it. But it is also a state of perpetual renewal and neither perishing nor renewal are so certain as the immediate experience of the present as always here and now.

We are accustomed to think of our experience as consisting of a series or succession of moments, one of which is present while the others are either 'past' or 'future'. There is no justification for this way of looking at our experience except that it is convenient to separate in the present moment three kinds of elements that can be called 'traces and memories', 'immediate mental objects' and 'expectations and hopes'. All three are contained in the present and we can, if we find it convenient, label them as past, present and future; but there is an objection to treating experience in this way, inasmuch as memories and expectations are also 'immediate mental objects'.

A further and decisive objection to treating past and future as distinct from the present moment is that this present moment is not fixed in duration and extent any more than it is unvarying in content. There is evidently in the present moment the relationship of parts and whole, such that both parts and whole are equally describable as 'the present moment'. We can speak of the present as the smallest interval of time and the minimum content that we can be aware of: we can also speak of it as the maximum duration that we can hold in our immediate awareness. But we can and do go further and take as the 'present', the entire field of our immediate concern. This field can range from a specific action or event in which we are continuously engaged, to the entire life of mankind over a century or more. Thus we speak of the 'present' century or the 'present age of science'. All these uses of the words 'present' and 'present moment' are equally legitimate and they evidently imply and require the relationship of part and whole.

One further preliminary observation is required. The extent and coherence of the present moment are evidently connected with the embrace of our awareness. We can say that the present moment for each one of us is relative to the integrative power of our own will. For subjective idealism, the present moment is nothing but the content of the mind. For objective materialism, the mind is nothing but the content of the present moment. The two viewpoints are in contradiction only if we import artificial distinctions of past, present and

future, or here and now, there or elsewhere, into our interpretation of experience.

The present moment contains what we may call 'latent mental objects', that is objects whose existence is as certain for us as those we perceive or think, but which are not directly present to our awareness. The back of my head is a latent mental object within my own present moment. Thus the present moment has an indefinite boundary between the perceived and the unperceived. It also has what we shall describe as 'invariant forms'. For example, in every present moment and every part of it, there is the form of the circle or of the human body. These are not necessarily immediate mental objects, nor are they latent, because they can enter our experience only in company with a trace, a sensation or an expectation.

We have also, as part of the furniture of the present moment, patterns which are not invariant but which do not change in the same way as the three main constituents. Patterns are related to traces and expectations and serve to link them together. Thus the behaviour-pattern of a person links the memory of mental objects associated with him to the expectation of mental objects also associated with him. The genetic pattern of an organism accompanies it in the present moment and binds traces and expectations, even though we have no immediate mental object of the pattern or of its expectations.

Finally, we associate with the present moment decisions or acts of will which we believe have the effect of changing its expectation-content. The possibility of such acts is bound up with the duration and extent of the present moment. We have to be aware—as immediate mental objects—of more than one trace or memory and of more than one expectation. This we call 'being faced with a choice'.

All of these elements enter our experience in such a way as to make the present moment what it is and also convince us that there is always a more extensive field beyond the present moment and yet containing it. There are constant exchanges between the present moment and the larger region which contains it. These

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exchanges are the core of experience and our constant and almost sole concern.

The description we have given is wholly derived from our immediate mental objects; that is to say, it is wholly empirical. It makes no use of our ideas about ourselves or the world, nor does it require or permit any kind of verification or justification. It is not a matter of belief or demonstration. All of these become necessary when we begin to connect

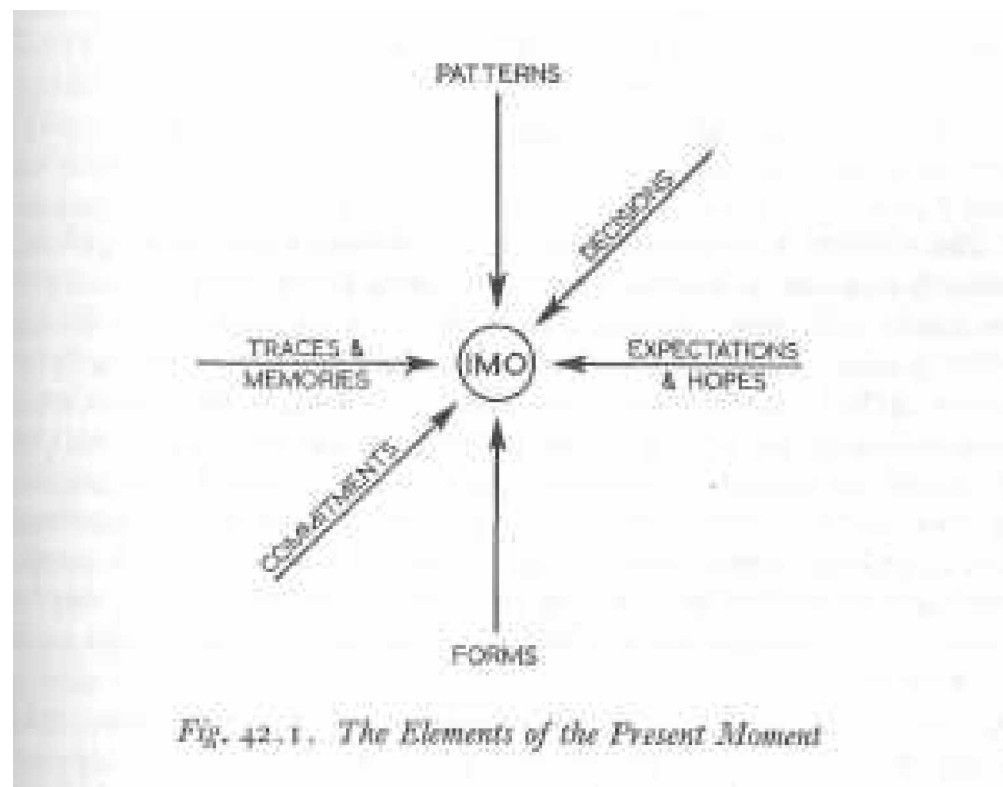
mental objects with decisions and actions and find it necessary to take latent objects, forms, patterns, traces and expectations, into account without adequate understanding of the way in which they are all connected.

One of the first steps is to sort the contents of the present moment into classes. This we shall do in terms of the geometry developed in Vol. I. We can represent the descriptions we have given by means of a symbolical diagram.

The six lines with arrows are the six 'outer' elements and the circle the circle marked is the immediate mental object or awareness of 'here and now'.

It is easy to see that this is similar to our scheme of dimensions if we write:

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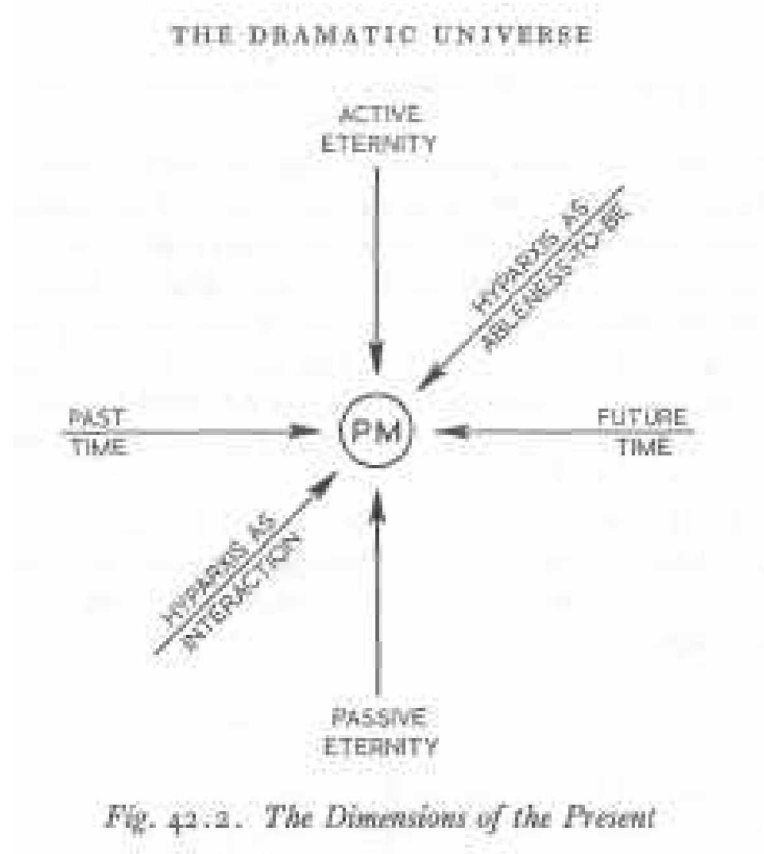


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The diagram serves to remind us that all our experience is of what enters the present moment. The illusion that the present 'come out of the future and 'goes into' the past is due to a wrong habit of thought which confuses the different elements, and so treats the combination of 'forms' and 'immediate mental objects' as if they had some status independent of the experience of the present moment. Thus, we think

of a 'chair' as 'existing in time and space' and we stigmatize as 'idealism' the view that a chair is nothing at all apart from a moment of experience. The chair has its own 'present moment' and it is what it is in its present moment and in no other way. The present moment of the chair may be a part of the present moment of some human mind, but need not necessarily be so.

From such considerations we conclude that all that we need to understand, in order to act successfully, is the way in which the present moment is constituted and the way in which it reacts with the larger region in which it is contained. Unfortunately, this does not get us very far, for it leaves us with the entire content of our experience to reckon with. We have, however, made a real step forward inasmuch as we have a common framework for all our problems: the Present Moment.



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16.42.2. Order Against Disorder

The Present Moment is the scene of an unending conflict between the forces of order and disorder. It is only recently that the intimate connection between disorder and time has been understood in quantitative

terms, thanks to the inspiration of Boltzmann who showed that time and entropy, disorder and increasing probability are linked together in the second Law of Thermodynamics. We have covered much of the ground in Vol. I and therefore can go straight to the main point that concerns our understanding of the present moment.

We can picture order being created within the present and disorder invading it from without. The present is always here and now, but it is under a constant disordering influence or action that, if not counter-acted, would reduce it to meaningless chaos. A hundred years ago, physicists could not imagine an ordering influence sufficiently universal in its operation to prevent the ultimate victory of disorder—the 'Heat Death of the Universe', in the picturesque phrase made famous by Lord Kelvin's British Association address.

We are not concerned here with the fate of the Universe. It may be that there is a continuous renewal of order upon the atomic or even quantum level. It may be that the universe is moving towards a final catastrophe. Or it may be that over vast cycles of tens of thousands of millions of years order and disorder succeed one another, so that the Total Present Moment of All Existence contains a balance of ordered and disordered states or processes. It is very unlikely that mankind will ever resolve these questions, for every new discovery discloses more complex and unfathomable depths of structure and process upon scales that make the million years of man's existence on the earth a very small 'present moment'.

Our task is to find guiding principles for the study of that part of our experience that consists in recognizing 'traces' that have entered the present moment from the 'past'. This is what we call 'history' and it is the history of life on the earth that concerns us directly. We can posit a present moment, large for us but small for the universe, that consists of the total existence of this planet from the moment that the conditions for life began to arise to the moment at which they will cease to exist. Measured by the clock this may have a duration of between three and live thousand million years.

Life on the earth—the Biosphere—is a very thin film of highly ordered material upon a sphere that has, in its turn, a very high degree of order compared with most of the matter of the universe. This order is pre-

carious: according to the second Law of Thermodynamics, the energy exchanges taking place between living and non-living matter must result in a steady increase of entropy or loss of order. We know that this is largely made good by the inpouring of high order energy from the sun. The sun is losing order by radiating its high order energy made by the

production of helium from hydrogen. The increase in entropy of the sun is certainly far greater than the increase of order on the earth, so that the combined Present Moment of Sun-Earth-Life is losing order in accordance with the entropy principle.

The mechanism whereby order is kept more or less constant on the earth is well known. It is the photosynthetic reduction of carbon dioxide to carbohydrate accompanied by release of oxygen. This is taking place on a scale that is colossal compared with any human activity. Every twenty-four hours, a thousand million tons of organic matter is synthesized from the carbon dioxide and water vapour of the atmosphere, drawing the necessary ordered radiant energy from the sun.

It must be understood that the level of order maintained by life on the earth is enormously greater than that of the relatively simple compounds that are the direct product of photosynthesis. Life itself is constantly raising the level of order of the raw materials that it feeds upon. This is the 'transformation of substances' that we discussed in detail in Chapters 32 and 35 of Vol. II, where we introduced the notion of Transflux Equilibrium* to describe the state in which the order within a given present moment is maintained by compensating for the loss of order due to the natural increase of entropy by drawing upon an external source.

Now the significant point about life on the earth is its ability to maintain a higher level of order than that of the energies and substances on which it feeds. It is this power, more than anything else, that distinguishes living from non-living matter. We can picture the present moment of life on the earth as a city under bombardment in which the buildings are constantly being destroyed. So long as the inhabitants can maintain their strength they can rebuild what is destroyed; but if they themselves are starving they must sooner or later abandon the struggle. Life is confronted with a similar two-fold problem. It can maintain order by drawing on the sun, but only on condition that it can renew its own power of transformation.

This point is so crucial for the whole of the argument that follows, that we must re-state it in precise terms.

* I.e. the chapters on Energies and on the Spiritualization of Existence.

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1. The System Sun-Earth-Biosphere as a whole is undergoing changes with steady increase of entropy.
2. The System Biosphere alone is undergoing changes without increase of entropy and this is possible because the present moment of

the Biosphere is contained within the larger present moment of the Solar System.

3. The order in the Biosphere is higher than that of the energies it receives from the sun and the raw materials of the earth's crust and atmosphere.
4. This higher order cannot be accounted for without postulating an ordering action proper to life itself.
5. The level of order in the Biosphere within its own Present is enormously improbable. The odds against its arising by chance are thousands of millions to one.

It follows from these five propositions, that are indisputable, that the Ordering Power of Life cannot be ascribed to simple chance. If to this we add the supplementary order that man has produced in the million or so years of his present moment within that of the Biosphere, we have another improbable decrease of entropy of the order of hundreds, if not thousands, of millions to one.* We can represent the situation thus:

Outer circle, U. The Universe. Order increasing, decreasing or stationary? Unknown.

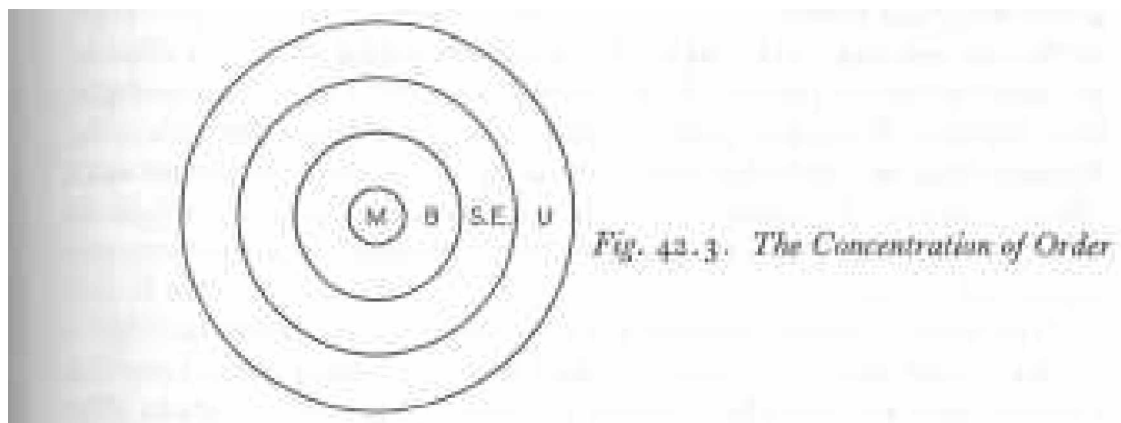
Second circle, S.E. Sun-Earth. Order decreasing on all measurable levels. If the Biosphere is included, the situation is unknown.

Third circle, B. Biosphere. Order at least stationary. If biosphere is still evolving, order is increasing.

Fourth circle, M. Man. Order certainly increasing.

It seems from these considerations that the ratio order-disorder is not constantly decreasing in every relatively closed system as the second

* This argument will be amplified in Section 17.44.2. below.



Law of Thermodynamics would require, but varies according to the 'present moment' on which our attention is focused.

We can look upon life in general and human life in particular as a struggle to preserve and increase order. Moreover, we can speak of 'orders of order' by which we mean the difference between quantitative or thermodynamic order, organized or vital order and mental or human order, to which we could add intelligent order and creative order to make the progression clear. The higher the order of order, the remoter the likelihood that it could arise fortuitously out of disorder.

Here we must return to the proposal of Professor Fantappie* that we should distinguish between syntropic and entropic processes in nature and postulate a balance between the principle of order (syntropy) and that of disorder (entropy). This proposal does not bring home the full significance of the order-disorder conflict; and it is preferable to think in terms of the Present Moment with an outward tendency to lose order and an inner tendency to build it up. Since the tendency to lose order is undoubtedly associated with our experience of time, we can say that the present moment is threatened with disorder by time and to this we can add—making use of the conclusions of Vol. I—that the Present Moment defends itself against the threat by the hyparchic creation of fresh order.

We can now explain the title of this chapter—The War with Time—as meaning that the powers of Life, Intelligence and Purpose are engaged in a perpetual struggle to preserve, build up and create order within the Present Moment and that there are contrary powers associated with Time, Entropy, Probability and Causality that perpetually struggle to break down order and reduce the present moment to a random, unstructured chaos.

Eddington's dictum, 'the Second Law shows the direction of Time's Arrow', misleads us by suggesting that time is pointing away from the present moment towards a more probable or less ordered state. The actual experience is that of disorder automatically invading the present moment, whereas order does not appear unless there is a higher order to make it possible. For example, sunlight alone cannot convert water and carbon dioxide into cellulose. It is the highly ordered structure of the chlorophyll in green leaves that, as it were, 'captures' the available order and turns it to account, ** We can meaningfully say that chlorophyll

* Cited in Vol. I, pp. 135 and 498 with reference to his book *Principi di una Teoria Unitaria del Mondo Fisico e Biologico*, Rome, 1945.

** This has already been discussed in Chapter 32 and is illustrated in Fig. 32.5. Vol. II, p. 234.

is a weapon that life on earth has developed to enable it to wage war successfully with the power of disorder. If this weapon were to fail and could not be replaced, all life would soon disappear from the earth and the level of order would collapse catastrophically to that of the Mineral Kingdom.

16.42.3. Separation and Reunion

The Present Moment can be understood from another standpoint as the Realm of a Will. It is the region within which a particular fragment of the Total Will holds sway. The fluctuations, in duration and extent, of our present moment are, on this view, the direct consequences of the instability and impermanence of our will.* The relationship of 'contained in and contained by' between present moments is one of Being, but the unifying principle within the present moment is Will.

The separation of present moments is a limitation of Being. We saw in Chapter 34** that Creation is partition and blending, and in Chapter 35, we introduced the notion of the Spirit Reflux or Counter-Creation. All Existence is perpetually flowing out from its source and striving to return. But within the Present Moment there is a process which is neither efflux nor reflux, but rather the establishment of a Higher Order here and now. We shall refer to this immediate, present action as Coalescence. It is this that makes the present moment significant.

Coalescence is certainly a reunion of the fragmented Will. It is also an enrichment of the separated Being. It is the very nature of History and it gives the historical process an aim to be achieved. 'Time's Arrow' is the direction from which disorder and separateness threaten: but it is also the direction along which they are to be overcome.

Separation from the Present Moment occurs, in our experience, actively, as the penetration of disorder that is in the form of successive-ness in time, and passively, as the partition of existence that is in the form of distance in space. There are also two kinds of reunion: that of will that we associate with hyparxis and that of being that comes from the eternal pattern.

Within our present moment we find various devices for overcoming separateness and disorder. The first of these is memory. We are selves

- For the doctrine of the fragmentation of the Will, see Vol. II, Chapter 27, p. 84: Postulate 'The Will is transmitted from Higher World to Lower World by a process of self-limitation consisting in the mutual exclusion of incompatible triads.'

** Vol. II, pp. 261—282, Creation, especially section 12.34. 1., Creation as Partition, Being takes on the limitations of existence by separating from its source. Each stage

of
Creation comes by a further separation.

by virtue of the power to extend the present moment by experiencing that which is not present in sensation as nevertheless present as an immediate mental object. This power resides in the structure of the human organism and it is the basis of our self-hood. The present moment is that which we are now aware of together with that which we can embrace in an act of will. For example, we turn our head and see what a moment before was not visible: both the sights are embraced in the act of looking. The field of the present moment is enlarged by memory and the special quality of human memory is one of the characteristics that distinguishes a man from an animal.

Memory as an immediate mental object is supplemented by traces that connect the present moment with the larger region that we call the 'past'. The perception, recognition and interpretation of traces is possible because of the interplay of various energies. We have enduring objects which connect us with the material energies and we have mind that connects us with mental objects. All of these can be regarded as means for the preservation of order within the present moment. We can bring all our experience into a coherent structure by relating it to the notions of order, disorder, and coalescence.* In the present chapter we shall examine those elements that are relevant to the study of history.

The first point to be considered is that of the fate of Existence itself, if it is throughout subject to the creative action of partition and blending. If there were nothing in Existence itself that at some point could arrest the atomization of its content, all would disappear into a state of uniform nonentity.

We do discover a state in which the progress of disorder is arrested, namely that of reversible processes. The stability of every present moment is maintained by a balance of order and disorder that, in the limit, amounts to simple reversibility. The basic situation is that of balance between disturbing and restoring forces, such as is present in the harmonic oscillator where a body moves without resistance in a centrally directed field of force. The nearest well-known illustration is the bob of a pendulum swinging without friction in a vacuum. More complicated systems can be described all of which have the property of perpetual motion. This seems to have little bearing on our problem, as everyone knows that no such thing as a perpetuum mobile can exist in nature. There is, however, a remarkably close approximation of it in the solar system. The sun and the planets move freely with exchanges of energy that are negligible compared with their masses and their

* The term coalescence was first introduced in Vol. III as the attribute of the hexad. Section 14.37.9.

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motions are reversible. We could, for example, describe the motions of the planets equally well if the direction of time were reversed. These well-known properties of celestial mechanics are generally disregarded in considering the problem of time; but, if we did not observe the periodic motions of the earth and planets we should lack the basic measurements of time by which life on the earth is regulated. The alternation of day and night, the return of the seasons, the ebb and flow of the tides, and other less obvious periodic changes caused by the sun and the moon, all depend upon the fact that the solar system behaves, upon the time scale of human experience, as if it were a perpetuum mobile. Another example of balance of order and disorder is given by the phenomenon of superconductivity. First observed at very low temperatures, it now appears that certain complex molecules of organic origin can show similar effects. Here we have something like time-reversibility in systems which form part of the general temporal process.

Still nearer home are the effectively reversible states of our own bodily organism. Our heart and lungs, our alimentary and digestive organs, our nervous system—including the brain—all work by way of cycles which closely resemble the swinging of a pendulum. These states are certainly not perfectly reversible, or the body would never grow old and wear out; but they give the basic continuity of our present moment. They do this in two principal ways. Firstly, by renewing the life of the organism they enormously prolong our possible experience. If any of these rhythms were to come to a stop, the body would cease to be a centre of experience in seconds, minutes or, at most, hours. The second effect is that they connect and stabilize the experiences that are the basis of bodily life. We feel ourselves to be living in the present on account of these recurrent events. We do not notice this, for the very reason that the cycles are maintained more or less regularly throughout life.

These illustrations help to show that our experience of time, as it enters effectually into our lives, does not correspond to the abstract view of time, according to which it is a one-way traffic with no halting places. It is a balance of order and disorder that is not static, but dynamic, losing and gaining equally so long as normal health persists. We are tied to the present moment of our material bodies.

16.42.4. The Endurance of Material Objects

This brings us to another defence against disorder that nature uses in the war with time; namely, the persistence of enduring objects. These

are so commonplace in our experience that we tend to disregard their significance. We have many times drawn attention to the extreme rarity

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of matter in the solid state.* Only under peculiar conditions do aggregates of matter solidify and produce enduring objects of the kinds that are so familiar to us, living on the surface of the earth, that we could not imagine existence without them. Solid bodies are, of course, not the only enduring objects of our experience; the oceans and the atmosphere persist and have persisted for some three thousand million years. The sun and the stars endure although they are not solid in the sense that we commonly understand the word. Our own bodies are only relatively solid, and their persistence is more than mere resistance to wearing out. We have, thus, a variety of ways in which existence persists in organized and structured forms. In the physical sense, endurance is always the result of conservation combined with recurrence.

From the standpoint of our human experience, enduring objects are one of the principal means available to us for bridging the stream of time. We cannot carry our mental states about with us, but we can carry our bodies and various kinds of records and messages that connect one present moment with another. We have only to picture our bodies made of matter in the state of gas or vapour existing in an environment wholly gaseous, to realize the immense significance of enduring bodies for the arising of souls. The soul-stuff in its native state has no coherence; and, as we see in young children, almost no continuity of experience. It is only when they become aware of their own bodies and of material objects that they begin to be aware of time. Until the soul is completely organized and independent, it cannot hold its experience together without the help of its own body and the solid environment of the earth's surface.** The significance of this should be deeply pondered by those who imagine that an unorganized soul could make progress in a disembodied state of existence. ***

We have not exhausted the order-preserving properties of material objects arising from various combinations of the four material energies: dispersed, directive, cohesive, and plastic. Elasticity, for example, as exemplified in a coiled spring, enables energy to be stored up and brought into use in future time. This illustrates the significance of material objects in connection with the storage of potential energy of all kinds. Electrical energy can be stored thanks to the chemical properties

* Cf. Vol. II, p. 275.

** Immensely interesting experiments in connection with space travel have demonstrated the disintegration of experience when the soul is deprived of contact with material objects; for example by floating in darkness and silence in an isotonic and isobaric medium.

*** Cf. Chapter 40, Section 15 .40.8.3.

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of metals and acids; but this is only possible in an appliance made out of enduring material.

An even more significant property of enduring objects is their ability to preserve records. Traces of the past consist almost exclusively of the records left in solid bodies; and our ability to predict the future—for example, future positions of the earth and planets—is wholly dependent upon the existence of more or less rigid bodies.

Thus, enduring objects not only preserve the present moment, but enable us to go beyond immediate mental objects into the past and future. This gives us, in effect, an extension of the present moment without which human life as we know it would be non-existent.

16.42.5. Life, Sensitivity and Self-hood

We come next to the role of life in resisting disorder. Since time immemorial, mankind has been aware that life is a war waged with time. We must not, at this stage, look at the situation through our human eyes—by seeking, for example, in the struggle of nature with time, an explanation of man's religious beliefs and magical practices. Nor must we look at the return of the seasons and the renewal of the activity of life, as they affect our human hopes and fears. We must rather look at life without man and ask ourselves whether the 'war with time' is an objective reality or only a projection of man's longing for permanence.

The first observation we make is that all life is renewal. Life does not endure as objects endure, it must be perpetually and instantly renewed in order to maintain its existence. We have only to look at the marvellous mechanism of self-renewal only recently discovered in the auto-synthesis of proteins to be convinced that the significance of renewal is no human projection. Life cannot stand still, but must either renew its order or disappear. This proposition which is confirmed by every possible observation of the life process and admits of no exception, distinguishes in a radical manner the relationship that life bears to order, from the relationships of material objects. We can conceive, and perhaps even construct, self-renewing machines. There are many simple devices that are constructed to renew their own state. A water cistern controlled by a ball-cock is a familiar example. But all such

devices are able to stand still. A self setting mechanism when out of use behaves like any other enduring object. Living organisms, from the simplest to the most elaborate, are in a perpetual state of self-renewal.

Self-renewal is met with at every stage. The raw materials of life such as the proteins, fats and carbohydrates from which living bodies are constructed, require to be in intimate connection with the nucleic acids

and their derivatives which constantly renew them as they are used up. Cells renew themselves by division and regeneration. Tissues are constantly regenerated by the reproduction of cells of the appropriate kind. Organs are renewed. There is a continuous flow of vital fluids: sap in plants, blood in animals and sera in micro-organisms. Every organism is constructed for self-renewal: some asexually, some by sexual reproduction. Whenever renewal ceases—whether in families, species, individuals, organs, tissues, or cells, right down to the basic proteins—the particular present moment collapses and the element ceases to live. Life is not simply more successful than inanimate objects in the battle with time: its method is totally different. The longest lived organisms, the great redwoods of California, live for two thousand five hundred years. A rock can endure a million times longer. All life on the earth, that has existed for perhaps two thousand million years, has been outlasted by the oldest rocks. On the other hand, neither rocks nor any other inanimate objects we know, have the power of renewal, except for special devices constructed by man for the purpose. All this will no doubt appear to be obvious but unimportant. So it is, until we realize that it has a profound bearing on our understanding of time. We are familiar with the evolutionary principle of the 'struggle for survival' and also with the vitalistic notions such as the *elan vital*. The completely mechanistic doctrine of dialectical materialism requires the assumption that there is a 'tendency' towards synthesis. All these doctrines are half-hearted steps towards the more radical principle that the whole of existence is involved in the war with Time. This may seem to be an anthropomorphic expression, but not more so than the 'struggle for existence'. The point of the principle is that it applies equally to inanimate objects with their property of endurance and to living beings with their properties of self-renewal and reproduction.

16.42.5.1. RENEWAL

The difference between the two ways of waging war with time—endurance and renewal—is not measured by success in terms of duration, but by the prospect of winning the war. At its first appearance, a new weapon is mainly efficacious by surprise and terror—the bow and arrow continued to win battles for a hundred years after the first gun appeared—but in the long run, the more intelligent weapon carries all

before it. Material objects may last for millions of years, but their eventual wearing out and disappearance is a certainty from the start. If nature had been compelled to rely on endurance alone, the battle with disorder would have been lost before it started. Life offers a totally

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different prospect. Renewal can, in principle, go on for ever. So long as the earth is habitable we may expect that life will continue to renew itself and to develop new and more viable forms. We can even entertain the thought that life on the earth could produce a species capable of migrating to other planets and even to other solar systems before the earth ceases to be habitable. This reminds us that life meets spatial separation far more effectively than inanimate objects and does so with increasing success as it advances on the path of evolution.

The step from endurance to renewal is indeed immense. Life can hold its own with disorder and separation. Individual organisms, even entire species and genera may perish, but life continues. The importance of life is immeasurably enhanced by the probability discussed in the previous volumes, that it is a cosmic phenomenon spread throughout the universe, though in forms, no doubt, quite different from those we know on the earth.

In an earlier chapter,* we treated life as the middle term of the triad composed of Material, Vital and Cosmic structures. We saw in it the instrument of the spiritualization of the Material Universe. We are now looking at it from a new standpoint: that of its role in the war of Nature against Time. In this role, it cannot be said to conquer. Life holds its own by renewal, but time continues to bear its sons away. For life, the past is dead and gone, and the future is non-existent. Life lives in its present moment which must be renewed perpetually in order to be anything at all. After all, Time is still the conqueror and life its perpetual victim. Claude Bernard who invented the phrase *Velan vital*, also left us the aphorism *vivre c'est mourir*. The living body disintegrates and its atoms are dispersed: so space also conquers life.

16.42.5.2. sensitivity

We, as living beings, know only too well that disorder has the last word; and this it is that drives us to seek for other weapons than simple self-renewal in the hope that we may hold our own. Let us recall our formulation of the 'first law of biology':

Organic sensitivity is the first necessary condition of the arising and existence of life, **

In this general statement, sensitivity is a combination of energies that can be regarded as the precursor of mind. It can be said that life has an aversion to disorder and that this is due to its ability to distinguish,

* Cf. Vol. II, Chapter 33. The middle place occupied by life is one of the main themes of this work.

** Cf. Vol. I, Chapter 19, The Bases of Life, p. 357.

by means of sensitivity, between order and disorder. Again, sensitivity is awareness of the present moment and this distinguishes living from inanimate forms which have their own present moment, but are not aware of it.

We should here take note of an apparent inconsistency in the use of the word 'sensitive' in this and earlier volumes. Sensitivity is one of the critical properties of Existence that makes it impossible to reduce the phenomena of life and consciousness to motions and changes of inert matter. Nevertheless, we accept the view now widely canvassed, that there are non-living states of sensitivity. We ascribe sensitivity to hyle under the condition of hyparxis, and distinguish three states: actual or time-like, potential or eternity-like and sensitive or hyparchic. There is, however, a decisive step from monomorphic sensitivity of inert matter operating as interaction and coupling and dimorphic or organized sensitivity.*

We also distinguished twelve levels of energy of which four—the vital energies—are characterized by some degree of sensitive organization and we assigned the descriptive label 'sensitive' to the highest of the vital energies E 5.** The use of the term is justified by the property possessed by the sensitive energy of allowing the will to be exercised independently. This comes from the coalescence of the three states of actuality, potentiality and sensitivity that characterizes the living organism. On lower levels, the states are compresent, but do not coalesce to produce a self-renewing structure. Sensitivity cannot be predicated of the four higher or cosmic energies which are not subject to the determining conditions, but to a more general law of Universal Order.*** Hence the sensitive energy (E 5) can be regarded as the maximum manifestation of the sensitive state of hyle.

Sensitivity plays a special role in Nature's struggle with disorder. This role consists in giving to every living being awareness of presence. We know very little of what this may mean in plants and animals and we shall confine ourselves to the consideration of human sensitivity.

* Cf. Vol. I, p. 370. 'Organized sensitivity is life itself, and the gradations of life are distinguished by the ableness-to-be formed in and through the organized sensitivity'. Again, *ibid* 'The threshold of life is crossed when sensitivity is organized.'

** Vol. II, Section 12.32.5., cf. p. 229. 'The plus-plus energy of life is characterized by sensitivity . . . sensitive energy makes choice possible.'

*** Cf. Vol. II, p. 121. 'In World VI, order does not imply the distinctions of time, space, eternity and hyparxis; it is a single law of universal consistency by which Existence is kept within the bounds of possibility .' Consciousness (E 4) is subject only to the distinction of transitive and non-transitive order: it can 'know' and it can 'act'. Creativity (E 3) is not subject to this distinction: its knowledge and action are not separated. Both are free from the limitations of sensitivity.

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The awareness of presence involves both duration and extension.* We are aware of ourselves 'here and now'. We have seen that the sensitivity (E 5) in its native state is like a formless mass with little or no coherence. It is associated with automatic energy (E 6) and is linked with the body through the vital energy (E 7) and the constructive energy (E 8). On account of the coherence of sensitive energy in living things, it can be said that each has a will of its own that determines its present moment.

Sensitivity is, indeed, one key to our problem. With the appearance of organized sensitivity, existence can participate directly in the War with Time. Enduring objects do not make themselves, nor can they renew themselves: they cannot produce order. Organized sensitivity makes possible the will to live. Here is the truly characteristic property of life that we have met with again and again in different forms. It enables Life to occupy the central place in the structure of the existing universe.

We have referred to memory as a means whereby the present moment can reach out beyond immediate mental objects. It was formerly supposed that only men and animals can be said to remember: but recent discoveries have shown that memory is present at the very root of life in the organic super-molecules that direct the synthesis of the materials of life.

16.42.5.3. SELF-HOOD

What, in terms of the war with Time, is a Self? Selves do not exist solely by enduring, nor by self-renewal, nor by sensitivity; but by a combination of these three with a fourth property that consists in a direct resistance to the disordering and destroying action of time. This

property can be called 'self-assertion' and we can associate it with the character of hyparxis described as 'ableness-to-be'.**

Self-assertion plays an enormous part in the fight with time that is waged in the soul of man. It is something different from self-preservation which concerns only the self-renewing impulse of life. As is so often said, a man will give up his life in order to assert himself, so that evidently self-assertion is a deeper and more significant property than the instinct of self-preservation.

The step we are now making is even more extraordinary than those

* This has been argued on quite different lines in S. Alexander's *Space Time and Deity*, where he insists rather upon the active character of space-time as if it were an entity in itself. This is wholly opposed to our view of space and time as conditions.

** Cf. Vol. I, Section 3.8.5.

that went before. Material objects, living beings, sensitive regions are all means of maintaining existence in time: but they are all passive contrivances that we have compared with different kinds of weapons. We now, for the first time, meet with the soldiers. Selves may prove to be poor, bloody infantry; but at least they know that they are in the front line of the fighting. They may not have been told what the war is about; but they know that a soldier's first duty is to stay alive.

Compared with the other modes of existence we have considered, selves represent an unattainable summit. This is because they are able to sustain and respond to an independent will, which neither animals, nor plants, nor any material object can do. But they are also the lowest organization in the scale of Being which can have free awareness. This is why they occupy a position that is unique in the struggle between order and disorder. Selves are embodied or incarnated wills, and they are not able to liberate themselves from this condition without attaining a superior level of organization. They are equally poised between the forces of order and disorder, and so stand at the mid-point in the scale of Being. As we pass beyond this point, the balance shifts from predominance of disorder to ever-increasing mastery on the part of the powers of order.

The state of incarnation can, for our present purposes, be regarded as one in which the Present Moment is balanced between order and disorder. This gives to the Self-hood the sense of impermanence and the kind of time-experience that is described as a 'perpetual perishing'. In its normal state—that of the True Self*—there is an awareness of different levels in Eternity and hence of the reality of an Unchanging

Order that accompanies the present moment. Thus, the awakened True Self centred upon its own 'I' can be aware of the meaning of the conflict of order and disorder and engage itself in the War with Time as a free agent. This is the Great Work which we shall meet in our survey of the History of Mind.

16.42.6. Influences Acting upon the Present

We are accustomed to thinking of the past as 'having ceased to exist'. This implies that existence is confined to our own present moment. But this is not a permissible attitude. We know that there are other present moments besides that in which we are centred. We know also that our own present moment is not a fixed region, but fluctuates according to our state of consciousness. We can go further and admit the possibility of a 'larger' present moment which would include much

* Cf. Vol. II, pp. 155-157 and p. 178 and Vol. III, pp. 140-1.

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of what we regard as 'past' and 'future'. From such considerations, we should be prepared to reopen the question of what we mean when we speak of 'the past'.

In some sense the past must exist now. It has left its traces and these traces are the certificate not only that it once existed, but that something of it remains today. In the representation of physical events in space-time, the coordinates x_1, x_2, x_3, x_4 are referred to a point O which is the 'here and now' of a hypothetical observer. There is no privileged moment in space and time that distinguishes one O from another and so, for such a representation, past, present and future have exactly the same status: they are all 'relative' to the point we happen to designate as O. This suggests that the 'passage of time' is a reality only for centres of experience; that is, for selves. Before we accept this suggestion, we must see how it looks from the perspective of the six-dimensional geometry we have been led to adopt from the study of force-fields and interactions.

We have, first of all, to remember the six laws of synchronicity formulated in Chapter 25.* These have not the rigour of scientific generalizations nor can they be demonstrated experimentally. They belong, indeed, to the region of experience where the very character of time and space differs from that of sense perception, and yet they do define the hidden character of the Present Moment.

Firstly, we should notice that the Law of Common Presence describes the character of the Present Moment as a finite region. The law as we formulated it in Vol. II, runs: 'spatial togetherness induces a common presence in the eternal patterns in a given region, and this common presence emerges as a recognizable quality that is shared by all entities

in the region.'** We should also cite (*loc. cit.*, p. 49). 'The common presence of a given moment has its own complexion and this may change slowly or suddenly, continuously or discontinuously into another presence.' When this common presence is associated with sensitivity it produces the experience of the 'finite region of the present moment'. The Law of Common Presence suggests an important additional notion, namely, that 'common presence' is associated with ableness-to-be, and hence with Will. The common presence is not only a composite whole, but also the activity within that whole. This involves an eternal component to give 'inner togetherness' as well as a spatial distribution to give 'extension' and also temporal 'duration'. The outcome is to give a

* Vol. II, p. 47. The six laws are: (1) Common Presence, (2) Mutual Adjustment, (3) Organization and Disorganization, (4) Multiple Existence, (5) Connectedness and Independence, and (6) Normality.

** Vol. II, p. 47.

certain degree of ableness-to-be, i.e., an hyparchic component. The activity communicates itself to other present moments as an influence, usually observed as memories or traces of the past. This formulation has an obvious bearing on the status of the past, for it asserts that the past is not all of a piece, but differs in its hold on existence according to the strength of common presence associated with a particular region. Again, to interpret in the language of this chapter, the stronger the event, the more can it resist the force of disorder.

The Law of Mutual Adjustment introduces the notion of pattern: 'There is in every region of space a mutual adjustment of the regulative influences of diverse entities such as to produce an overriding pattern that is more or less independent of the separate entities present.'* We can draw from this law the significant notion that eternal patterns can remain in the present moment even after the entities producing them have disappeared. Connecting this again with the properties of the sensitive energy, we can say that the pattern of an event can be stored up as sensitivity in the virtual state. From this it would follow that not merely the traces of the past remain, but also the possibility of renewing the experiences of the past. If this conclusion is correct, we should have evidence of it. Here the present writer can offer his own personal testimony. The following example is one of many where a contact with the experiences of past events seems to have occurred. In 1938, visiting for the first and only time the Chateau de Poitiers, he was shown into a chamber under the battlements to wait for the return of the guide. In a few moments, his cheerful mood changed into a state of anguish and terror. Nothing had happened, nor did he remember anything which could account for this terror unlike anything he had

previously experienced. Shortly after, the guide entered and began his tour by explaining that they were now in the former torture chamber of the castle. There seems little doubt that the pattern of experience of events long past had communicated itself to at least one person present. At least a score of equally striking experiences could be cited, in several of which the hypothesis of suggestion by living people knowing the history of the place is excluded. It is possible to explain such experiences, assuming them to be veridical, by supposing that some 'substance' attaches itself to the material objects and preserves the 'trace' of past events. This would, however, not account for instances where no trace remains of any buildings or other objects connected with the event. It seems, therefore, reasonable to regard all such 'con-

* Vol. II, p. 47.

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tacts with the past' as instances of conservation of a pattern of virtual sensitivity as predicted by the Law of Mutual Adjustment.

The conclusion to be drawn from these observations—it must be remembered that veridical post-cognitive experiences are by no means rare—is that, in at least one sense, the past may be said to exist—in the form of virtual patterns—here and now. These are different from traces left in objects, inasmuch as there is continuity of existence of matter in the virtual state.*

From the point of view of entities, within the present moment, centuries separate the experiences in Poitiers described above. But from the point of view of non-actualizing virtual experience there is no separation at all. This idea is no harder to grasp than the idea of a null-interval that has become familiar from the special theory of relativity.

We can interpret the laws of synchronicity as ways of saying that:

1. The Present Moment is relative to the particular centre of experience.
2. There can be Greater Moments which include and connect lesser moments.
3. The Present Moment is a pattern of actual and latent experiences.
4. The latent experiences of the Present Moment correspond to different states of sensitivity and consciousness.

5. Multiple Existence means that there are different conditions of Order-Disorder and that it is possible to be aware of the difference between these conditions all within one and the same Present Moment.

6. Within the Present Moment there is a normal pattern that can be more or less completely realized by Acts of Will.

7. The normal pattern is the maximum order compatible with the content of the Present Moment.

We can make these notions clearer with the help of the symbolical diagram introduced at the beginning of this chapter. We make use of the property of openness that characterizes the present moment.

1. It is open from here to not-here, i.e., towards the surrounding regions of space.

2. It is open to the determinate past by way of traces and memories and this is causal openness.

3. It is open to various degrees of determination towards the future. This includes the notions of Fate and Disorder.

4. It is open to the ordering influence of eternal forms.

5. It is open to eternal patterns that exert an organizing influence.

* There is a null-vector connecting two virtual moments just as there is a null-vector connecting the points of emission and absorption of a photon.

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6. It can open into the present moment that is its own living past.

7. It can open towards the present moment that contains its own destiny.

We should need a seven-dimensional model to represent these as independent terms, but they can be grouped according to our determining conditions and the space term omitted as its contribution to the present moment is different from the rest. We can distinguish:

a. Causal or determinate influences on the present moment. Time.

b. The influences of forms and values. Eternity.

c. The influences of the Will, or freedom to choose within the present moment. Hyparxis.

In this diagram, the line marked 'hyparxis' properly should not enter between those of time and eternity, but quite independently, and should be represented by a line passing vertically through the plane of the paper. Nevertheless, the diagram serves to illustrate many significant points.

1. There is a determined region of strict causality in which the past is fixed and the future predetermined. It is coterminous with the basic material level of the Present Moment. This region is 'Time' as ordinarily

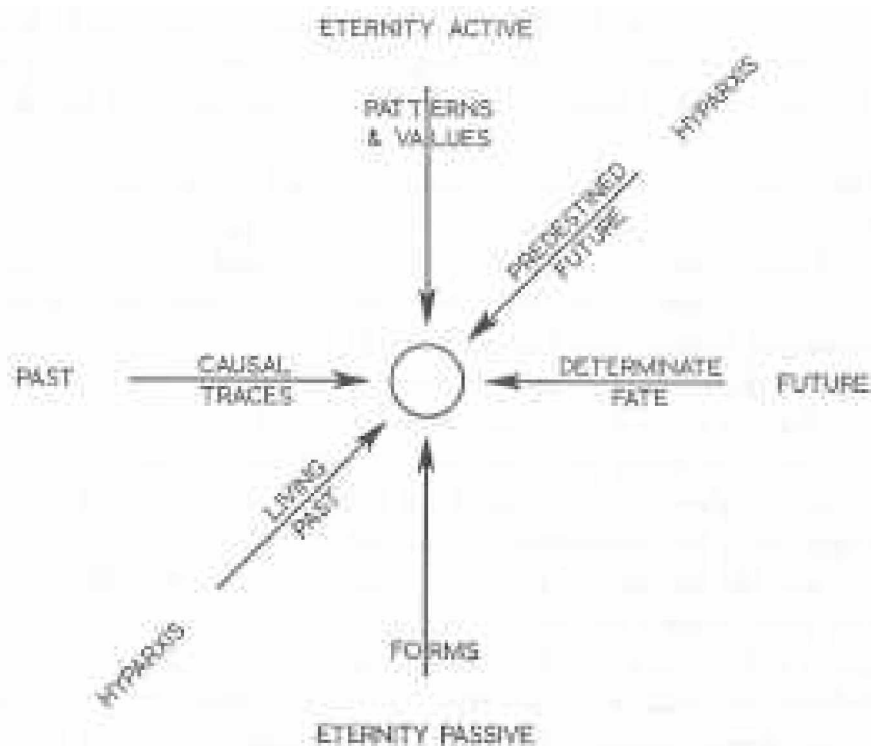


Fig. 42.4. Influences acting on the Present Moment

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conceived. It is an incomplete state of existence which cannot preserve its own order except at the price of cessation of all change. This is the region that is 'open' to the disordering influence that we associate with 'Time's Arrow'.

2. There is a region in which there is no actualized hyle but only the forms of objects and all the levels of potential hyle. Its condition is thus wholly potential and it corresponds to our definition of Eternity. Since nothing is or can be actual in this region, it is free from the disordering influence of Time; but, on the other hand, it is also devoid of action and therefore cannot increase or change its order.*

3. There is an undetermined region where matter is in the sensitive state. Here there is freedom to create order. It corresponds to hyparxis. In this region, the will is perfectly free. A very significant characteristic of the hyparchic region is that there are no barriers at the boundary of the Present Moment, and 'past' and 'future' are equally accessible.
4. There is an intermediate zone between time and eternity in which there are varying degrees of order and organization. All entities capable of resisting disintegration occupy this region. Thus reversible states, enduring objects and living organisms are located here. Order is conserved to a degree corresponding to the level of organization. Matter is in one of the four states of material energy: dispersed (E 12), directed (E 11), cohesive (E 10), plastic (E 9). Here the resistance to disorder is only in the structure of things, not in their activity. There is no life in this zone, only the material structures of living things.
5. There is a second intermediate zone between time and hyparxis. This is characteristically the zone of Life and matter is in the state of one of the vital energies: constructive (E 8), vital (E 7), automatic (E 6), and sensitive (E 5). There are varying degrees of determination and relative freedom of action.
6. There is a third intermediate zone between eternity and hyparxis. Here only the cosmic energies can enter: so it can be called 'supernatural'. The energies are: consciousness (E4), creativity (E 3), unity (E 2) and transcendence (E1). Existence in this zone is exempt from the influence of disorder. The highest characteristic here is that of Fore-ordainment, which can be interpreted as the creation of the Eternal Pattern which the Great Present Moment of Existence is called to realize. At the other extreme—where the zone touches the region of hyparxis, we can picture the intervention of the higher cosmic energies as the means of enabling beings to fulfil their destiny. It can be regarded

* Cf. The conclusion of Vol. I, pp. 158—9 where the concept of Virtue or negative entropy is introduced and found to be stationary for displacements in eternity.

as the channel through which Grace can enter the souls of men and of societies. The present moment is contiguous with the hyparxis-eternity zone; but there is only a one-way traffic, for the energies of mind and body cannot penetrate the barrier that separates them from the cosmic energies.

Nevertheless, it is not right to say that mind has no place in the zone Hyparxis-Eternity. There is within mind an element of creative freedom that is within the present moment. This is because the present moment,

to exist at all, must have at least a minimal extension into all zones and regions.

The complexity of the situation for human experience is enhanced by the dyadic character of our perceptions and indeed of the human mind as an instrument. Because of this, each of the determining conditions operates both in a closed and limited manner and also in an open and unrestricted manner. We shall call these active and passive conditions. The distinction can readily be understood in the case of Time as that of past and future. With Eternity, there is form as limitation of potentialities, and pattern as the opening of potentialities. Hyparxis presents us with a more difficult task of interpretation because we cannot associate a passive state with a condition that, by its very nature, is the region of positive activity. The distinction is between the act of commitment and the act of recreation or redemption. The first brings the power of choice into the present moment. It can be compared with a pre-selective system that opens a path. The second hyparchic condition allows for the correction of mistakes.

There is a most significant difference between the passive time and the pre-selective hyparxis. The one is the determination that enters the present moment and that we call 'past'. The other is also 'past', but it is not determined, but selective. At one extreme is the material situation governed by the law of maximum probability converging to certainty. At the other extreme is the spiritual situation governed by the principle of free creativity and converging towards the supernatural action of the Transcendental Energy (E1).

Within this range, the 'past' is in different states of existence. There are areas that have fallen outside any present moment and can be called 'dead'. Others are within the present moment of living beings and can therefore be called 'living'. The 'living past' is not a fixed state—any more than the present moment—but a state of existence in process of transformation towards a fuller and richer structure.

It has often been suggested that the past, in some way, continues to exist and even to undergo change, but the notion has never been con-

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vincing. This, indeed, is inevitable so long as we hold to the notion that there is only one kind of time. There is no place in determinate time for the past to change, let alone to be susceptible of being changed from the present.

Our starting point, is the recognition of varying combinations in the action of the determining conditions. Between hyparxis and time, there is a zone of varying freedom of action and the passive or pre-selective

segment of this zone is the living past. But there is, of course, always an element from this zone within the present moment. We can picture an Event P that is no longer within our experience, but is known to us by traces or records.

When we seek to reconstruct P as it has been described by historians in succeeding centuries, we find that there have been remarkable changes, not only in the significance attributed to P, but even in the supposed factual details. The obvious explanations are that historians err, are biased, discover new facts and that, in general, the past is more effectually veiled from us than we like to suppose. No other explanations are possible if we take it that P occurred in so precise a manner that it could have been recorded in all its detail and transmitted to posterity undistorted. This is the tacit assumption that underlies all historical research: the facts are there, but we do not know them fully because the records are defective.

The reality is totally different. There are no such precise 'facts', for the simple reason that facts are known and no one either knows or ever did know all about P.* There were certainly phenomena, but only some of the phenomena were experienced as present moments, and they were differently reduced to fact by each of the selves who experienced them. No total factual situation ever existed or ever could exist. Moreover, even the phenomenal situation was never wholly actual. There were potential events that were included in the present moment. One observer would see one event and another observer a different event at the same place and time.**

At first sight, it seems absurd to say that phenomena are really indeterminate, and not merely apparently so, on account of the practical im-

* Cf. Vol. I, Chapter 5, Knowledge. Seven kinds of knowledge are distinguished: non-discriminative, discriminative, relational, subsistential, effectual, structural and revealed. We cannot go beyond discriminative or polar knowledge without direct experience of the object known: consequently, historical 'knowledge' cannot be subsistential, that is, tell us how things really are. The reader is referred to the whole of Chapter 5, for a fuller elucidation of the limitations of human knowledge.

**This is why the accounts of eye-witnesses may be sincere and even accurate and yet contradict one another.

possibility of attaining exact knowledge of them. And yet this is just what we have to accept.

Let us consider, as an example of our event P, the French Revolution. This event has left its trace on human life and society throughout the

world. It also has taken shape in people's minds as a series of events and actions united by a recognizable common characteristic. They also are confident that it actually happened. So far, everyone would be agreed. In the light of our own views we should add that there is also a continuing presence of the event in a state of virtual sensitivity.

For several generations, historians and others have debated the French Revolution: what it was and what it signified, what actually happened in France between 14th July, 1789, and Napoleon's election as First Consul; who were the principal agents and how were they all connected? Very different—almost unrecognizably different—pictures have been drawn by different authorities at different times. Nevertheless, a general picture of what the French Revolution was and what happened during it has formed in the minds of people of the present day. In many respects, this picture would astonish those who were contemporaries or even eye-witnesses of the event. We look upon the French Revolution as a necessary, inevitable precursor of the modern world: a world as different from that which the revolutionaries dreamed of, as it is from that which they destroyed. This is only a matter of viewpoint: we look back through the events of the Industrial Revolution, the World Wars and the arising of modern science and technology; we cannot see things as they were seen in 1789. The real question concerns the event itself. Which is the real event: the one as seen by eye-witnesses or the one as it appears today? It is quite certain that many incidents and actions that appeared decisively important to the participants have been completely lost. Others that did not occur within the knowledge of anyone living at the time are taken to be facts and recorded in history. All this is quite apart from any falsification of records or suppression of evidence and it goes far deeper than even the most sceptical historian would imagine.

What is the explanation? The French Revolution had an enormously rich potential for actualization as history. Some of this potential was actualized on several different levels, so that there were in reality several French Revolutions. Moreover, the unactualized events were and are also part of the reality: they remained in the state of virtuality.

All this means that the French Revolution was, is and will continue to be, a living mass of experience undergoing change. It is not fixed, frozen out in the past; but moving, changing, developing and acquiring

ever new depths and qualities within the present moment that contains it. That Present Moment—which measured in astronomical time, lasted five years, included all France and touched the whole contemporary world—has its place in the zones of fate and destiny. It was both

causally determined and selectively predestined and it had form and pattern that were out of time and space.

Certainly, an event so significant for mankind continues to live in the hyparchic past. It not only lives but transforms. As we look back upon it after five generations have passed, we do so in the perspective of centuries. This is equivalent to saying that the present moment that contains the French Revolution has expanded. What we can discern today is nearer to the predestined or pre-selected event, than anything that contemporary eye-witnesses could have observed. We speak of the 'judgment of posterity' and take this to mean that as the event recedes into the past, personal passions and prejudices die down and a sober assessment becomes possible. This is by no means the whole story. As the present moment expands, the event itself takes shape and its true nature becomes more and more apparent.*

We have taken to illustrate the thesis, an event that has grown clearer and stronger, which will be remembered as long as the present human culture lasts. There are also events that fade away and disappear from memory and even from the records. Thus, there is a kind of filtering or concentrating process by which happenings are sorted out. A very small proportion gain in their power to influence mankind and the greater part diminishes until it ceases to exist.

Our picture of the past is now reasonably complete. It is as real now as it ever was. It is only past for our present moment. Moreover, it is constantly changing and evolving in the H-T zone. It projects itself into different times and places and each projection is different. It is connected with other times and places by the pattern of its virtual sensitivity. In this way it is possible to make direct contact with it.**

We do not perceive all this and we find it hard to accept: we are conditioned to equate reality with sense perceptions which belong to

* Jung, in his autobiography, *Memories, Dreams, Reflections*, describes an experience of 'dying' which vividly illustrates our theme: 'I had the feeling that everything was being sloughed away ... an extremely painful process. Nevertheless, something remained; it was as if I now carried along with me everything I had ever experienced and done ... I consisted of my own history' (p. 271).

** For example, a man may find that he has a vivid memory—as if he had actually been present at an event that occurred a thousand or two thousand years ago. He feels that he must have 'been there'. This seems to justify belief in reincarnation: but the memory refers to the trace stored in the Soul-Stuff Pool (Cf. Chapter 40) and he has touched it by way of a null-vector, as he might 'touch a star'.

our own present moment and cannot connect us with anything else but the content of this present moment.

16.42.7. The Status of the Future

The future exists, but in a different way from the past, and within another present moment. There is an obvious way in which the future can be said to exist. We expect with greater or less confidence that various kinds of events will occur in the future, but we can never be certain. Expectation is relative. Some events are very likely indeed to occur: only a cosmic catastrophe can stop the sun from rising tomorrow. Some events are so improbable that we do not take their occurrence into account in our preparations for the future: a giant meteorite may fall on London tomorrow and obliterate all its inhabitants, including the author of this book and all his works, but we take no precautions against such hazards. Between the two extremes are the events that form the thread of our daily lives, containing much that we expect, but always something we do not expect.

The usual explanation for our expectations regarding the future comes from the doctrine of causality. The present moment is presumed to have its causes in the past, so future moments have their causes in the present. It is theoretically possible to know all the causes and calculate their exact effects and therefore to know the future for certain. This point of view was given its extreme expression in the famous dictum of Laplace: 'Let me know the coordinates and moments of all the masses in the universe and I will predict the future of the world.' We can see today that such a claim is not even theoretically tenable, and our views of causality have radically changed. Most philosophers of science prefer to speak of probability rather than causality, and some have seen that this requires a change in our attitude to time. Yet, in spite of the success of relativity theory and the disturbing consequences of recent discoveries in sub-atomic physics, nearly every scientist and philosopher continues to think about time in an absolute manner.

It is exceedingly hard to picture to ourselves existence that is neither here and now, nor elsewhere and now; but in the still unactualized future. That the future, as future, exists and therefore must have a material content, follows from the picture we have drawn of time and hyparxis. The state of existence must evidently be quite different from the present state, but it certainly cannot be nothing at all. The notion of conditional existence is not totally strange, for we also speak of what 'might-have-been' and if this means anything at all, it must signify a

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conditional existence directed from the present moment towards the past. If we could turn a 'might-have-been' into a 'has-been' we should

be acting from the future upon the past. The point is that the zone E-H contains existence as a pattern that is 'really' there, but not actualized in terms of material energies.

We have now come to the crux of the matter. The homogeneity of experience does not allow some parts to 'exist' and others not to 'exist'. All that ever has been or ever will be experienced and all that could have been experienced, in short, all that is possible, exists.* This doctrine, formulated in Vol. II, in the process of tracing the stages of Creation, is also implicit in the Law of Order, which operates differently on different levels of being. We have already concluded that the 'Present Moment' has the limited transient character to which we are accustomed, only on the level of Self-hood, World XXIV.**

We have, thus, strong grounds for supposing that the apparent non-existence of past and future may be due to some limitation in our own modes of perception; and that, for a different and more comprehensive vision, all that has been or will become actual would be seen to exist. It does not follow that all exists in the same way. There are three states of existence that we can recognize: the past, the present moment and the future. Our present moment has a reality of its own and is a region of experience in all dimensions. But there are also 'longer moments' that have their own character and contain our own. For us they are past and future, but in themselves, they are present.

The relativity of the Present Moment is different for all the seven types of openness described before. If we confine the use of the word 'actual' to mean that with which we are connected by an 'immediate mental object', there are different degrees of non-actuality. Let us consider a few examples of non-actual connection with the present moment.

1. Tomorrow's sunrise, though now non-actual, is almost certain to be actual tomorrow. The probability is so great that it is practically causally-predetermined. Most physical phenomena are similarly pre-determined by causes existing in the past.
2. The state of mind in which you will find yourself in twenty-four hours is also non-actual but it is also almost unpredictable. Apart from

* Cf. Vol. II, p. 269, 'Existence is the sum of all possibilities of Being according to Law'. Again p. 264, 'Existence is possibility divested of impossibility'.

** Cf. Vol. II, Chapter 30, p. 173, 'There are no events in the higher worlds'. The transitive order of World XII unifies time and hyparxis, thereby removing the distinctions of past, future and present, *ibid.*, pp. 148-150. For Individuality the Present Moment is not divided; but this does not imply that disorder is removed.

the small (we hope) uncertainty about whether you will be alive, there are no causes that can be known with sufficient accuracy to predict a future experience. Moreover, there is at least some element that cannot in any case be predicted, because your freedom of choice allows you to intervene in the situation and your intervention will falsify any possible foreknowledge.

3. The child that is to be born from a conception is still non-actual. Apart from influences of the first kinds (high probability of embryological laws and uncertainty due to freedom of parents) there is the eternal pattern of the child due to its genetic constitution and the other factors discussed in Chapter 40. 'The child is father to the man,' can be interpreted to mean that the eternal pattern preconditions the future in a non-causal way. This kind of determination is different from either of the previous cases, because it accompanies actualization and does not precede it.

4. An event of decisive importance is to be enacted in a particular time and place. The event may not occur at all, or it may fail to achieve its purpose. Nevertheless, it pre-exists in a manner that is different from any of the other three cases. It belongs to the destiny of those who are to take part in it. If it fails, or if they misunderstand what is required of them, they miss their destiny. Their lives continue to become actual in their own present moment: but they do not become real.

Here we have four ways in which the future is linked to the present moment. Have we any grounds for using the word 'exist' in the literal sense of 'standing out from nothingness'? Evidently this is not a field in which we can ask for 'experimental' evidence for we can make experiments only in the present moment. We must therefore rely upon observations and these obviously will be not reproducible and only partially verifiable.

Nevertheless, there are several ways in which the existence of the future can be tested. The simplest of these is precognition, that is knowledge in the present of a future event that cannot be calculated in advance and yet is perceived in such a way that chance coincidence can be ruled out. Here the subject is passive, though in some cases his or her precognition affects the course of events. So many and so varied instances of precognition and premonitory phenomena have been investigated, and found to be inexplicable by accidental coincidence, or prediction from pre-existing causes, that we are justified in concluding that there must be some sense in which the future already exists.

The subject has been exhaustively investigated many times. The latest and in many ways the most convincing is to be found in J. B. Priestley's

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Man and Time* Priestley distinguishes precognition from F.I.P. (future-influencing-present) phenomena. This refers to cases where a sequence of events can be explained only on the supposition that some influence of a later event produced a certain pattern of behaviour in an earlier event.

Another class of phenomena, not investigated by Priestley, concerns intentional precognition, that is to say, divination, and all kinds of fortune-telling. It seems very probable that it is possible by various procedures to foretell certain kinds of future events. That this is not only possible, but does frequently occur, has been believed for thousands of years by the most cultured nations of the old and new worlds. Oracles, soothsayers, diviners, seers have been accepted and believed so widely and so consistently as to make it improbable that authentic prediction of the future never has occurred; but we have no studies of prediction as thorough and reliable as those which have been devoted to telepathy and precognition. There are, however, certain striking features in the various accounts of precognition and the procedures of divination that provide indirect evidence of both the reality and the relativity of future existence.**

1. Divinatory procedures are almost invariably based upon the observation of spatial patterns. Tea leaves in a cup, the livers of sacrificial animals, the flight of birds, the arrangement of yarrow stalks thrown at random are typical and well-known examples. By various conventions of interpretation, a spatial pattern in the present is used to predict a temporal pattern of events in the future.
2. Divination usually requires some change of consciousness on the part of diviner or medium. There is a suppression of normal sensitivity in favour of a different level. In other words, divination seems to involve a shift in the direction of eternity.
3. Premonitions almost invariably refer to the visible behaviour of objects and people. A study made forty years ago of hundreds of premonitions of the 1914-18 war, brought to light little except stories of material objects such as guns, bombs, cities in flames and soldiers in uniform. There were virtually no premonitions regarding the fates of particular people, or of course of the war.

* Published 1964, with a wealth of examples and references to a far larger number of cases elicited by an interview on the BBC programme Monitor, The whole of Part III, Examples and Speculations, pp. 190, 309, should be studied by anyone who is doubtful about the weight of evidence in confirmation of precognition and allied phenomena.

** By 'real' we should understand 'within a Greater Present Moment', and by 'relative', linked with our own present moment in varying degrees.

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4. Precognitions and retrocognitions are very often linked. The latter usually go unnoticed, because it is assumed that we can know the past only by the traces left in the present moment by past events. Systematic studies, as made by Soal and Rhine, indicate that their subjects tended to guess cards or other symbols both pre- and retro-cognitively. Many reported cognitions of the past which are interpreted as evidence of reincarnation, may be retro-cognitive in which the *modus operandi* is apparently the same as that of precognition.*

5. Contacts between minds at different times do not seem to occur. This is striking because telepathy, i.e., contact between minds within the same present moment, even when spatially separated, seems to be well established. It seems equally clear that contact between bodies at different times does not occur; if it were to do so, the conservation laws (energy, momentum, etc.) would be violated. Contacts seem to occur between minds and bodies or between bodies and minds. The first comes in precognition and the latter in divination.

In order to make sense of all observations such as those cited in studies of parapsychology and divination, we must ask ourselves how we could know anything without messages received through the senses. As Professor Price** and many others have shown, the problem is really that of showing how we receive images in the mind. These involve a jump from material energies (electrical impulses, etc.) to vital energies (automatic and sensitive). This jump does not involve movement in time and space, but rather a null-interval of the kind we found in our studies of the physical world.*** Our framework allows for nil-intervals by combinations of space and eternity, with time and hyperaxis. Similar combinations can be formed within the mind, because the mind is already in contact by way of consciousness and creativity with pools of universal energy that are not limited in time and place.****

Three kinds of cognition are possible.

1. The direct contact of material systems by nil-vectors allowing energy exchanges without movement. This occurs, for example, with light signals, which are transferred to the mind by the sensitive energy.
2. Direct contact of the automatic and sensitive energies. This includes sympathetic and empathetic communication between minds and bodies such as the phenomena of telepathy and precognition.
3. Contact by way of the universal energies of consciousness and

- * C. D. Broad in *Lectures on Psychical Research*, London, 1963, refers to retro-cognitions as 'Post-presentative veridical hallucinations',
- **H. H. Price, *Perception*, Oxford, 1932.
- *** Cf. Vol. I, Section 5.13.7. and Appendix II, pp. 499-502.
- **** Cf. The theory of the human Soul-Stuff Pool developed in Vol. III, Chapter 40.

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creativity. This is always in operation, but we become aware of it only when there is a transfer into the mind. This appears to occur spontaneously and unpredictably, because we cannot trace the operation beyond the limits of the mind. This third kind of contact can give knowledge of past and future because the universal energies are not subject to the distinction of virtual, actual and conditional states. This also explains why consciousness appears to have the power to project 'action to a distance.'

Consciousness can 'pick up' energy patterns in a virtual state and it can also form such patterns with the help of an influx of creative energy. This explains what are called 'thought-forms', which in reality are not thoughts, but patterns.

It should be noted that most accounts of premonitory phenomena do not include precognition of events on a higher level of order than the material world. Are they to be excluded from contact with the present? The answer to this question is far more important and more astonishing than the elucidation of premonitions of events. It seems that creative impulses received in the present moment may—and perhaps always do—come from the future. When a scientist has a flash of insight into the workings of Nature, or an inventor sees how an hitherto unknown device can be constructed, they are in momentary contact with the future outcome of the discovery or the invention. This can account for the well-known observation that the same flash of genius will occur to more than one person at a given time, though usually most who have it fail to follow it up. Again, a military genius like Alexander or Napoleon acts with supreme confidence in the success of a manoeuvre which occurs to him in a moment on the battlefield. Why? Because his heightened awareness brings him into immediate contact with the future situation that he himself is about to create.

There are, thus, several ways in which the future can influence the present. Creative insight, though the highest open to man, may not be the highest possible. Similarly, purposes consciously entertained may be linked to the pattern of future moments; but there can also be some kind of sensitive connection with the future that produces instinctive actions as in animals. Within the region of possible connections, instinct, expectation, precognition, predestination and creativity all have a place and all can be accounted for in terms of the scheme we have outlined. It

all turns indeed upon the simple notion of coalescence of present moments.

This notion is derived from one of the most certain and invariable features of our experience, namely, that the embrace of the present

moment is always changing. As a new object enters the mind it 'coalesces' with the existing content. As we open our eyes what we see is embraced into the present moment. Less obvious and certainly less frequent, but equally striking and decisive, is the encounter of minds in the act of mutual understanding. Two present moments coalesce into one. Even more powerful is the sexual experience of coalescence of total experience into a common present moment, so that two souls become one. Taking these immediate, personal and indubitably real, experiences as the starting point, we extend the notion of coalescence to the present moment of societies ranging from a family of three generations to that of the entire human race over a million years. Clearly all these can be regarded as present moments on condition that we can specify the consciousness and will that makes them so. If there is to be a Great Man-Soul such as we postulated in our study of man,* and if this soul is to be conscious and exercise a single Individual Will, then we can certainly refer to the experience of that Great Soul as its Present Moment.

Since innumerable intermediate states can be postulated, we can use the notion of coalescence as a simple and comprehensive way of speaking about pre- and retro-cognition and of the future-influencing-present. There are not only different degrees, but also quite different kinds of coalescence or excursion beyond the specious limits of the present moment. Every one of the seven directions** is open to the Will that is strong enough in its union with Being and Function to respond to the invitation.

There is, for example, clearly a decisive difference between creative impulses and precognitions. The latter do not depend upon any present action—otherwise they would not satisfy the requirement that they could not be foreseen by any ordinary kind of knowledge or foresight. The former depend upon the ability of those who receive them to recognize and act upon them.

'Harp and carp, Thomas', she cried
'Harp and carp along wi' me.
If ye dare kiss my rosy lips
Soon of your body will I be.'
'Harp and carp', true Thomas cried
'That wierd shall never daunten me.'

Soon he hath kissed her rosy lips
All underneath the eildon tree.

* Vol. III, Chapters 39-41.

** Vide supra, p. 33.

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And so he was borne off out of his present moment and was not seen again of men until they caught up with his time. His excursion into the future was made possible because he accepted the challenge of the unconditioned.

There is more than fantasy in the tale of 'Thomas the Rhymer'. The future can be a realm of creativity into which the soul can enter, when it is delivered from the conditioning of the past. Here we stand before a very great mystery that we shall refrain from probing until we reach the end of our journey.

It only remains to answer the question: why is it that excursions into the future occur so seldom if they require no more than a null-vector of the same kind as the proper-time of light? There are three parts to the reply. Firstly, excursion into the future is probably not so rare as might be supposed. Immense credit for emphasizing this is mainly due to Dunne.* Secondly, messages from the future are received by the one and only receiving apparatus available to us: the sensitive structure of the mind. This apparatus is almost continuously occupied with receiving messages through the senses, and, even in the absence of sense-impressions, it is taken up with mental images and traces of the past which have been stored up in the memory. Thirdly, there is probably a special mechanism built into man's nature to prevent him from directing his apparatus towards the past or the future. The result is that only when this mechanism is accidentally inhibited in its action that such contacts can be made. Nevertheless, it does seem that it is possible by a special kind of self-training to acquire control over this mechanism and use it to connect with regions of space, time, eternity and hyper-space which are within the present moment and yet out of reach of the senses. This amounts to the power to expand the present moment. It also seems that such training can greatly increase the sensitivity to creative impulses coming from the hyperarchic future and thereby, ensure a far more productive and successful life than would otherwise be possible. This doctrine presupposes a real power to 'change the future' and this must be the case if the responsibility of man or any other intelligent creature is a reality. If all were predetermined, there would be only one kind of time and the present moment would be embedded in a total World Event in which there could be no choice: hence no moral action and no responsibility.

The scheme we have developed may seem complicated, but reflection will show that it is the minimum that will account for all the elements

* Particularly in his Experiment with Time. His scheme of the indefinite regress comes near the mark but fails for want of an adequate framework.

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of our experience. We have still to show how, in this scheme, disorder can be overcome—or, in more picturesque language, how Time can be Conquered—and not merely held in check.

The central problem for any understanding of our situation is to show how the limited Present Moments associated with separate selves, can be significant for the entire Human Race and how, in its turn, the Present Moment of Humanity can be significant in this great Universe.

16.42.8. Hyparxis and Time

The problem of disorder has been identified with the problem of Time. The present moment which we wish could last for ever, will indeed last for ever, because it is timeless: but it is threatened with progressive loss of order that will leave no place for life. This disorder threatens out of the future and if it is to be averted, the future must be changed. So long as the future pours disorder into the present moment, we can do no more than resist by the various means discussed in earlier sections.

But we want more than to hold back the flood: we want to reclaim the present moment. We want not merely to endure, but to evolve. We know from our own experience that it is possible to increase order within the present moment by exercising our power to choose; but this presupposes a higher order already present that enables us to choose. We do not increase the total order, but only that which is upon the levels accessible to our intentional action. We can, indeed, 'put ourselves in order' up to a certain point; but, as we saw in our study of the transformation of man,* help from a higher level is always needed. We are now faced with the problem of giving this observation an historical interpretation.

We are now as confident as we can hope to be about anything, that order has increased on the earth during the last thousand million years and that it has done so by the Evolution of the Biosphere. We saw, at the beginning of this chapter, that this victory over disorder has been accomplished without violating the second Law of Thermodynamics, because the increase of order or virtue in the Biosphere has been at the expense of a greater decrease of order in the system Sun-Earth. This

could not have occurred without a generator for anabolic transformation** and a source of higher energy. This is the crux of the matter, for upon

* Cf. Vol. III, Chapter 40, pp. 193, 194-5.

** Cf. Vol. II, Chapter 32, p. 233. 'The transformation, in any kind of generator, of energy from a lower to a higher quality is anabolic' Also p. 220, Proposition VI: 'Every generator converts one quality of energy into another through the action of a third.' The third energy in our present case must come from beyond life: i.e. it must be conscious or creative, probably both.

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the soundness of this conclusion turns the entire question of whether evolution can be regarded as a natural process or whether a supernatural agency must be invoked. This question is decisive for the interpretation of History.

We can form a picture of the present moment with a three-fold structure of transformations.

1. Predetermined or quasi-determinate material transformations. These belong to future time and are successive, predictable and subject to laws of causality and probability.
2. Predestined transformations that are within the zone of life. They are not predictable because they depend upon acts of choice and decision. There is a transition, not strictly continuous, but unbroken, from determination to destiny. At one extreme there are causal processes with no pattern to guide them. At the other extreme, there are purposive processes guided towards a predestined pattern.
3. A foreordained plan which is the ultimate purpose of all existence and every separate existence. Hence it enters into every present moment, though only conscious energy (E 4) can provide awareness of it and only creative energy (E 3) can act according to it. The act comes from the Personal Individuality in so far as it concerns the life-aims of the human person, from the Universal Individuality for all mankind and the Cosmic Individuality for the whole creation.

The Present Moment is the scene of an incessant transformation of energies. This transformation acquires direction and purpose with Life; it becomes self-directing with Mind and creative with Soul.* The energies that are associated with the present moment of Self-hood in the embodied state are necessarily localized and condensed into a region of space. They must also be condensed within a corresponding duration of time. The highest energy that can be condensed in this way is the

sensitive energy (E 5) that is at the upper limit of the vital energies. From the concentration of sensitive energy an action is initiated that reverberates in space and time, but only in those areas that are accessible to the embodied self. Outside these areas there is the 'past' of the Self. This is not accessible to material energy transfers—as must be obvious from the laws of conservation. Nor is it accessible to the vital energies except in the very special case of sensitive energy associated with consciousness (E 4) that we call Mind. The sensitive energy that is 'left behind' in past events, concentrates in some and weakens in others. Hence we have the well-known phenomenon whereby some moments

* For an explanation of these terms see Vol. III, Chapters 39 and 40.

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in the past stand out in sharper and sharper relief as we recede from them while others disappear and are forgotten.

Thus, the 'transformation of the past' makes itself felt as the enrichment of a few moments, and the impoverishment of the great majority. We should ordinarily interpret this as a trick of memory by which what is well recorded and remembered is all that remains. This interpretation fails to account for the fact that events almost totally overlooked by the contemporary world—the supreme example is the foundation of Christianity—are seen in the course of time to contain a far higher concentration of conscious energy* than events that, at the time, seemed to be far more important and were far better recorded and for a few generations, far better remembered.

The notion of an objectively transforming and developing past is so strange that it can be accepted only if it is found to give a more consistent, more complete and convincing explanation of the past than the usual one that treats the past as non-existent and ascribes 'existence' solely to the present moment. The difficulty is enhanced by our eternity-blindness.** So long as our experience is dominated by exchanges of energy, the present moment appears to be a 'moment of time.' But we can sometimes be aware of timeless moments and these are found on careful examination to be states of minimum energy exchange. For example, respiration stops and even the pulse may be arrested. Again artificial states in which sense-stimuli are almost entirely eliminated are always associated with a profound change in time-perception. These timeless moments are explained in terms of conscious energy (E 4) which is not subject to the 'flow of time'.***

There is, however, another kind of timelessness connected with Will. We find that attention fluctuates by timeless jumps. Decisions are taken

timelessly. The experiences of Individuality reported by those who have attained soul-completion, are invariably timeless. They are not, however, the same as 'time standing still.' We must clarify the notion of 'hyparchic moments'. We can 'know' the temporal past from its traces in the present moment and we can forecast the temporal future from the same data: but we cannot enter into the temporal past and future because they lack the conditions for conscious experience. Hyparchic moments can be experienced by those whose consciousness is not limited by actualization: i.e. by the vital energies.

* How this cosmic energy can be 'concentrated' is explained in Vol. III, Chapter 41, Section 15 .41.6.

** Cf. Vol. I, pp. 145-6, Section 5.13.9. The simplest example is our inability to perceive potential energy.

***And hence can see time for what it is.

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The hyparchic moments are interconnected by their freedom from the requirement of being actual. There are past hyparchic moments and events and there are also future hyparchic moments and events. We have looked into the hyparchic past in connection with the notion of the 'growing and changing past'. We must now see what the hyparchic future has to offer.

The hyparchic future consists of non-actual and yet real events. They are not potential in the sense of being patterns of what might be: but are in a state of creative activity that must be wholly virtual.* It is probable that only three cosmic energies—consciousness (E4), creativity (E 3), unitive (E 2) can be in the hyparchic future state, ** The hyparchic future is the place of creativity, so it can be regarded as the region in which the purposes of existence are given shape and substance prior to their actualization. This is possible, because the hyparchic future has a degree of freedom that the temporal future does not possess. This can perhaps be grasped by an illustration.

Suppose we have an apparatus S that delivers coloured balls in pairs and that the operator, A, must take one of the two balls to make a sequence.***

When a ball is taken from its receptacle, it is replaced by another from a hidden storage vessel. The operator wishes, let us say, to make a blue sequence, but does not know if he will have blue balls delivered—because, we may suppose, the balls are of seven different colours. He is obliged on the average to discard six out of every seven taken. The same would be true whatever pattern he wished to form. This can be taken to represent the temporal tendency towards disorder.

Now let us suppose that there is an unseen operator B on the other side of the apparatus, who does not feed the balls out at random, but has his own pattern that he is trying to realize 'on the other side'. Operator A has one plan and operator B another. It is now probable that instead of wasting six out of seven, A will waste far more. Here there is a conflict between two 'orders' with the result that an excess of disorder occurs. If, on the other hand, A happens to hit upon B's plan and accepts it, he will be highly successful.

This can be said to represent the 'successful man of destiny'. It is not necessary that B should be present as a person; because a pattern

* The notion of the 'virtual creation' of particles, important for nuclear physics, is a useful parallel to our notion of the creativity of the hyparchic future.

** The Transcendental Energy (E 1) is associated with 'pure' hyparchic and eternal states and can be controlled only by the Cosmic Individuality.

*** The model is to represent man able to make a choice of 'yes' or 'no' to two alternative paths. This corresponds to the ordinary working of the will in man as a self.

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could be 'programmed' into the machine. This corresponds to Fate, where the pattern is fixed once and for all. Here there is a direct correspondence between two patterns: that of intention behind the machine and that of actualization in front of it. This does not take into account factors that do not directly concern A's fate.

Now, suppose that there is a planner C of a higher authority than B and that B is no longer free to offer balls to A only but must distribute them to a number of A's, say A₁, A₂, A₃, etc.* We are now nearer to the situation of our ordinary experience. We have only to add one more notion and this is that B cannot intervene all the time, but must allow the machine to work according to its own programmed system of distribution, except when there are gaps or 'unprogrammed moments'. This produces a situation analogous to the world of sense experience where causal explanations can account for events on a single line of time, but not for interactions between lines, such as occur in most biological phenomena.

We shall call the near side of the machine 'the local present moment' and the far side, the 'hyparchic future moment'. The temporal future evidently lies on the near side of the machine and it includes events that we confidently expect. Let us suppose that we have never known the machine to fail to deliver a thousand balls an hour and we call our expectation that 24,000 balls will be delivered in the next twenty-four hours a 'well-established scientific generalization'. It may also be that

we find a statistical constancy in the number of balls of each different colour. This is an 'empirical observation' that enables us to make predictions and direct the course of events. All this is called 'gaining control over Nature'. The A operators do not suspect that they are dealing with an apparatus whose function is to keep their activity within predetermined limits and so to fulfil a certain purpose.

The far side of the machine is totally different. This is the input side. What appears from one side as a random distribution of balls governed by statistical laws, is seen from the other side to be the creation of a pattern that gives a particular place to each ball. The 'randomness' of the output is due to the failure of the A operators to recognize the pattern. The statistical regularities are due to the construction of the machine. The pattern—which is what really matters—is seen only by those who are on the input side.

Now let us translate this simile in terms of man's psychological structure.

* These represent the various selves of A, only one of which is able to actualize at any one moment.

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The apparatus is the human mind,* which includes energies from automatism to consciousness. It receives impressions (coloured balls) through the senses and it also receives impulses from the higher centres (arrangements of colours in patterns.) The A-operators are the selves of man and his personality or personalities. The B-operator can be identified as the Personal Individuality, which is the Will unattached to an existential support. The C-operator may be the Universal Individuality.

The Self-hood of man is predominantly connected with immediate mental objects. This makes it aware of time as passing and also of a connected pattern in its experience. We can, with some reservation, regard the four Selves as existing on different levels in eternity. Only one self is normally aware of the Present Moment. When one Self is dominant in this way, the others are latent mental objects. The mind is the locus of the Selves and that part of the mind that we call 'conscious' is the content of the immediate Present Moment. This is more or less fragmentary according to the power of embrace of the Will. So we may associate the Personal Individuality with hyparxis as the will to realize destiny. Only with the four cosmic energies can hyparxis and eternity be brought into direct contact and this agrees with the observation that, in their ordinary states, the Selves have no awareness of Individuality.

The Universal Individuality is 'beyond consciousness' and therefore can act both within and beyond the mind without the latter being aware of it.

The next stage of the argument can best be followed by returning to the simile. We shall speak of the 'near' side of the machine and the 'far' side. On the near side is the present moment of a particular mind. On the hyparchic side, there is no actualization and therefore all events are reversible. On the near side of the machine, activity produces the past, on the far side it produces the future. This suggests the very important conclusion that there is no 'present moment' except in minds: from which it would follow that the present moment is not a part of time but a state of mind arising from an act of Will.

Our immediate concern is with events on the far side of the machine. So long* as there is an Individual Will but not a mind, there is no personal present moment. The Individuality is a pattern of possible relationships in the Greater Present Moment. The arrangement of colours of individual balls corresponds to the destiny of the Individual Will; but there is neither communication nor cooperation between the two sides. The Self-hood is isolated from the Individuality, within a

* Reference should be made to the author's *A Spiritual Psychology*, p. 128-130.

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present moment that appears to it to contain all experience, although in reality it is only a small region of indeterminate extent.

The state of the completed soul is in the hyparchic future. This state is quite different from that of the temporal future which is on 'this' side of the machine and can therefore be precognized in varying degrees. Let us consider the situation of a completed soul that has reached the Psychoteleios state.* Such a soul is able to enter the hyparchic future because it is an Individualized Will. It brings its mind with it. This introduces operators of a new kind that we shall call D-operators. These are perfected souls that have left the limited present moment and entered the hyparchic state. A soul—which combines mind and will—situated in the hyparchic future, can influence the present. We have here a consistent and natural explanation of the condition of saints.** We can also see that the saint has conquered time for himself, for he is exempt from successiveness and irreversibility. Moreover, since in him

consciousness and sensitivity are independently organized, he also is free to move in the direction of eternity and become aware of Values as part of the Foreordained Plan of Creation.

We can now ask ourselves just what is and what is not possible in the hyparchic future. The hyparchic state is not in this present moment, hence it cannot act directly upon it by any material agent. The influence upon the human present, of a mind in the hyparchic state must consist in pattern formation. We may have experience of this but do not recognize it. It occurs in the spontaneous arising in the mind of patterns of action that are not the result of previous thought or of influences received from outside. These patterns of action probably come from the Personal Individuality. They do not enable us to conquer time, but they can be of great significance for understanding and fulfilling our destiny. The conquest of Time requires effective action outside of the personal present moment. This is possible only in the hyparchic future. It should by now be clear that there is no other condition open to a finite Individuality in which anything can be done. The activity of a perfected soul in the hyparchic future can include the creation of patterns that will balance and so counteract the consequences of temporal actualization.

This can be illustrated by the apparatus. We suppose that the D-operator is aware that a particular combination of events—for example, the concentration of conscious energy (E 4) within a certain group of people—will bring about an increase of order, that is, an

* Cf. Vol. III, Chapter 41, section 15 .41.5.

** Saints are a sub-group of the Psychoteleios Group, loc cit., Section 13.41.5-2.

evolutionary development contrary to the trend of probabilities, within the human society at a certain time. Such a concentration may be obtained by a particular pattern of coloured balls, and the D-operator can manipulate the apparatus so as to give a strong bias in favour of the desired pattern. If we suppose that there is an A-operator (i.e. a living person) who can recognize what is required, he will respond to the indications and an effective cooperation between his present moment and the Greater Present Moment will be set up. So long as this lasts, the result will be to introduce into the present moment of ordinary people unexpected and improbable factors, of such a nature as to appear to go against the stream of time.

We may further suppose that the hyparchic future has its own localizations. These localizations can be aligned with respect to the present moment in such a way that the nearest differs very little from the temporal future. At each stage, there is a greater degree of freedom, enabling the creation of patterns to be directed towards the highest attainable degree of order or the maximum exclusion of disorder.

The hyparchic future is a region of patterns of events, not of events themselves. Patterns can be created and are created by souls in the hyparchic future. There is an overriding pattern of Destiny. The hyparchic future contains the destiny of mankind, of races, societies and individuals. This destiny is not fixed, but is in process of being created. There can be a feed-back between the small and the large present moments: but this takes place on the level of the cosmic energies of consciousness, creativity and unity and therefore cannot be observed by the human mind. This feed-back enables destiny to be adapted to the course of events. Unless it were possible, failures would be irredeemable.

The hyparchic future cannot determine the present. Predetermination belongs to time alone. If predetermination were absolute, there would be no hyparxis. This corresponds to the state of unconstrained motions, which can be described without any reference to hyparxis.* The future motions of a system of unconstrained bodies can be predicted with absolute certainty from full knowledge of its present state.** As soon as there is interaction, predetermination ceases to be absolute. It follows that the enlargements of the Present Moment which we can observe and study must lie within the H—T zone.

The hyparchic future appears to be a strange notion wholly alien to our experience—which is always in the restricted present moment. The

* Cf. Vol. I, Section 5.14.1, 'Non-interacting Relatedness'.

** By the Principle of Stationary Action. Laplace and Lagrange showed this in the eighteenth century; but mistakenly supposed that it would be true for all motions. D.U. iv—4*

same is true of the hyparchic past. Are we then to conclude that hyparxis is a mysterious concept that belongs only to mystical experience in the rare cases of direct knowledge of past and future events? By no means. We should have no experience at all unless there were an hyparchic component within every present moment. It is this that enables us to live and move 'within the present' by enabling a more or less extensive region of space, time and eternity to be integrated as 'here and now'. The eternal element in the present moment is experienced in the separation of the mind from its objects; and, to an enhanced degree, when consciousness and sensitivity are separated in the mind. But this separation would only produce a state of subjective trance (samadhi) if there were no hyparchic component to hold the elements together.

We can, therefore, say that the 'present moment' is also the hyparchic present. If it were only a temporal present it would be a vanishing instant of time without duration. If it were a spatial present only, it

would have no motion. If it were only an eternal present, it would be trance.* The present moment within which it is possible to act, must have an hyparchic component. When this is very strong we can pass beyond the simple 'yes' and 'no' of the illustration given above, and act according to our destiny, **

The fully developed man who has attained Individuality has, like everyone else, his own present moment, but he can also enter into other present moments and act within them. This means according to the views developed in this chapter that when the Present Moment opens in the direction of hyparxis, it also gains in duration, extent and in the perception of Eternal forms and values.

Even for ordinary selves, hyparxis is a necessary condition of experience. Nor is it totally imperceptible. We do not observe it directly; but we have an intuition of 'presence' in those whose hyparchic nature is strong. This means that they do effectively live in the space that contains and surrounds their physical body. Though the notion of hyparxis as a determining-condition like space and time is unfamiliar, the manifestations connected with it are there for us to experience, when we know how and where to look for them.

16.42.9. The Greater Present

We cannot leave the subject of disorder and separation, without considering how it affects our notions of existence and being. Ontology in

* The experience of nirvikalpa samadhi reported by Yogis such as Ramakrishna show that this is possible.

** The A and B operators become one and the same.

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philosophy has been concerned only with an ill-defined instant or with a timeless, 'Eternal Now'. We need an ontology of all present moments including past and future states. To make this clear we shall have to return over some of the ground already traversed. As we have said, past, present and future, both temporal and hyparchic, all exist; but they do not all exist in our present moment. What exists for us is our present moment, and this is different according to the state of our being. The present moment is an intersection of seven regions and zones which range from the existing and actualizing world to the worlds of Will and Value which are not subject to existence. When these meet, there is experience. In the ordinary way, experience is of that which is now being actualized, namely the content of the present moment with its traces of the past and expectations of the future. Within the personal present moment, freedom is limited by the commitments of the past and the patterns of the future. These have the effect of turning the present moment into a tramline in which the driver—or the Self—has little

power of choice. It is, however, possible to get away from the commitment by abandoning attachment to present existence and thereby entering a larger Present Moment.

The future exists: but it does not exist within this present moment. It exists in our future. The future is not yet now, but it is already future. We cannot say that the future is 'in' the future for this means nothing. What we can say is that an event that will occur in the future is already present in the future. But it is differently present from 'here and now'. This is the difficult idea that has to be grasped. The future is not actual and so not yet committed to being what it will be. That which is being actualized at the present moment—the words I am writing on this piece of paper—are being as we so aptly say 'committed to paper'. The commitment is irreversible. 'What I have written, I have written', as Pilate said, with deeper significance than he imagined. The words were inscribed in the Present Moment of the whole Christian Era and are still present.

It is useful to make ourselves a partial representation with the help of other conclusions reached earlier in our investigations. We have repeatedly said that Will does not exist, and Individuality, a pure Will does not exist either. We have seen Individuality acting in the future.* There is also existence, but in a present moment that is beyond our reach. The Individual Will has power over existence in the future. We have called this action pattern-creation and we supposed that this is occur-

* We must be on our guard against thinking of Individuality as existing in the future.



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ring in a present moment which includes both 'our' present and 'our' future.

The usual way of thinking about Will, is to regard it as a power directed from the present towards the future. If I say: 'I will go', the intended meaning would probably be: 'A decision has been taken in my mind that will at some future time result in the act of going and at some still later time will validate the statement I went'. 'Whatever sense we may ascribe to the word 'will' in this statement, it certainly refers to future time. This is equally true for those who deny Will any reality and

for those who assert that man has will and that he can exercise it freely and so can 'change the future'.

We take an entirely different view of the situation. Will is exercised exclusively in the present moment and its operation is inseparable from such exercise. We can only change the future if we can act in it, and this is only possible if we can bring it within the present moment. This, according to the ideas developed in this chapter, is possible in several ways.

1. The simplest and most immediate situation is that of the Self-hood. This is contained within a present moment of finite duration, occupying a finite region of space, with some separation in eternity* and some degree of hyparchic freedom. The self-hood can be aware of alternative possibilities within the present moment and act in such a way as to realize one and reject the others. This act only influences the future to the extent that there is a determinate connection. Trivial choices leave no trace and might as well not have been made. Serious and effectual choices are rare and they seldom produce intended results for lack of power to calculate their consequences or to precognize the future directly. This is the ordinary state of the Self-hood.

2. The Will is exercised by the 'I' of the True Self. This stands between the vital and cosmic energies. The mind reaches out into the future and the present moment includes the act and its consequences. This is the state of the truly responsible will. The 'I', associated with conscious energy, stands apart from the sensitivity and other vital energies, and can determine action outside the present moment of the

* Cf. Vol. I, Chapter 8, Section 3.8.3, pp. 160-4 for a discussion of the apocritical intervals that separate levels in eternity. The point is that, although all existing entities must have some degree of organization and hence some 'depth' in eternity, only conscious energy in Selves can give direct awareness of this separation.

** The equivalent status of the Universal Individuality and Demiurgic Intelligence was implicit in our discussion of Psychoteleios Society, Vol. III, Chapter 41, Section 15.41.7.6. It is made explicit in the next chapter and will play an important role in our account of the evolution of mind.

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lower selves. The separation of 'present' and 'future' is momentarily overcome by an expansion of consciousness. In this state it cannot be said that the Will is directed towards the future, for it is able to act along the direction of the hyparchic present and future which is timeless. This is a state that man can experience, but usually does not recognize.

3. The Will is exercised by the Personal Individuality which is able to pass freely out of the present moment of the Self-hood into the Greater Present. It does so by way of Consciousness and Creativity. In this case, the act of will is in the future of the Self-hood. It works against Time and brings creative order into the present. This mode of willing is possible only when the Individuality has entered into the Self-hood.

4. The Will proceeds from the Universal Individuality or Demiurgic Intelligence.** It is wholly free from the limitations of Self-hood. It operates in the zone that connects Eternity and Hyparxis. Here the action creates the pattern of events that still lie in the future of the Self-hood. The mode of willing is also outside the limitation of number. One act of will in the Hyparchic future may influence the present moments of thousands of selves.

In using such expressions as 'future moment', 'hyparchic future' or even simply 'future', we run the risk of treating the future as if it were now; that is, in some way 'alongside' of our personal present moment. The future lies within a Greater Present Moment that also contains our own and for that moment, both our present and our future are now. Nevertheless, there is a true sense in which one moment can be said to succeed another. This is correctly given by Eddington's description of 'Time's arrow' as pointing in the direction of maximum entropy increase; or, as we should put it, the direction from which disorder penetrates into the present moment. This direction is that of predetermination and so it is also that in which time can be measured by clocks. The two properties are quite distinct and their interpretation in terms of our hypothesis is exceedingly instructive. The direction of 'pure' time is inaccessible to the life energies and therefore cannot produce any immediate mental objects. In plainer language, the state of absolute determination and absolute disorder is incompatible with any kind of mental structure. It is wholly 'materialistic' and outside of any possible experience.

We cannot reach, but we can approach, the direction of pure time. This we can do from two directions: from the zone time-eternity and from that of time-hyparxis. The first makes us aware of transience and hence of the threat of disorder. The other makes us aware of recurrence

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and hence of metric measurement. If there were no perception of levels of existence, we should be wholly involved in the probabilistic actualization of maximum disorder; i.e. of maximum degeneration. If we had no contact with hyparchic ableness-to-be, our present moment would

collapse into durationless instants and there would be no observation, no measurement, no awareness of succession.

We may now see how the lesser present enters into the larger in such a way as to preserve the distinction of past and future, and yet allow the past and future to exist for the experience that embraces them. We can show the situation by means of a diagram. We can start with a human self O, who has a present moment embracing his capacity for immediate experience. Although this present moment is always 'now', O, identifying the present with its material content, observes that the latter changes and describes this as the perishing of the present. In doing so, he treats the situation as if the only direction were that of pure time and identifies all existence with inert matter obeying absolute 'laws' of simple causality. Narrow causality is obsolete, because it is no longer possible to think in terms of Absolute Time and Absolute Space as the sole determining conditions; but it remains true that there is one unique direction for which past, present and future are a succession of point-instants. In the diagram this is shown as the horizontal line TP-TF (i.e. time past to time future).

P, N and F are the past, now and future content, of the present moment of the observer O in so far as he is confined to the perceptions of

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his Self-hood. The larger circle marked GPM is the greater present moment of the Personality Individuality.

1. For O, experience is always now. The material content undergoes change and in doing so conforms to laws of conservation and entropy increase. But O remains at N.
2. When O interprets his experience in material terms, he takes P to be past and F to be future and he draws the line PT-FT using it to define successiveness, irreversibility and the other properties he ascribes to time.
3. Associated with every present moment are the regions of eternity and hyperaxis marked E and H on the diagram. The present moment has non-vanishing components in these regions and in the intermediate zones. This makes it possible for O to sense, to know, to think and to act. These powers are all associated with 'now' and they have no past or future. The situation is that of the mind.*
4. The Individuality is independent of Existence and does not change with the change of content of the present moment. It can therefore embrace past, present and future in the Greater Present Moment represented by the circle GPM in the diagram.

5. The present moment marked P, though past for N, does not cease to exist for the GPM for which it is now. Nor does it cease to exist in its own right. This is the 'living past' that we have discussed in an earlier section. Its present moment is vivified by its own coherence and energies, but it is subject to disorder and hence to disintegration if it does not continue to evolve.

6. The present moment marked F includes the 'hyparchic future' of N. Within this zone, the Individuality can create the pattern of events: but only on condition that its Will is integrated with a corresponding level of Being. In other words, F must be a 'living future' with both time and hyparchic elements if it is to be changed.

7. Both P and F are outside the now of O, but not of the Individuality I. This is the crux of the matter and it explains the peculiar working of the Creative Energy that injects notions into the mind of O, 'from nowhere'.

8. The future of the self-hood allows for intervention by the Individuality—or by another Will that is not limited by Self-hood—within its here and now. Thus the future can influence the present by an intentional action.

* Mind is a region of ordering activity. Cf. Chapter 39, Section 15 .39.5.4. With the overcoming of separateness mind becomes soul—an organized structure of vital and cosmic energies. Cf. Chapter 40, Section 15.40.5.3.

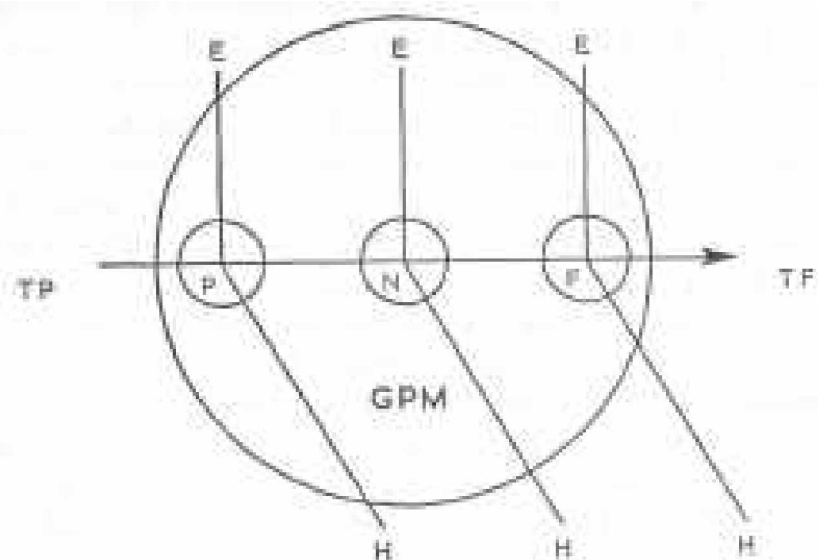


Fig. 42.5. Present within Present

It can also influence it through the pattern of energies that are the future content of N. These energies must include the material and vital energies. The former can exist only in the state of virtuality and the latter as latent mental objects.* The pattern pre-exists the moment of its actualization, providing it is capable of pre-existence, and this holds only if it is associated with energy free from disorder—that is the creative and higher cosmic energies. These are associated with the Higher Individuality which can thus create destiny. The pre-existent pattern is not able to influence the present except through some intermediate state in the form of a bridge between Will and Being. The virtual hyparchic pattern is an act of Will, which can be associated with creative energy but not the lower energies. By an act, that is apart from Being and yet directed towards it, the virtual or creative pattern transforms into a potential pattern that is eternal. This eternal pattern is the same as we have already found as the directive and organizing factor in development. It acts upon the actualizing present moment to bring order and organization and so 'change the present'.

We can take as an example the human mind. The will-pattern is in the creative state. It can modify the consciousness and be translated into the potentiality of the present moment. If the sensitivity and consciousness are separated, the pattern can be translated into the sensitive state as a mental image. For our later studies on the evolution of life this is of some importance, for it shows how patterns of pre-existence modify the organization of the present moment through the conscious state. Contrast this with the genetic pattern of the organism that does not go beyond sensitivity in its structure. This is why the genetic pattern must accompany the organism in its present moment and explains why we find it only in the zone eternity-space as an organizing influence.

Within the three regions and intermediate zones, together with the regions of space, there are several distinct future regions of the Greater Present. These range from determination to freedom, and from freedom to ordainment, and they include accident, fate, destiny and the Cosmic Plan among their possible patterns. We shall consider each of these future states in turn.

16.42.9.1. PREDETERMINATION

The wholly determined future is that in which nothing new or unexpected can occur. Its type situation is the perpetuum mobile. A

* The term virtuality was introduced in Vol. I as the condition of energies constituting the eternal pattern of an entity. In the course of further researches, it has turned out necessary to reserve this term for the purely hyparchic state, reserving the term potentiality for the content of the eternity region.

near approximation is met with when events on totally different scales are compared. We observe the galaxy from the earth: its general pattern remains unchanged for millions of years. The constellations observed thousands of years ago will remain the same thousands of years hence: but they only remain so relative to the earth and relative to the duration of human cultures. Nearer home, we confidently expect that conditions of existence on the earth will remain substantially unchanged for a long time. All that depends upon and is governed by large-scale laws is more or less determined on the small scale. Through our bodies, we are governed by the condition of the earth and by many smaller, but nevertheless relatively unchanging influences. Events so governed can be described as predetermined. Predetermined events vary in the degree and completeness of their determination and we must therefore remember that we are dealing with a class that has a range of predictability.

16.42.9.2. PREDESTINATION

We can define a quite different class of events distinguished by having a destination or end-point lying in future time. All life belongs to this second class. The simplest living thing has a pattern that it tends or seeks to realize. The most complex and also the vaguest human aims and purposes are associated with events of the second kind. We shall describe these as predestinate to indicate that they are always recognizable by having a destination that may or may not be reached. Here again, relativity applies and we recognize a range of destinies from simple pattern through purpose to the realization of a cosmic role.

16.42.9.3. FREEDOM

We can suppose that the future exists as a field of creativity where nothing is predetermined or even predestined. This third kind of future is free from all commitments: even in the shape of patterns to guide actualizations in its past. Nevertheless, such a future cannot be an empty void, for where there is nothing, nothing can happen. The free future must not be a state in which there can be arbitrary or capricious events that violate the laws of nature. It can only be a state in which there are free but legitimate possibilities.

Without such a region, Existence would be cut off from the potentialities for recreation that are in the unlimited state of Being. The distinction between determination and freedom would then be sharp and therefore absolute, and the present moment of any existing entity would be subject to the play of order-disorder and nothing else at all.

Without a regenerative or recreative action, the present moment would sink into chaos and lose all its meaning. The natural remedy for such a situation lies in the possibility of free actions that remain within the conditions of existence. Since we reject the notion of arbitrary providential intervention against nature, we need to postulate a state of affairs where it is possible to create new possibilities to make good those that have been lost or wasted. This goes further than the creation of patterns. It must make it possible to change the course of already committed events and yet do so without violating natural laws.

16.42.9.4. FOREORDAINMENT

We have, finally, to consider the zone in which there is no tendency towards disorder—or no time-component—and in which patterns can be created without corresponding material structures. This is possible, because we are in a zone occupied only by matter in the states of Cosmic Energy and dominated by the Transcendental Energy which connects Existence with Infinite Being. The acts of Will that are possible in this zone are Creative in the highest sense of being independent of pre-existing matter or form. We shall call this Foreordainment, to express the notion that we have here the Plan of Creation.

The Plan of Creation is realized in History. This comes with the progressive expansion of the present moment so that separateness can be overcome. But this is not enough, for the very nature of Existence is to be subject to the threat of annihilation in disorder. This threat must be overcome, or integration would be futile.

As with individual man, purification and integration must go hand in hand if he is to achieve perfection; so on the vast scale of history the overcoming of disorder must go together with the overcoming of separateness. We cannot hope to come closer to the purpose of our existence than to start from the premise that the human race did not arise on the earth by predetermination or even predestination alone; but by a foreordainment which intended that mankind should evolve into a conscious, creative power able to bring order to the earth, perhaps to the entire Solar System, and to establish a Greater Present Moment of the Biosphere that will integrate the entire history of this planet.

Chapter Forty-three

THE STRUCTURE OF HISTORY

16.43.1. The Historian's Role

History is the study of that which lies outside the present moment of the historian, but within the larger Present Moment of the region of experience he selects for his activity. Thus, the history of Europe is concerned with a present moment of nearly three thousand years, united by continuity of tradition, culture and environment. Since we are in the midst of this greater Present Moment of European history, what is to

come is as significant for understanding it as what has gone past, but we cannot know it in the same manner for the lack of traces and signals. Nevertheless, the historian cannot be indifferent to the expectations of the future that he derives from the traces and their interpretation.

The historian is not concerned with the determined past that can be exactly known by measurement and calculation. He works in the zone that links determination and destiny, though one may interpret these conceptions very differently from another. According to the views developed in the last chapter, the status of the past varies according to its content. Whether he recognizes it or not, the historian is concerned with the living past. The greater Present Moment associated with any centre of experience must be living and transforming; just as the lesser present moment associated with our private experience is living and transforming. We must see how the greater Present Moment is to be studied and understood.

We can do this best by comparing the work of the historian with that of the scientist or the artist. All three deal with experience. All three select from experience certain elements which are significant for their aim and seek to give these elements some kind of expression: verbal, symbolic, plastic or musical. The similarity ends when we examine the criteria according to which each makes his selection. The scientist is concerned to find regularities in phenomena that he can reduce to Fact and express in the form of general laws. His concern is to add to the sum of human knowledge and power. This dictates each stage of his procedure from observation to experiment, from experiment to analysis and generalization, thence returning to observation and experiment to verify and extend; finally, he goes on to predict the course of some future

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series of events, and finds, in .successful prediction, the justification of his procedure. When new observations enter his present moment and seem to falsify his generalizations, a fresh cycle of scientific activity is set in motion. In this way a growing body of well-attested facts and successful hypotheses comes into being and takes its place in the world picture accepted by natural scientists within the scientific present moment in which they all share. The world picture within the present moment constantly changes, but over the centuries its progress resembles a helix, that is, as we follow it outwards from its beginning, increases in radius but returns again and again to point in the same direction.

In one sense, it gets nowhere, because after thousands of years since men began to leave traces of their observations and speculations, science is no nearer to final answers to any of its questions than were the

Egyptian and Babylonian sages. In another sense, science is not only progressing, but doing so at an accelerated pace. The volume and complexity of known facts is constantly growing. Hypotheses are being refined and made more general in scope. The very nature of scientific knowledge is better understood: we see, for example, how much our picture of the world is influenced by our human perceptions and modes of thought. All this is real progress; yet science is also repetition: the confidence it inspires is largely founded on the ability to repeat and reproduce experiments. The subject matter remains apparently constant. For thousands of years man has observed the stars, the earth, living things and every kind of material object and forms of energy and has made experiments to extend his knowledge of this apparently unchanging 'objective' world. The repetition is not circular, fixed in its scope, but expands in a spiral. So we could describe the scientific method as Expansive Repetition. The entire process takes place within the present moment of science, which is expanding and complexifying. We cannot tell if it has an end-point, but it has a goal: the complete knowledge of Nature and her operations and the liberation of man from the limitations imposed upon his power to do whatever he wishes. So science includes within its present moment expectations of the future, although, by the very nature of research, it cannot predict what will be discovered.

The artist deals with experience by a very different procedure. He recognizes a pattern which for him represents a Value and he is moved by the urge to give it expression. To this end, he proceeds to eliminate all that is irrelevant, in order to bring into his present moment the particular pattern of qualities that has attracted his interest. His concern is wholly with the particular, even if his form of expression is abstract, and even if the 'particular' is some universal truth or cosmic value.

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He has a definite, immediate objective that cannot be reached by hypothesis or generalization: he must express in a work of literature, painting, sculpture, architecture, music or even dance and mime, the infinitely rich content of an aesthetic present moment. When the work has been done, the artist turns to another experience and begins again. Every work of art is thus an end-point beyond which there is nothing. It can never be complete or perfect, for the content of the present moment is rich beyond the possibility of expression, but there must be an end to the attempt. If it is 'successful', there is a sense of fulfilment that attaches itself forever to that particular work and can never be destroyed. For better or worse, with all its imperfections, the work is finished with. Its 'present moment' remains, but that of the artist grows and opens to another start. Nevertheless, the life of the work of art is not ended; it will either rise or fall in the scale of significance in just the same way as any other present moment. The work of art links the past and the present in a present moment of its own. It is a constantly renewed experience that we may describe as Reiterated Concentration.

Neither the scientific activity nor the artistic are historical in the usual sense of looking back towards the past. The work of the scientist is wholly directed towards the future. He builds on the past, but he has his back to it. The artist lives and works in the present. His task is to endow the present moment—as represented by his work—with such a pattern of sensitive and conscious energies that it will live. The paintings of Polycleitus still live for us though the material objects have long since perished. The acting of Mrs. Siddons or the playing of Chopin are still present in their own present moment. The immense significance of the artist's achievement does not concern us here, except to note that he creates by elimination.*

The historian also eliminates, but his aims and his procedure are quite distinct from those of the scientist or the artist. His concern is to strengthen the link between his own present moment and that of the region of experience he studies. He surveys the traces left in the present moment and separates the determinate and therefore insignificant, from the living and therefore non-determined and significant. If he were to confine himself to the Domain of Fact, he would not find the living content. But if he remains in the Domain of Value, he cannot touch the traces. The true historian is not an archivist interested in the preservation of material records; nor is he a writer of romantic fiction expressing, in terms of traces of the past, no more than his own subjective states.

We have distinguished between traces of the course of determinate

* As Michelangelo well understood. Cf. Rime, particularly No. XV.

actualization and evidences of purposeful actions guided by the pattern of destiny. When these traces can be put together to form a present moment, we shall refer to the first kind as happenings and the second as events. The content of history is composed of events. Remembering that every event is a present moment within a greater present moment, we can say that the historian is concerned with the way in which the present moment is realized. This involves activity and order (the tetrad) potentiality and significance (the pentad) recurrence and coalescence (the hexad) and structuring or completion (the heptad). He must use his powers of intuitive perception to penetrate beyond the visible traces to discern the hidden structure.

Without structure, there would be no History. Structure of the living present must take patterns and voluntary actions into account. The historian is as much concerned with Eternity and Hyparxis as with Time. So we have to include in our notion of history that it is concerned, in part at least, with voluntary and responsible actions. No amount of automatic activity, nor any quantity of sensitive experiences, will produce historical events unless there is also a leaven of conscious and even

creative action. This is one of the reasons why there are so many views as to the nature and meaning of history. Every historian must apply criteria that seem to him to be valid in order to eliminate the irrelevant traces of the past and discover the structure of events. His criteria come from the Domain of Value as his material comes from the Domain of Fact. In combining them, he himself does something to the past; and possibly, the past does something to him. He cannot enter the Domain of Harmony and come out again the same man as he went in.

The historian must work in his own present moment. He is the child of his time and he is the product of the activity that has given content and shape to his own nature and environment. One consequence of this is that there are as many views of history as there are historians.

The 'providential' scheme of history, that dominated European historical studies for a millennium, was based on the Judaeo-Christian belief in the intervention of the Divine Will in Jahveh's adoption of the Seed of Abraham and in the doctrine of election. The 'drum and trumpet' notion of history, as the record of wars, conquests and expansion, is based on the axiom that the will of rulers is more significant than that of the ruled. One historian sees the significance of history in the evolution of jurisprudence, another in economics, a third in forms of government or society, a fourth in culture, humanism, science or religion. In all cases, there is a criterion of selection and elimination given by the doctrine of significant harmony that the historian adopts. The structure

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is so rich, that every interpretation has its merit. The hard task is to see the working of history as a complete structure in which all elements have their place. We must begin by a study of events.

16.43.2. The Event

An event is a present moment associated with significant experiences that link it with other moments. It is built up from elements, but it also has an overriding unity that makes it a coalescent structure or hexad.

We can distinguish five stages in the study of an historical event.

1. The event is taken as a set of knowable facts within a larger nexus of knowable facts; partly antecedent and partly subsequent. The factual material is put into order with the help of a set of premises or principles of historical interpretation. From the 'premises' and the 'facts', a logically consistent scheme is sought for. This corresponds to the first stage, where concepts and inferences are the instruments of analysis.
2. The known traces of the event are grouped according to systematic principles. There are as many 'principles of explanation' as there are relevant systems.* There are conflicts and contradictions to be studied as

dyads. There is a dynamism to be interpreted by the triad. There is an ordered activity requiring the discernment of motivation and instrumentation. There is a central process of significance with a 'master', 'nourishment' and an 'inner life.' There is the 'coalescence of the event' to be studied as a hexad. Each of these systems contributes to the construction** of the event.

3. The Event is also a part of human experience. It is associated with a particular society composed of various groups. It may occur, for example, within a particular civilization or nation and involve the various subordinate societies and groups within the totality. This prescribes the dynamism of the event: for example, a revolution is to be seen as the interaction of the ruling oligarchy, the masses and the revolutionaries. It also enables the event itself to be recognized as a present moment. It is the Present Moment of the society within which it occurs. In looking upon the event as a social phenomenon, we must take into account the non-human environment which sometimes appears as one of the sources of the dynamism.

4. The Event is an element of order within the greater Present Moment of human existence on the earth. Every historical event is an episode in the War with Time. It takes place on the levels of human

* A full description of the systems was given in Vol. III, Chapter 37.

** Cf. Vol. III, Chapter 41, Section 15.41.1.

experience and it is a coalescence of Wills whereby it gains a degree of unity that mere happenings do not and cannot achieve.

5. Finally, we have the Event as a Present Moment in its own right. We sometimes express this by referring to the Moment of Decision or the Moment of Destiny. We see the event as an independent fragment within the greater whole.

We may not be able to recognize the full significance of past events; but we can certainly agree that in our everyday experience we do encounter 'bundles of activity' that have some at least of the characteristics of events. The problem before us is to decide what we mean by 'past events'. We can make a start by referring to the laws of synchronicity.* The first law will give us a starting point. We have seen how the togetherness of entities in a given region of space and time produces the experience of the present moment.** We may go further and say that every event is a present moment that can be entered by any mind whose consciousness is free to travel outside its own bodily presence.

This leads to an extension of the notions we have hitherto developed of the lesser and greater present moments of selves and societies. The definition given in the last chapter of the Present Moment as the sphere of operation of a single Will must now be extended and include the coalescence of Wills that makes the Event. In some cases, we can recognize a personal Will in the Man of Destiny who dominates the Event, but this is not obligatory. The Unity of the Event derives from its significance for the spiritualization of Mankind; or, what is equivalent, to its place in the 'War with Time'. The stronger the event, the more does it live and evolve and the more do we recognize in it the character of a Will. This is sometimes expressed as the 'Spirit of the Time' the *Zeitgeist* that is the Will-pattern of the Event.

We do not compromise the significance of an event if we describe it as a present moment of history. The present moment, as we saw in the last chapter, is not just a region of space-time, but a region of experience into which different influences penetrate. Some enter, it is true, from what we call space and time; but those that are historically significant arrive from the regions and zones of *hyparxis* and eternity. ***

We are accustomed to regard private experience as more authentic and 'real' than collective experience. We do not enter into the experience of a nation or a culture and would regard this way of expressing it as figurative rather than literal. The truth is that our notions of the

* Vol. II, Chapter 26.

** Chapter 42, Section 16.42.6, p. 31.

*** Cf. Chapter 42, pp. 33, 35-9. 54~5.

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nature of experience need to be revised even more than those of time and space. If every event is a present moment, then we must modify our usual notion that the 'present' is a private experience of minimal duration. We must suppose that there can be a 'group present' which is not experienced by the individual members, yet has a collective reality in which they all participate. If, within the event, there is a 'Man of Destiny', he may be aware of it as a whole and he may be able to seize its timeless pattern. It is also possible to conceive a Higher Intelligence, able not only to see the duration of the event as a single moment, but also to discern as a single structure all its parallel actualizations: even those that escape the notice of all the human participants.

Before we leave our examination of the Event we must clarify what we mean by its being a fragment of reality. We are not to look upon events as the sum of the actions of all the participants, together with all the material changes that occur. It is not even enough to bring in the personal experiences, the motives and characters, of the human actors.

Nor is it sufficiently described by reference to its historical context, its antecedents and its consequences. There is something more, which is the Integrity of the Event itself. Although the participants and material objects, together with their changes and transformations, are all real enough in their own way, their existence is temporal, whereas the event in the integrity of its significant pattern is eternal. Men and things are confined to their own present, but events belong to a larger whole. Events are not successive: they are, in their intrinsic nature, timeless. They do not continue as things endure or as life renews itself. They are like a caravanserai. Individual travellers and caravans come and go, but the resting place remains. The simile is not adequate, for we picture the inn as a material object. If we look upon it as an experience: the place of rest, security, refreshment, where tales are told and memories renewed, we can evoke the picture of a constantly changing and yet always present life. The caravanserai is its ever flowing life. An Event is to be conceived in some way analogous to this. Because of its unceasing flux, it sometimes appears to go round and round in a circle. Hence the notion of 'eternal recurrence' has been introduced as an improvement upon that of the 'dead unchanging past' ;* but this notion is defective inasmuch as it reduces the event to a succession of instants. It is a present moment that, by being present, is not to be treated as a process in time, or even as a recurrent process in eternity. The simplest way of looking at it is to use the notion of the 'hyparchic past' introduced in the last chapter.

* Cf. P. D. Ouspensky, *New Model of the Universe*, Chapter 11.

16.43.3. Human History —Its Range and Operations

We must now turn to the study of the Greater Present Moment which is the theme of history. Events are not history, but the elements of the historical process. In order to pass from knowledge of particular events to an understanding of history, we must develop a theory of historical structure. Events concentrate significance and interest upon particulars. History expands significance into universals. The step from event to history requires a new set of relevances connected with the purpose or Plan within which and towards which the process is directed.

Few would dispute that there are different histories. Economic, social, political and religious history are commonly distinguished. There are histories of each special field of human activity: the history of art, of language, of invention, of science and so forth. Any attempt at establishing a total history must not only find a place for each kind of history but also show how they are related. Much has been written on the philosophy of history, since Giambattista Vico founded the discipline in his *Scienza Nuova*. We quote from a well-known work to illustrate

the need for a criterion of relevance in order to bring all histories into one history. Professor Cohen writes: 'The question of relative importance might conceivably be regarded from the point of view of what is more important in explanation. If war and politics could not explain the art, science and literature of the Greeks, while the culture consisting of these elements could explain the military and political events, the more primary elements would, for logical purposes, be the more important. It would, however, be difficult to prove that this is the case. The attempts to show that the geographic or the economic factor is primary in one absolute sense are, like all controversies about absolutes in human affairs, interminable because in essence inconclusive.'*

History regarded as a tetrad of activity involves motivations and instruments. Regarded as the completion of the present moment it has seven qualities or levels. To characterize it adequately we need four heptads. We shall draw upon our study of essence classes and human societies to describe the levels and set them down without explanation at this stage.

16.43.3.1. HIGHER MOTIVATIONAL HEPTAD

We must look to the highest essence class within the existing world—the Universal Harmony. We then find that the human essence class

* Cf. Morris B. Cohen, *The Meaning of Human History*, La Salle, 1947, p. 237.

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in occupies the central position in a heptad at the base of which is the vegetative life of the Biosphere. The scheme is set out in Fig. 43 .1.

Goal

Supernatural History

Providential History

History of Soul

History of Mind

History of Human Societies and Institutions

History of Conflicts, Conquerors and

Achievements of Man

History of Man's Relationships with the

Biosphere and the Earth

Essence Class

Universal Harmony

Cosmic Individuality

Demiurgic

Human

Animal

Germinal

Plant

Fig. 4.3.1. Upper Motivational Heptad

16.43.3.2. LOWER MOTIVATIONAL HEPTAD

The lower motivational heptad will be obtained by starting from the lowest essence class that enters directly into human experience. This is the crystalline essence or solid state condition of the earth's surface.

If we are to confine ourselves to history as it is knowable to man, we must take the seven essence classes from the Demiurges to the Crystals. We obtain the following scheme:

Essence Class	Ground
Demiurgic	Religious History
Human	Cultural History
Animal	Social History
Germinal	Political History
Vegetable	Population History
Soil	Edaphic History
Crystalline	Economic History

Fig. 43.2. Lower Motivational Heptad

16.43.3.3. OPERATIONAL HEPTAD

We now turn to the instrumental terms of the tetrad. We have to distinguish seven types of operation by which the present moment undergoes changes and transformations. These range from mere actualization to creativity:

THE DRAMATIC UNIVERSE

Monadic Operation

Dyadic Operation •

Triadic Operation

Tetradic Operation

Pentadic Operation

Hexadic Operation

Heptadic Operation

Action

Interaction

Formation

Growth

Development

Transformation

Creation

Fig. 43.3. Seven Operational Terms

16.43.3.4. DIRECTIONAL HEPTAD

Finally, we come to the instrumental term that fixes the scope and character of the present moment. This must be derived from the individuals, groups and societies that can participate in human history. We have nine levels from man to the Biosphere* of which the two highest belong to the history of the Biosphere as a whole and fall outside the present moment of humanity.

Scale of the
Present Moment

All Human History

Great Cycles

Epoch

Civilization

Nation

Family

Man

Directive

Influences

The Plan of Human Existence

Stages of Human Evolution

Master Ideas

Cultures and Value Groups

Regions, Races, Linguistic Units

Clans and Localities

Personal History

Fig. 43 .4. The Directive Groupings

This scheme will be explained later. Each of the seven terms of the heptad characterizes a type of present moment in history.

16.43.4. The Operations of History

We shall now consider the operational scheme as this has not previously been discussed and there will be no appropriate moment later.

The seven operational terms enable us to distinguish various ways in which we can act within the present moment. These range from pre-determined changes, transferred into the present from the temporal past, to free creative acts that are wholly without antecedent causes. The seven terms can be regarded as a spectrum lying between the direc-
* Cf. Vol. III, Chapter 41, Section 14.41.7.

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tions of time and hyparxis. Owing to the property of the material world of being predominantly 'empty', there is room for all kinds of transformations. The diversity and rich complexity of historical events are due to their participation in all the seven modes of operation. We shall now briefly examine each of them in turn.

16.43.4.1. action

All simple unconstrained motions can be called stationary actions because there is no change of either energy or entropy. It follows that all simple actions are completely reversible. There is no way of telling

the 'direction' of time, for positive time and negative time are both lost in the laws of motion.

It might seem that simple action is a wholly artificial notion with no relevance for history. This is not the case, for we live upon a planet which is part of a solar system in which the motions are very complex but, nevertheless, closely approximate to simple action: upon the scale of our observation. They would appear quite differently if we could observe them over tens of millions of years. Time is measurable chiefly because there are many operations in nature that closely correspond to simple actions. In constructing clocks, we seek to reproduce as closely as possible the conditions of stationary action, by introducing compensation for the loss of energy and increase of entropy.

In the study of history, we discover cycles that, in the last analysis, are due to the existence in nature of close approximations to simple action. The agricultural cycle of the seasons in Northern Latitudes illustrates the simple operation. We shall see that there are cycles of long periodicity that play a great part in the history of mankind.

16.43.4.2. INTERACTION

This includes all exchanges of energy which are not exactly reversible. It is characterized, therefore, by increase of entropy. In fact, the laws of thermodynamics—conservation and entropy increase—apply strictly only to the second gradation of operation.

With interaction changes occur, but they are all of one kind—transitions towards the most stable condition. Boltzmann's interpretation of entropy as the transition towards a more probable distribution of energies belongs to this second mode. Interaction is manifested as the ageing and wearing out of all that exists. It is expressed in the dictum of the Buddha: 'Impermanent are all component things, nothing cometh into existence but bears the seeds of its own dissolution.'

The positive aspect of interaction is to be seen in communication. At

the first stage of simple action, communication is impossible: the perpetuum mobile is in perpetual isolation from the rest of existence. Interaction makes sharing possible. This allows more or less stable combinations to be formed. We have seen how 'composite wholes' can arise only if there is sharing of hyle between two particles* and this requires an hyparchic component having the dimensions of action.

In our experience, interaction provides the environmental element in history. We are concerned in the transformations of the earth's surface

that produce and maintain the soil: the basis of terrestrial life. Climatic changes are the consequences of interaction. Within the Biosphere, interaction is seen in the ecological balance of different forms of life.

The vast and complex group of actions that come under the present heading are all dominated by the successiveness and irreversibility of time. The hyparchic component plays no other part than in coupling. The eternal pattern is simply the condition which makes interaction possible—as in the case of the atom which has a limited group of interactions determined by the nuclear structure—but it is not transformed by interaction. This is why interaction is the fundamental characteristic of existential time.

16.43.4.3. FORMATION

Where there is a pattern, there can be orderly action. This is typically seen in crystal formation. The third gradation of operation yields enduring objects. These have form and for this reason we designate the third mode of action as formation. In psychological experience, formation includes the activity of language and distinguishes linguistic communication from a mere expression of feeling. Through formation, there can be a build-up and preservation of traces of the past. Thus, a new element of immense significance marks the transition from wholly passive modes of will-action, to modes that allow some degree of intention.

We can describe action and interaction with the help of higher modes, but we could not set up a descriptive framework if we were wholly restricted to these two. For example, no signals could be received, nor transfers from past to present be made, unless there were objects having recognizable forms. In terms of the war with time, formation represents the first step towards the ability to overcome the limitations of successiveness and irreversibility.

The history of the earth is made possible by the solid shell that is the

• Cf. Vol. I, Chapter 18.

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permanent formation upon which life has come into being and passed through the transformations that have led to our present moment of history. The solid shell itself has undergone processes of formation that have concentrated the chemical elements in the stable structure of the oceans and the rocks. The relative permanence of geological formations has allowed traces to be preserved including those of animal and vege-

table organisms. Nearer to the present, man himself has produced innumerable artefacts including written records.

All these collectively are the material of history as interaction was the condition of history.

16.43.4.4. growth

The fourth gradation of operation comprises all kinds of directed activity. Changes that are related to a destination or end-point, are to be distinguished from those that are related to fixed pattern or form. We shall designate them as growth operations.

Growth is typical of living organisms. Growth is an aggressive operation, inasmuch as it must always be at the expense of some corresponding diminution. The organism grows by drawing nourishment from its environment. Growth as mode of operation raises the local significance above that of the environment as a whole. This higher significance cannot be obtained by any of the first three kinds of operations and this introduces a very important new element: that of selective operation. It seems that the limitations of time cannot be overcome or even diminished without it.

Selection is impossible without rejection. Consequently growth also implies decay. Where the potential for growth is unlimited, as it is in all living forms, selection must lead to competition. We have here the elementary state of 'survival of the fittest'. It is necessary, not only to grow, but to grow successfully.

16.43.4.5. DEVELOPMENT

Growth is directed towards a definite end-point: the maximum expression of a particular form. There is a higher mode of operation which comes through adaptation and response. Here the end-point is not fixed but open, and the operation is called development.

The kind of operation at this stage is analogous to the life of a city-state governed by a constitution, or that of an organism governed by a genetic pattern or a game of skill governed by a set of rules. In each

case, there is no fixed end-point, but rather an activity with unlimited possibilities of variation. The game does not 'grow', but rather 'develops'.

This is not to imply that growth and development are mutually exclusive: on the contrary, each mode of operation arises out of the next

simpler mode. With growth there is an ableness-to-be that unifies a multitude of simpler operations. Development is the realization of the potentialities present within a given situation. Since this must take account of the potentialities outside the situation, there must be a regulating factor. Thus, development is more markedly hyparchic in character than growth. Growth is an operation characterized by its direction and end-point; but development is significant in its own right, for at every stage it is dramatic. Each successive situation that arises presents a problem to be solved. There may be failure; or partial or even total success. These distinctions are possible because of the hyparchic present. Thus, development is far more than a mere process in time.

16.43.4.6. TRANSFORMATION

The sixth mode of operation occurs when there is cooperation between entities of different orders. It permits the arising of potentialities that were not initially present. This kind of action makes it possible not merely to resist the conditions of temporal actualization, but to reverse them. Instead of a diminution of potential, there is an increase. The 'arrow of time' no longer points towards decay and dissolution, but towards a higher degree of organization and effectiveness.

Transformation cannot be obtained merely by bringing two situations into contact. Normally, such contact will only increase the rate of growth followed by inevitable and accelerated decay. This kind of contact is not transformation but stimulation. There can be growth stimulation and there can also be stimulated development: but these are totally different from true transformation.

Transformation, as we said, requires cooperation and this, in turn, requires consciousness set free from sensitivity. The typical operation of transformation is seen in the relationship of an artist to his work or that of a teacher to his pupils.

With transformation, the War with Time ceases to be a defensive action. Time is used to obtain a result that requires time and yet is free from it. In transformation the hyparchic past, present and future are brought into a common field of action. Where there is true transformation, the past is alive and the future is active.

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16.43.4.7. CREATION

The seventh and highest gradation of operation is that of the free creative power working in the hyparchic future to restore and hold the present moment to its predestined pattern.

Here we have the action of the unconstrained will free from the limitations of existence in the present moment and yet directed towards it. Within the Greater Present Moment that includes past and future, an interpenetration of activity is possible for the four cosmic energies that are not subject to the restrictive conditions of time and place.

Consequently, the creative operation must find a conscious response at the sixth level of transformation in order to penetrate into the visible history of human experience. This notion will prove of the utmost significance in our final attempt to assess the present situation of mankind.

16.43.5. The Seven Levels of History

We shall take the motivational terms in pairs to give, in effect, seven tetrads each with its own 'ground' and 'goal'. The first pair is given by the opposition of vegetative and material forces.* This gives us the history of man's natural life. The highest pair shows how the purpose of human life is a combination of obligation to rule and to order, derived from the Demiurgic Essence, and of the hope of becoming united with the Supreme Reality.

We shall take each of the seven pairs to define seven levels or stages of history.

16.43.5.1. MAN AND NATURE

The basic activity of history consists in the immediate contact between man and his natural environment. By this his present moment is nourished, enriched and expanded. See Fig. 43.5 on p. 80.

The material world is represented in the essence classes by the crystalline forms of the earth's crust and what man makes of them in the form of material objects. The goal of man's contact with Nature is the preservation and transmission of life represented by the plant essence. The process at this level is not organized, but comes from the action between each human being and his environment. In this action, man is the directive term and his natural powers are the instrumental term.

Basically, man's life in nature starts with the use of tools that dis-

* Vide Figs. 43.1 and 43.2 for the higher and lower motivational heptads from which the pairs are taken.

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THE MATERIAL WORLD

Fig. 43.5. Natural History of Man

tinguishes him from the animals. This is the origin of material history, that has now become economic history. The natural laws that govern the properties and behaviour of material objects are statistical, that is to say, they are based on the probable distributions of large populations. The larger the population (in the sense of a group bearing a measurable character) the more accurately can the future course of events be predicted. In the limit, we come to the wholly determinate future that can be known in advance in terms of the traces of the past.

Although material objects belong to the hyponomic world and are passive in all their relationships, they have a peculiar place in the dynamism of human activity. The plastic energy (E 9) that characterizes material objects gives them the endurance that we so readily mistake for strength. From time immemorial, men have come to rely upon material objects as the mainstay of their existence. The possession of material objects is taken to be a guarantee of security against the 'future'. The existential relationships of mankind are based upon their material bodies and upon the sharing and exchange of material objects. Even when higher values are present, the medium or instrument of relationship is still in the material world.

All this produces a particular kind of history. The ownership of land—in Roman law *res nobilis*—and of chattels and money—*res vilis*—influences all historical events. It is the part of Caesar.* The dynamism of money scarcely needs elaboration.

The aim of the basic history is to enable man to live successfully

* Cf. Matt. 22.21. 'Render therefore unto Caesar the things which are Caesar's, and unto God the things that are God's.' Here the tribute money that can be seen and touched stands for the visible history. The contrite heart of the psalmist (Ps. 50, v. 18) is a symbol of the invisible history.

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in his natural environment. Memories and traces serve this purpose and are soon systematized in language and behaviour patterns.

The vegetative history is below the level of sensitivity and is dominated by the constructive (E 8) and vital energies (E 7).* There is no historical sense, no transmission of experience in the manner required to connect the small present moment of the individual with the greater present moment of past and future. Man on this level of history does not know himself as an historical being.

Vegetation is the living, self-renewing source of the natural activities of man's life on earth including food, shelter and clothing. Vegetative history has been significant for all periods of great climatic change. The time-scale of major changes on the vegetative level is very long. It is more than ten thousand years since people were introduced to agriculture. A long way further back men were fruit gatherers in the equatorial regions. We are now passing through another major change in which man is intervening in plant life to produce great changes in the distribution of vegetation, and even the species of plants that grow in immense cultivated areas in all parts of the world.

16.43.5.2. POLITICAL HISTORY

The tetrad is given by:

GERMINAL STRIVING

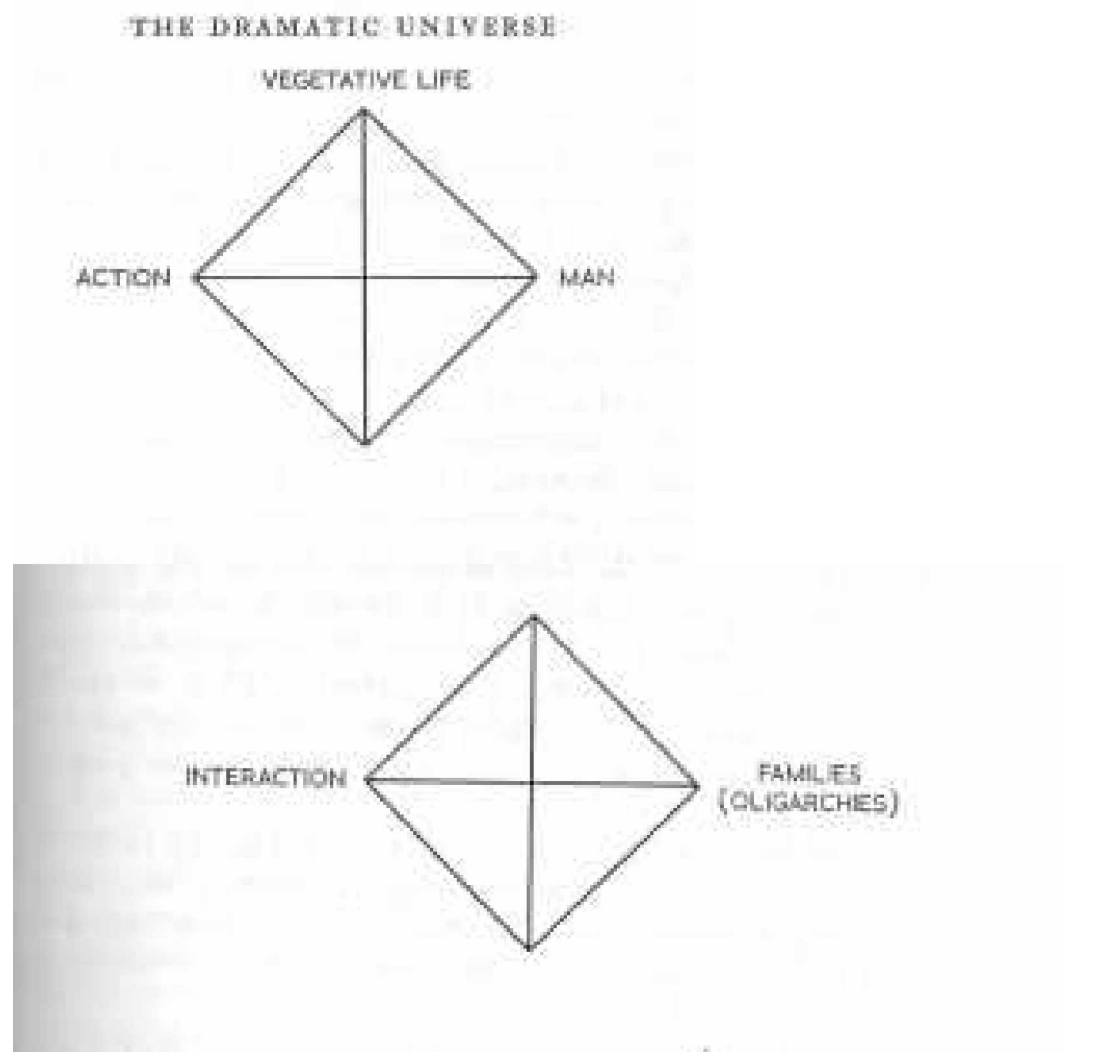
THE SOIL

Fig. 43.6. Political History

The upper term of the tetrad is derived from the germinal essence and the lower from the soil. We have thus the history of the struggle for survival turning into political history.

This history lies between the constructive and automatic levels. It is external to man's private experience and he knows it only in its manifestations. It is the history of conflict and also of relatedness.

* The twelve levels of energy are discussed in Vol. II, Chapter 32.



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Political history is always connected with the soil. It is associated with man's need for food and shelter. But it is also connected with man's need to change, to evolve towards a more integrated condition. These two characteristics come from the soil and the germinal essences.

The history of man's connection with the soil will be called edaphic history.* No one doubts that human life, and therefore human history, is intimately connected with the fertility of the soil. It is always operative in the present moment.

Sometimes great events, such as the migrations of peoples, have been decided by changes in the fertility of the soil. A migrating people has the coherence of the families that make it up. The seasonal variation of temperate climates has made their history quite different from that of

the tropical regions. The cycles of high and low productivity that occur with several distinct periodicities are reflected upon all the other levels of history. It is also to be noted that small differences in the nature of the soil produce differences in populations; and social structures are influenced by migration routes imposed by soil conditions.** Through the soil man is linked to the planet. He participates in the 'fate of the earth'. The soil is like the breasts of Mother Earth at which man feeds and from which he draws comfort and the assurance of a protective care. This influence is felt in history. The cruelty of forced migrations is like the suffering of a child wrenched from its mother's breast. The present writer well remembers the sufferings of more than a million Greek refugees from Asia Minor after the exchange of populations of 1925 and their desperate efforts to reattach themselves to a soil so unlike that of their native Anatolia. Ever since Neolithic times, the soil has been a family concern and such experiences belong to the present moment of families.

Attachment to the soil has been the greatest stabilizing factor in history. This would make it appear that edaphic history is necessarily static, marked by man's resistance to change. More important than attachment is the joy of life. Though men are not always aware of it,

* ~~Edaphic~~ stood in ancient Greece for the meagre coating of soil that enabled them

to cultivate their inhospitable rock. The transition from crystal to soil in the early history of the earth gave life its solid foundation—edaphos—on which all subsequent progress has been erected.

** Edaphic factors occupy an important place in the work of Frederic le Play and his followers. Cf. Edmond Desmolins, *Comment la Route Cree le Type Social*. I cannot here refrain from paying tribute to the insight of the late Prince Sabaheddin of Turkey, with whom, between 1919 and 1923, I had many stimulating discussions on the subject of the different levels in history, and who introduced me to the work of Frederic le Play.

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their enjoyment of life comes from the soil.* Joy is the highest of the natural values.** Man shares it with animals and birds, and maybe even with ants and bees. Joy is the experience of the normal activity of life. It is derived from interaction with the environment. This enjoyment is not only momentary, but also historical. All men are drawn towards the enjoyment of life and their actions in the family society are influenced by its appeal.

Political history has as its goal the creation of a politeia or state, that includes all the members of a nation, and eventually of all mankind, in such a way as to ensure that the material and spiritual—or existential and essential—needs of all are as well satisfied as the economic and social

conditions will allow. The right balance of the two conflicting demands is only then very briefly achieved, in that political history always fails to realize its objectives. As an example we may consider the reign of Louis XIV. Mazarin appears as a calculating politician intent only upon the aggrandisement of France and his private vendetta with the Pope. But we must also look at his dream of Europe reunited under a most Catholic king, with an integrated economy drawing upon the wealth of the new world and the Orient. We must look at the transformation of agriculture and the picture of a world united by new means of communication. This was, perhaps, the ideal outcome of the long reign of the Roi Soleil. That it led instead to the French Revolution is characteristic of the inversions of political history. As the Politeia of Plato proved a disaster in practice, so did Mazarin's concept of the spiritually guided king. In both cases, the failure was due to the inability of psychostatic man to liberate himself from existential motives. We can see in these failures the inevitable result of the mode of operation we have called interaction. There is no short cut to the ideal society of the three orders. Political history cannot become free of the disordering of time.

The structure of the triad of existential history is profoundly instructive. The general rule is that the affirmative influence is concentrated in individuals or small groups and the receptive influence works in the situation as a whole. So here we have the contrast between the fluctuating states of the people and the general conditions of existence. The state of the people proves, in the long run, to be the affirmation in existential history, and the land is the medium through which it acts. In the ideal history, the invisible influences of man's destiny eventually

* It is no accident that we speak of the 'pleasures' of the city and the 'joys' of the country. City-dwellers may have other satisfactions, but they are not, on the whole, joyful people.

** Cf. Vol. III, Chapter 38, Section 14.38.2.4.

to achieve a social order founded on justice and spiritual values, is the ever-present third impulse that initiates freedom and order. The movements of evolution and involution are balanced in such a way that the Psychostatic, Psychokinetic and Psychoteleios groups can sustain and supply one another's needs.

We may believe that such a political history is destined to be realized by humanity; but, hitherto, it has never been even approximately exemplified in any actual human situation.

16.43.5.3. SOCIAL HISTORY

The third level of history can be recognized in the proverb: 'birds of a feather flock together.' The third stage of human social groupings is the nation characterized by a mutual recognition and acceptance analogous to that of animal species. The goal of this history is the organic unification of all mankind. We have described the lower motivational term as 'population history' to draw attention to its source in the spread of the human race by breeding and interbreeding. The tetrad is given by:

operation

The instrumental term 'formation' indicates the basic which is the association of people into coherent groups.

Vegetative history determines the 'state of welfare'. It is constantly fluctuating and it is not equally distributed. We are well aware, at the present time, of the distinction between developed and underdeveloped countries: the haves and the have-nots. These differences primarily concern the availability and distribution of food and other necessities of life. A country may have excellent soil conditions like Java and parts of China and yet, owing to over-population and bad communications,

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be seriously undernourished. The condition of the country is determined by the vegetative and not the edaphic history. Indeed the two may be in direct conflict: attachment to a fertile soil and favourable climate may prevent a redistribution of population that would relieve much want. Thus Java and Sumatra, two neighbouring islands, part of the same state of Indonesia, are populated, the one in the ratio of 1, 1 00 per square mile and the other less than 200. Attempts to resettle the Javanese excess populations have always broken down in face of their attachment to the soil.

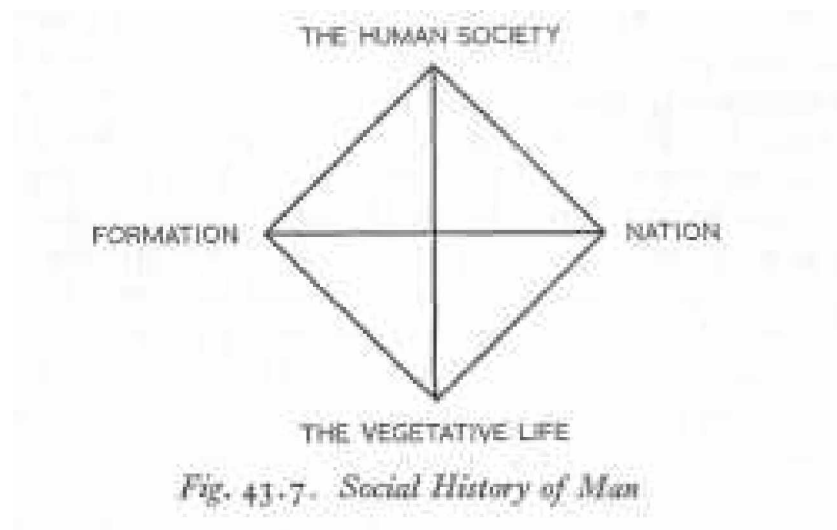
It now becomes apparent that vegetative history is the history of living conditions. Because these are different in different regions, a potential is created and aims and purposes are awakened.

Man shares with most of the animals dependence upon his fellow-men for his existence. He also needs them for the attainment of his essential destiny. There is a tetrad that prescribes the form which social history should exemplify. The motivational terms are destiny and necessity. The instrumental terms are man's knowledge of the existential world and his understanding of the essential values.

We have already seen that the structure of society is based upon the three tetrads of the Psychostatic, Psychokinetic and Psychoteleios Groups. Large and small societies reproduce the basic form of opposing motivations and instrumentations. This structure, being that of an activity, lends itself to the historical development of humanity on all levels.

We can take as an illustration the structure of the productive sub-group in the United Kingdom in the nineteenth and twentieth centuries. The British Trade Unions were brought into existence by causal influences stemming from the Industrial Revolution; but they were also the precursors of a new social structure towards which the world is still painfully feeling its way. Their motivation was, in part, the quest of the ideal of social justice and in part immediate self-preservation. The instrumental terms of the tetrad were at first lacking, as demonstrated by the collapse of Chartism. Gradually leadership developed on the one hand and loyalty, obedience and better deployment of technical skills on the other. The movement attracted men of the Psychokinetic Group ready to devote themselves and their special abilities to the socialist ideal.* Though almost entirely existential in its outward activity and

* The Webbs were both historians and actors in the event. A. R. Orage, guild socialist, journalist and pupil of Gurdjieff, one of the apostles of the psychokinetic movement in Europe of the 20th century, is one of many who served the movement in its formative days.



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though drawn into the stream of political history with the rise of the Labour Party at the turn of the century, the Trade Union Movement was also in its hidden essence a part of social history. Notwithstanding its defects and the general failure of its avowed aims, the movement will leave traces in the future and will be recognized as a significant event for many centuries to come.

The connection between the social structures of man and the animal essence arises from the structure of the Biosphere in which all the animal genera make a specific contribution to the activity of the whole. The animal genera have developed the various characters that enter into the Divided Self of man and determine his social potential. Moreover, the animals are the organizers of sensitive energy* (E 5). They stand in the scale of existence at the point where life begins to be aware of itself. Similarly, the social history of man stands at the threshold of experienced history. We are aware of the social activity of mankind as the framework of our daily lives. It thus far more intimately concerns us than political history. The characteristic energies of social history range from the vital (E 7) to the sensitive (E 5). Although individual men and women can be conscious, societies are automatic and reactional. This explains the discrepancy between the human behaviour of individuals and the animal behaviour of societies.

Certainly, we can conceive an ideal social history which will create for humanity an instrument of activity that will serve the unified Mind of Man that one day will emerge. When this stage is reached, man will be in full harmony with the Biosphere, and the lower or animal nature of the human essence,f will be able to understand and assure the needs of all animal life. Meanwhile, the social history of man is the gradual penetration into the present moment of various social structures. The three main groups of Psychostatic, Psychokinetic and Psychoteleios men and women are still very imperfectly represented. Man cannot occupy the place destined for him until his social organization corresponds to his essential nature. ***

16.43.5.4. THE HISTORY OF MIND

We come now to the central point of human history where the goal is that man should become man. We call it the history of mind; because it is by the evolution of mind that man is moving slowly towards

* An important fact for the studies of the next two chapters,

** Cf. Vol. II, Chapter 35, Section 13.35.12.

***The groups and sub-groups and other features of human society were discussed in Vol. III, Chapter 40.

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the realization of his essential pattern. The ground out of which mind comes is the germinal essence in which the sensitivity that is the precursor of mind begins to be organized. The instrumental terms are civilizations and growth. The tetrad is given by:

The term 'civilization' used to designate the directional term of the tetrad refers to the greater cultural unities which share in a system of values and social structures and modes of life.

Mind is both psychological and historical. We recall the notion of a Soul-Stuff Pool from which minds are formed at conception.* We now must look out from our present moment to mind as the central place of human experience. The history of mind is also the history of human culture. Since man has been man, and so long as man will remain man, the human mind will be the scene of the development by which eventually the entire human race will be endowed with common understanding and a consciousness in which all will share. The visible history of the mind is seen in art, science, philosophy and literature. The invisible history is the slow maturing of man's power to understand himself and his destiny.

The two aspects of the history of mind are associated with the energies of automatism (E 6) and consciousness (E 4). The history of mind is the story of the building of a bridge that is to connect the world of Life with the world of Spirit. Mind stands astride the gulf that separates these two.

At the present time, the gulf is spanned only by rare minds that develop powers that remain latent in almost the whole of mankind.

* Cf. Chapter 40, Section 16.40.3.

D.u. iv—5*

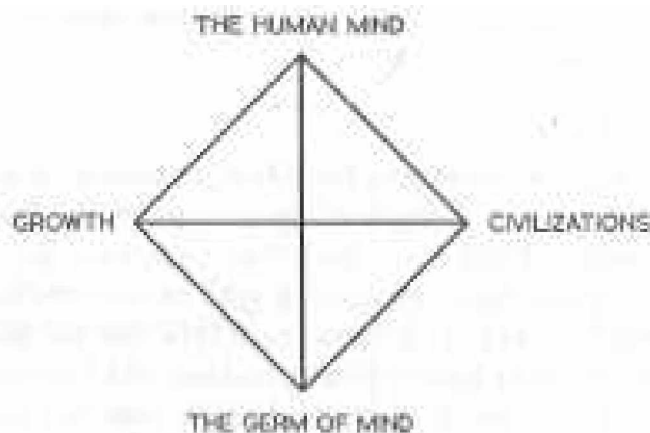


Fig. 43.8. The History of Mind

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People in general are unaware of the powers and responsibilities of the mind; or, at best, see them in terms of its visible manifestation in all forms of culture.

Nevertheless, the history of mind is there and we all have a part in it. In the study of human history that we shall undertake in later chapters,

the origin, development, maturing and ultimate destiny of mind will occupy a central place.

16.43.5.5. THE HISTORY OF SOUL

The soul of man is the seat of his power of choice; it is mind transformed by creativity and integrated by a single will—that of the Personal Individuality. Until this change is complete, the soul-stuff is fragmented into many localizations each with its own 'will' and therefore its own present moment. It follows from this that the history of the soul of man must be the history of all mankind. We have passed beyond the stage of local and partial histories, but we have not reached that of total history. We shall use the term Epoch to designate those greater Present Moments in which all humanity is united by a community of will and a creative activity directed towards broadly similar purposes. We have described the unifying characteristic of the Epoch as the Master Idea.* This expression will serve, providing we recognize that the qualifier 'Master' is to be understood in terms of will. The Idea is not an abstract mode of thought, but a focus of Intelligence. When this is present, there is a present moment. At our present stage of evolution, the human soul-stuff is incoherent and can only sustain a very diffuse 'direction of intent'; yet this is enough to colour the actions of all people to the extent of their capacity to respond.

The evolution of the human soul consists in acquiring of the ability by mankind to understand and to act as an integrated whole. Therefore, the form of action appropriate here is that of the fifth level that we have called development. The motivational terms are suggested by the characteristics of the animal and demiurgic essences. These can be interpreted as organized sensitivity and creative responsibility.** The pattern of sensitivity is the ground from which both the personal soul of the

* Cf. J. G. Bennett, *The Crisis in Human Affairs*, London, 1948, p. 211. 'An epoch is characterized by a grand conception, a Master Idea, which inseminates the whole life of Mankind for a new harvest of temporal activities.' When this book was written in 1947 the connection between Will and the Epochs had not been discovered.

** Cf. Vol. II, pp. 306—316. It is worth noting that we connected the Demiurgic Creativity with the introduction into human life of Existential Images that work through the Power of Ideas (p. 316). The Demiurgic Intelligences create Images that direct the human will towards the Cosmic Harmony.

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individual and the Great Human Soul develop historically. The goal towards which this development is directed is the attainment by the

human race of the power of Creative Responsibility that at this present time (the twentieth century of the Christian Era) is reached by very few souls.

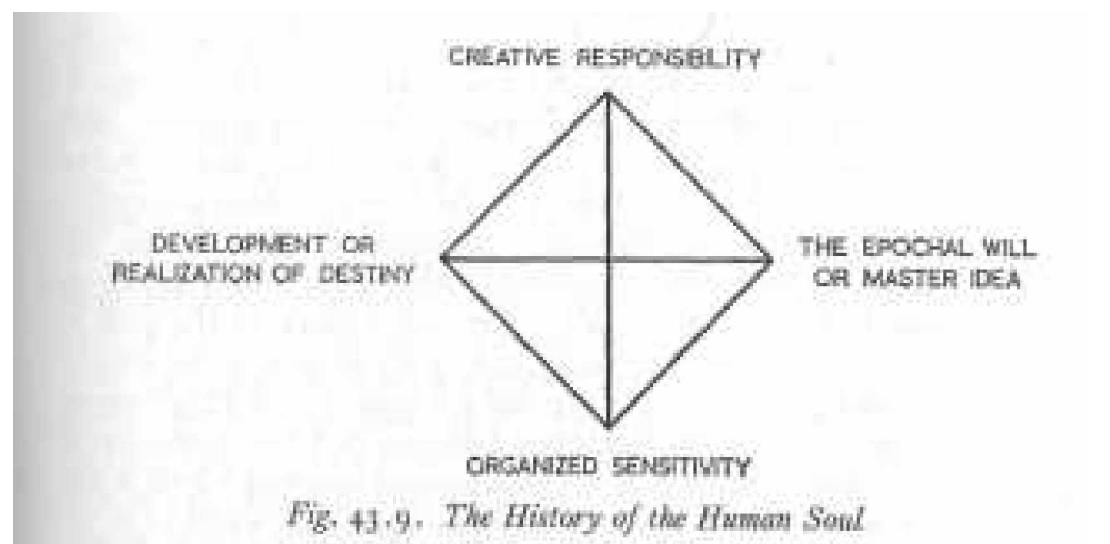
We can now set down the tetrad of soul-history.

We must emphasize the importance of the element of Will in this tetrad. We have left functional history behind. The mind of man, although functional, is also the root of his being; but it has no will of its own .

The soul is 'within' the mind. It is composed of finer energies that the mind cannot perceive directly. It goes beyond consciousness to the creative energy (E 3). Hence the soul-history is necessarily invisible history; we perceive it only in its consequences as they enter the mind and influence behaviour.

Belief in the reality of the soul connects man with the workings of human destiny. Without this belief—or its equivalent expressed in other words—man's attention is inevitably drawn towards the determinate levels of the material world. Those who deny the existence of the soul as a substantial—though potential—element in human nature also deny the reality of human destiny as a pattern created by a power higher than man himself.

There are always evidences of the reality of the soul; but, since they manifest in behaviour, they can be attributed to the mind. This is why it seems that the mind is the crown of man's nature and also why those who deny or disregard the reality of the will cannot distinguish between



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the automatism of the nervous system, the sensitivity and consciousness of mind and the creative will that resides in the soul.

We have in this tetrad the key to one of the central enigmas of history: that is the tendency of the greatest events to conform to a general pattern. The pattern is not explicable in causal terms, because its most striking feature is that it is discernible only if we examine the process on the right scale. At the present stage of human evolution the Epoch has a duration of some 2000—3000 years.* It is characterized by an attitude or intention that influences all peoples living within it. This intention has a pattern which influences all activities, including thought, and therefore produces also attitudes of mind: that is, ideas and attitudes of feeling directed to the value system of the Epoch. These detectable 'signs of the times' are the secondary consequences of a step in the development of the soul-stuff of mankind; whereby it slowly grows to be responsive to the Universal Will. The true history of the soul is beyond the mind; or rather so deeply and subtly hidden in the depths of the mind that it cannot be perceived by men of the Psychostatic Groups and the two lower Psychokinetic Sub-groups.** For undeveloped man, all experience is referred to his own present moment which is the content of his mind. This is influenced, without his being aware of it, by all levels of history. The soul-history is contiguous with mind history and can be perceived by those whose consciousness is awakened. We can set out the seven histories from the natural to the supernatural, with the history of mind as the link between the visible and the invisible. This is shown in Fig. 43.10.

* Cf. Chapter 47 below.

** Cf. Vol. III, Chapter 41, p. 68.

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For the mind, all history is in the present moment. It is known by its traces, judged by its values and realized in action. The mind is the instrument of realization; but it cannot be a self-directing instrument for the realization of values until it is transformed into a soul.

The projection of essential history into the existential life of man is to be recognized in the rising, flourishing and transformation of cultures and in the succession of Epochs. Behind the visible history of civilizations, is the hidden work of the psychokinetic groups. Behind this work again is the motivational influence of Guides and Prophets.

Soul-history stands at the limit of man's power of action. It is also the channel through which superhuman action is transmitted. In all the great and decisive events of history there is a creative element that is unrecognized on the existential levels. We touch here upon a matter that lies outside the scope of the historian who puts his trust only in the visible traces of the past. The idea of invisible influences exercised by

men or groups of men on a higher level of being, is totally at variance with most accepted views of history. The historian may recognize that, in the past, poets have indeed been the 'unacknowledged legislators of the world.' He may admit the decisive influence of cultural developments upon political and social history and agree that the creative artist often proves to be more important in retrospect than he appeared at the time. But he draws the line at any suggestion of an 'invisible' history. Nevertheless, good evidence can be brought forward of its reality. For example, Dante Alighieri or Goethe were more important historical personages than their contemporaries suspected; but their importance lies in the realm of creation rather than action.

Evidence of such a nature cannot be conclusive, but there is a more general and more important line of argument to be considered. It is easy to show that in all periods and among all people there has been an awareness of the reality of the soul-nature of man and a sense of a need to find ways of accelerated transformation. There have always been men of the Psychokinetic Group—a minority no doubt in numbers, but immensely significant in their influence—of the types represented by Gilgamesh, the wanderer, or Socrates the proponent of questions, who have devoted themselves to the search for the imperishable Reality. There have always been Psychokinetic Societies. The influence of the Psychokinetic Group has always been to redress the balance lost through the attractions of material objects and the forces of life.

Essential history is mostly unseen by the world. When it is visible it has usually been associated with religion and called religious history. Sometimes, it takes the form of a reaction against a false theocracy. A

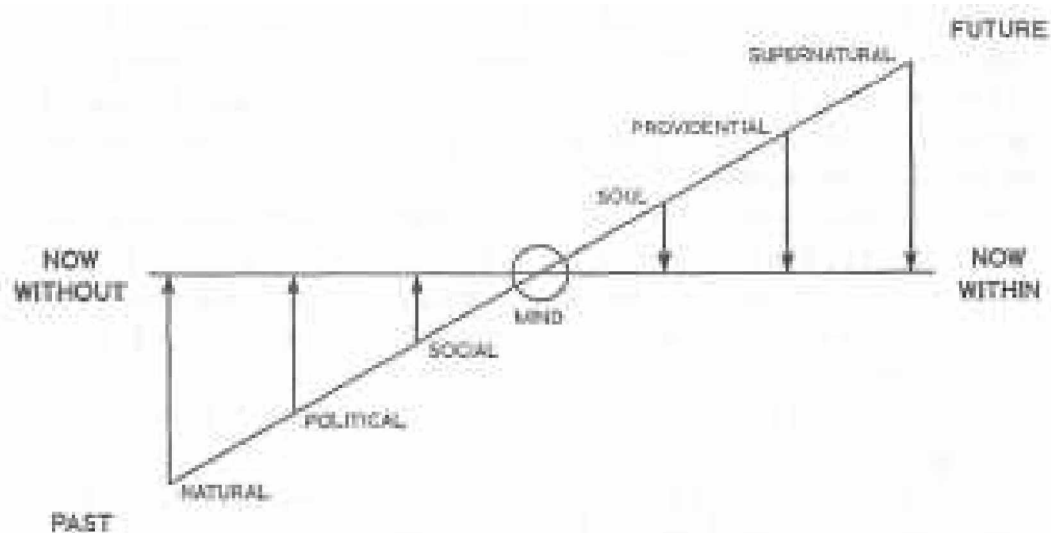


Fig. 43.10 The Seven Histories and Mind

classic example is given by the reign of Akbar (1556-1605), the best known of the Mogul Emperors. His immense conquests, his administrative ability, his endeavours to create an unified Indian society are well-known. So also are his hostility to the Muslim Ulema—the pseudo-theocracy that was a legacy of Baghdad—and his convening of the Great Congress of Delhi at which Jesuit Fathers, Buddhist Monks and Muslim Ulema were invited to debate the unity of religion. What is less well known is Akbar's connection with the Sufi Masters of Balkh, Bokhara and Kashgar. The Jesuit eye-witness account of the proceedings describes a square hall with Christians, Buddhists and Muslims in three corners and Sufis from Central Asia in the fourth, with Akbar on his throne free to turn in all directions. The Emperor was inspired to attempt the unification of religions by the advice of 'Wise Men from Kashgar' in the furthest point of his Northern conquests. Later, he helped the Jesuit explorers to make the journey to Cathay, which demonstrated that the Cathay of the Arabs was identical with the China of the Portuguese travellers. Thus, new routes were opened, new channels of communications established and new ideas brought into the open that were to have an immense influence in shaping the modern world. The conquests and the empire of Akbar soon collapsed, but the achievements on the levels of mind and soul history have remained. The point is that the contemporary world saw Akbar the Conqueror. We today can see beyond this: Akbar the instrument of creative history.

The reality of Soul History cannot be demonstrated by its traces, but by the character of its Present Moment. There is a spiritual life that cannot be accounted for in terms of causes transmitted from the past. This life is that of the Collective Soul of Humanity. This soul is present here and now, though still little more than embryonic in its development. It lives by a creative action that constantly overcomes the disruptive action of the material world. We do not see its source, but we feel its working. It is a natural working, but not a mechanical or even a vital one.

Soul History is a decisive element in the war against time. At the present time, relatively few men are able to participate in this working or even to be aware of its operations. Much that is due to reactive acts appears to be either accidental or providential. The Psychokinetic Society in which Soul History should be fully operative remains for the most part fragmented. Psychokinetic men and women seek their own salvation or endeavour to serve humanity: but do not understand how these two operations are linked to one another and how both require the conscious deployment of the creative powers that are latent in all men.

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There is a significant distinction to be made between the history of development, which is the course of human evolution towards the

natural destiny of man, and the history of transformation which is the action whereby man can transcend the limitations of destiny and enter superhuman states of being. These latter belong to the next level.

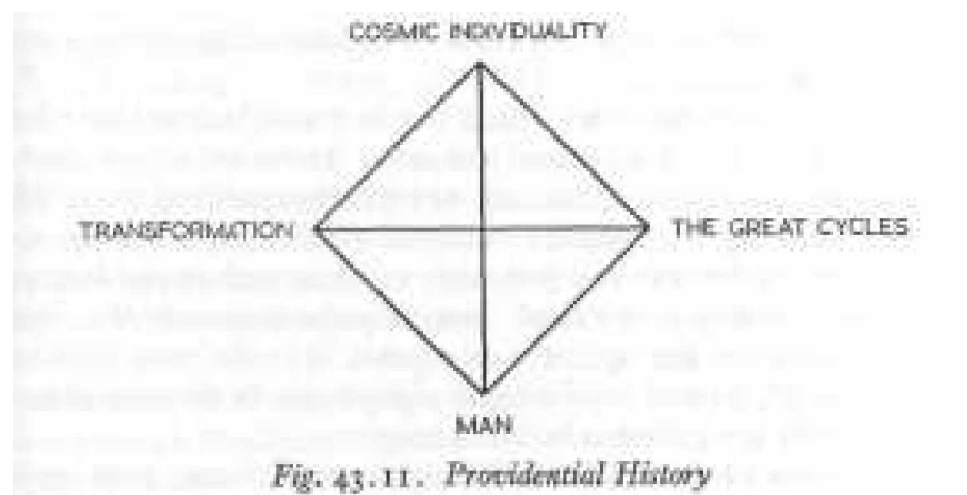
16.43.5.6. PROVIDENTIAL HISTORY

We now go beyond man's own part in history to that region where history is made possible. This is the region of the hyparchic future discussed in the last chapter, or rather the zone that links the hyparchic future to the Destiny of Man. We can start by setting down the tetrad:

This is the history of man's transformation, not from animal to true man; but from man alone and apart, to man united with the Cosmic Individuality. The reference to Great Cycles will become clear in a later chapter.* They are in the very Great Present Moments of the intervention of the Cosmic Individuality in the destiny and evolution of mankind. They affect not only the mind and soul; but the essential status of the human race.

We now pass beyond destiny as the pattern of man's existence in the solar system, to the foreordained state to which man is called. Man is not only predestined to be a responsible agent of the Cosmic Purpose, but a direct participant in its creation. This is not for the individual but for the race. It is for the World Soul: but until this is matured and awakened, man cannot understand this total significance of human life, and therefore must be helped and guided towards it. The guidance is not visible to those who are guided, and providential history is usually left

* Cf. Chapter 45, Section 17.45.3, below.



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out of account. Nevertheless, from man's first awakening to the notion of destiny* he has left evidences of his belief in superhuman powers that

intervene within the natural order. Temples and pyramids, tombs and steles, inscriptions and tablets from before the dawn of history, testify to the strength of this belief.

These doctrines evolved and changed until, about two thousand five hundred years ago, they were merged into revealed religion. We use the expression 'merged' because they did not disappear but were sandwiched between Nature and God. They persisted in the form of beliefs in superhuman beings, such as Devas, Asuras, Angels, Jinns and others, having varying degrees of obedience to the Divine Decree that allotted a special destiny to man. These beliefs remain to this day in all religions; and, in some, for instance in Islam, they are an integral part of the dogma.

We shall see later that these beliefs can be traced back at least twenty thousand years before the present and are at the root of all our modern cultures. The modern world has almost entirely repudiated them. They were questioned by eighteenth-century rationalism, rejected by nineteenth-century positivism and put aside as trivial and almost forgotten by twentieth-century modernism. Not only, however, are the Demi-urges** relegated to the age of superstition; but the very notion of Psychoteleios Men capable of insight and powers far beyond those of ordinary people is equated to belief in magic.

The inclusion of Providential History in our scheme, goes against nearly all modern trends of thought. It is foreign not only to philosophy and science, but also to modern theology that concentrates all religious significance in the relationship of God and Man and pays little attention to the operations and intelligences that are the instruments of the Divine Will.

At one time—for example in the Greek Church by St. Gregory Palamas and his school—the doctrine of Energeiai or Divine Operations was introduced into Christian theology from Neo-Platonic and Persian sources. We can interpret these operations in terms of our scheme of energies as a co-working or synergy of the Unitive and Creative Energies, that enter human experience as Illumination *** and result in the transform-

* Which we assign to some period between 30,000 and 40,000 years before the present. Cf. Chapter 46 below.

** Our name for the class of entities concerned with harmonizing planetary existence with the Cosmic Plan. Cf. Vol. II, Chapter 35, p- 315.

*** Illumination was taken, in Vol. III, Chapter 41, Section 15.41.4.4, to be the action whereby psychokinetic man achieves Initiation.

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ations characteristic of Providential History. We shall use the word Illumination to designate this operation.

The symbolism of Light and Light-bearing Essences is familiar; but there is a tendency to confuse the operation of Illumination with its effect, which is the state of Illumination. We shall use the term only in the first, or operative, sense. This connects it with the Demiurgic Powers, whose role is both to transmit Illumination and also to supervise the action that it produces in History.

Illumination involves the coalescence of Love and Creativity, as Intelligence requires that of Creativity and Consciousness. In either case, it is necessary to recognise that something more than energy is at work. There is an element of Will that gives both Intelligence and Illumination their operational character.

The Demiurges, however, are neither supernatural nor immaterial. Their conditions differ from ours in that they operate in the hyparchic future, rather than the present. In Chapter 28, we distinguished between the Universal and the Personal Individuality and assigned the former to World VI which is the state of 'pure-existence'. We can now go further and distinguish the between Universal Individuality as Will and its operations as Intelligences. Will combined with Intelligence is a mode of Being with which we are not acquainted except when associated with a living animal body—that is in man. Will exercised through intelligence can be effective within the conditions of the hyparchic future. This is what we understand by 'Demiurgic Power', which can be regarded as a quasi-personal state of the Universal Individuality. Of the Universal Individuality we said that it 'pervades all worlds and is the source and origin of all finite self-hood'.* The point here is that the Universal Individuality exists within nature as the working of the Cosmic Individuality that is beyond nature.] There is a void space in current thought that divides science as study of nature and theology as enquiry into the supernatural. The gap is really there, but it is not empty, for it is the region of the hyparchic past and future. This is the region in which destiny is adjusted to fate and fate to destiny

* Cf. Vol. II, p. 131.

** The Universal Individuality must be very carefully thought of to avoid falling into the error of gnosticism. It is not to be understood as an emanation but as a working or *energia* of the Divine Essence. St. Gregory Palamas, the greatest exponent of the hesychast tradition, associated the Divine Energies with the manifestation of the Power, the Love and the Providential guidance of God within the Creation. The energies are thus natural in their operation though supernatural in their origin. This agrees with our conception of the Universal Individuality as the Unity in Multiplicity of the Demiurgic Intelligences and Powers.

—purpose to cause and cause to purpose.* In this region, the Demiurgic Intelligences work, but they can do so only with the cooperation of the Present Moment. Mankind existing within the 'Present' cannot discern the pattern of the future and therefore acts in many ways contrary, not only to its ultimate good, but even to its immediate interests. This can be understood from an example: humanity is a collective entity slowly evolving towards an integrated Identity. This Identity is destined to act as a vehicle for the soul of the Biosphere; but in our present state of immaturity, we pillage and destroy the life entrusted to our care.**

We do not see that the very pattern of our existence is that of a Reciprocal Maintenance *** which involves us in a complex structure of mutual dependence not only with all life on our planet; but also with the materials of the earth's crust and atmosphere.

Providential History can be regarded as the action whereby man enters into his true destiny as the Soul of the Biosphere. He arose from the biosphere as an animal endowed with mind. Within mind came soul and within soul Individuality is to be realized. In the early stages the action was wholly directed and guided by the Demiurgic Intelligences. Stage by stage, a greater share of responsibility has devolved upon man himself; but we are still far from being trustworthy guardians of the earth's living treasure: and, at all times, the Demiurgic Intelligences keep watch over world affairs, intervening when necessary to rectify our mistakes or nullify our destructive impulses.

The common notion of Providence as the suspension of natural laws is unacceptable in the light of our present knowledge. We can, however, draw upon the conclusions reached in the last chapter and picture to ourselves the Demiurgic Intelligences operating in the hyparchic future from which the 'empty places' in the present are discernible and can be used to inject new influences. Again and again, tensions have unaccountably been released and now we can explain how it happened. We can ascribe the action to an influx of creative energy that acts directly within the consciousness of all who can respond to it. The results are not always effectual or even favourable; but on the whole, they bring about decisive changes in the visible course of history.

* We mentioned in Volume III the role of the Prophetic Circle in adjusting the place of human evolution to the opposing forces of materiality and spirituality. Cf. Chapter 41, Section 15.41.5.3. The notion of the adjustment of destiny in the hyparchic future has been discussed in Chapter 42, pp. 54-5, 62.

** Cf. Chapter 41, Section 15.41.7.8.

*** Cf. Vol. III, Chapter 41, Section 15.41.7, where we sketched the structure of the Biospheric symbiosis. The notions are taken up again in Chapter 44 and are implicit in the succeeding chapters.

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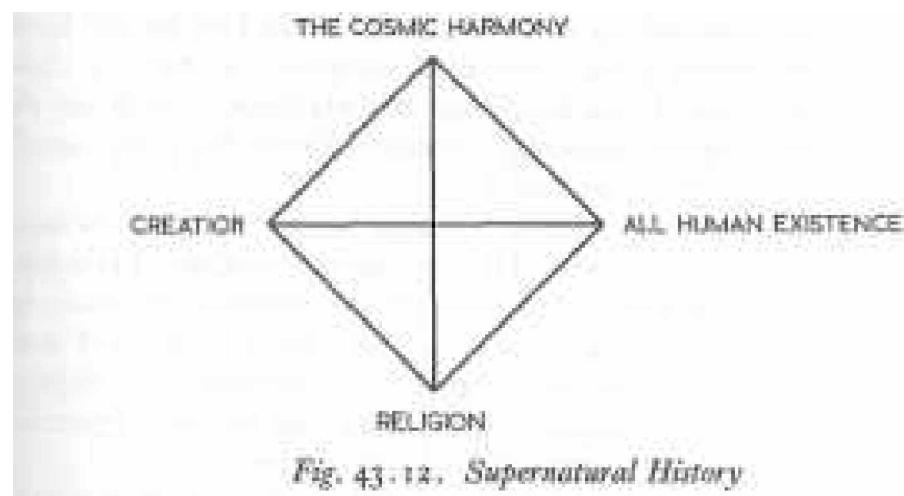
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Our scheme requires that we should go beyond the existing world to seek for the Source of man's arising. We may or may not believe in a Transcendent Creator and we may or may not accept the possibility that man was created to serve a purpose: but at least we should establish the linguistic distinctions to enable us to speak consistently about such matters. Thereby, we enter the domain of theology rather than that of history and, in doing so, give expression to a very definite theology: namely, that which postulates a purpose in the Creation and therefore an ultimate meaning in history. This interpretation of the total experience of mankind is already implicit in the results we have reached in the earlier chapters.

Historical theology requires not only a purpose in Creation, but also uncertainty as to its attainment. If the outcome of the world process were wholly predetermined, there would be no history, but only a single creative act the meaning of which could not possibly be discovered within the creation itself. On the other hand, non-theological history also breaks down, for history is distinguished from mere happening only by its significance; and there could be no partial significance unless there were a Total Significance. Since total significance must transcend the existence it informs, it cannot be contemplated without acknowledging a Spiritual Power beyond Existence—that is beyond nature. This is why we have called the seventh level Supernatural History.

We do not need to particularize the character of the supernatural—to distinguish, for example, between a Personal God and a Supra-personal Will—but we must, if our historical scheme is to hold together at all,



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postulate a Goal towards which the creation is directed. Since humanity is a part of the Creation, mankind is involved in this history and hence in the realization of the Universal Harmony. We have designated the seventh level of the lower motivational heptad* as Religious History. We can say that religion is the root in human experience of that which grows out of experience and reaches beyond nature to the Harmony of Infinite Being. The Tetrad is completed by Creation, and the Present Moment of all mankind from our first arising on the earth to our final withdrawal. These four terms contain the entire history of the human race, and yet they are beyond the greatest Present Moment that we as men can experience.

Religion is the experienced ground of the supernatural activity whereby mankind is created and drawn towards fulfilment of the foreordained plan. The inner, invisible reality of the Supernatural History is known only by Revelation: but is experienced in any human soul that is liberated from egoism and united with the Individuality.

We should draw here an important distinction between ignorance and sin. Providential history is directed towards the correction of ignorance; but not to the redemption of mankind from sin. Such an action would exceed the powers of the Demiurgic Intelligence! and calls for an intervention from beyond Existence itself. Our connection with that Source is the Cosmic Individuality. Supernatural History concerns the means, whereby the consequences of man's involvement in the cosmic evil are redeemed. The process of redemption is always in operation and without it the entire human race would rapidly degenerate and lose contact with Individuality. Nevertheless, men are not aware of the process and have recognized it only when it has been made manifest in specially contrived or created events. These events are Revelations, though not all such events are, strictly speaking, 'manifestations' for only small numbers of people become aware of them.

The reality of Supernatural History cannot be demonstrated as fact, nor is it possible to infer it as we did in the case of Providential History. It is invisible history apprehended only by the theological virtues of Faith, Hope and Love. These virtues can be exercised in their real character only when the Unitive Energy (E 2) is present. The Supernatural History is wholly contained in the zone that connects hyparxis and eternity** and its operations are in the Cosmic Energies.

The upper motivational term of the tetrad is the Transcendental Decree that establishes the Harmony of the Creation, and its lower

* Cf. Fig. 43.2 where it is derived from the Demiurgic Essence Class.

** Cf. Chapter 42, pp. 35-6.

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motivational term is :he creative and religious urge latent in the human soul. These are given by the energies E 1 and E 3. The instrumental terms are the inner and the outer workings of the Divine Love.

Without the operations of Supernatural History mankind would be defenceless against the evil forces that are involved in the existing world.* If we admit the reality of sin, we must also postulate the means of redemption and this requires the Supernatural Operation that is possible only on the seventh level.

We shall not pursue further the systematics of history, but use the results so far obtained in an attempt to build up a consistent and reasonable picture of the Great Present Moment which includes not only the existence of mankind, but that of all life on the earth. The History of the Biosphere and that of Man are indissolubly linked and we must go back to the origins of life if we are to understand the history of the human race.

* The notion was first introduced in Vol. II, Chapter 36. It will require further examination in connection with the Fall of Man, Chapter 47 below.

Chapter Forty-four THE HISTORY OF LIFE ON THE EARTH

17.44.1. The Start of History

The content of history lies outside our present moment. All that is contained in the present moment is non-historical. This includes the messages we receive by light signals from other planets, stars and galaxies. All these are in immediate contact with our present moment, because light travels in a null-vector. We know the past only by traces that we find in the present, and when there are no traces there is no past for us.

Almost all the traces of the past that have reached us are on the earth and concern the earth. An exception is Tycho Brahe's star, seen in 1572 and rediscovered with modern telescopes as a shell of fragments that are undoubtedly the relics of the catastrophe first seen as a supernova four hundred years ago. We have here an elementary 'historical occasion' inasmuch as the traces (Brahe's records) reach the present moment together with the signal (null-vector of light) that connects us with the star. In nearly all other cases, we have only the light signal which is non-historical. The achievements of astrophysics in the past forty years are among the greatest triumphs of the scientific genius and the volume and variety of data relating to the present state of stars and galaxies is such that no one mind can assimilate it all. But it is all knowledge of the same moment—for it is all directly connected with our present. From knowledge of the present physical condition of tens of thousands of

stars, various hypothetical lines of development have been proposed, such as the 'main sequence' to which our sun belongs. These are no more history than if we were to classify, by observing their appearance, tens of thousands of men chosen at random in a great city and from the regularities found were to construct a 'main sequence' of bodily conditions and imagine that thereby we were arriving at human history.

Without traces of the past, there can be no history. Until recently, the only traces taken into account were the written records; and so history was supposed to have started with the earliest inscriptions on stone or clay made five or six thousands years ago. All that went before that was 'pre-history'. This is a convenient, but artificial, distinction. The earth's history written in the rocks and ocean bed can be deciphered

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by geologists—by different means, but no less well, than archaeologists decipher hieroglyphs or cuneiform. The first condition of knowing history—the availability in the present of traces of past events—is satisfied, so far as our earth is concerned, for a period that extends back before the first appearance of life itself.

However, it is only on a very broad interpretation that we are entitled to speak of the 'history of the earth'. The earth is a hypernomic entity, which means that its existence is of a higher order than life. Although, for our observation, the earth appears to be actualizing successively and irreversibly—or in the usual language, it appears to exist 'in time and space'—this is true only from our human standpoint. We cannot imagine how time appears for bodies like the planets and sun: their cosmic significance is still a mystery.

By a hazardous speculation, we have assigned to the planets the role of 'sub-creation'.* This becomes much more comprehensible in the light of the conceptions of chapter 42. We can look at the earth as the director of history rather than an actor upon its stage. It would be wrong to regard the earth as the author of the plan of history for this role must certainly be played upon a still higher level. This suggests that the Earth is to be treated as a Demiurgic Intelligence, or possibly as the support of a society of such Intelligences.

It is probably nearest the truth to say that the entire period of the preparation, emergence and development of life has been a 'present moment' for the earth. What appears to us as a succession of events is probably one total experience. The analogy of our own experience makes this plausible. Within the present moment of an act of perception millions of events occur upon the scale of existence of the cells of which

our body is constructed. An incomparably greater number occurs in a few seconds on the scale of atoms and quanta. A single act of perception involves a complex and irreversible succession of impulses passing through millions of nerve cells. This involved process occurs wholly within our present moment.** Now, we have found that the region over which the present moment extends is a function of the degree of integration of the experiencing entity concerned. The present moment of the earth is likely to be much nearer to a totality than it is for the

ordinary man. This view is strongly supported by the association of the

* Cf. Vol. I, pp. 215 and 442—3. On p. 443 we gave the analogy of teacher and pupils to illustrate creation and sub-creation. Reference should also be made to Section 9.23 .2, in which we draw the picture of the earth as a sub-creative whole. On p. 452 we speak of 'the earth's history' but this refers specifically to its role as the creator of a plan to be executed.

**fCf. Scientific American, Nov. 1964, p. 116 in the article on Psychological Time.

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novempotent plants* with the ninth level of energy—that is Conscious Energy (E 4).

We find that all our lines of approach lead us to the conclusion that the earth is an Intelligent Being on the next level of existence above life. Intelligence is not subject to the determination of time in the same way as are the lower energies and so we can perhaps venture to reach the conclusion that the history of life on the earth works itself out in the earth's present moment.

Although, on this view, history starts within the earth's 'mind' and works itself out according to the determining conditions as they apply to life—not as they apply to the earth—this does not mean that history is started by the earth. The Intelligence of the earth links the operation of Consciousness (E 4) and Creativity (E3); whereas the sun spans Creativity (E 3) and Unitive Energy (E 2). We have assigned the role of life creation to the sun.** We shall for the time being regard this, not so much as an hypothesis, but as a convenient way of distinguishing between life as foreordained on the earth and the forms of life as predestined. *** We may say that the appearance of life on the earth was foreordained by the Unitive Energy working in the Sun and that the pattern according to which life has developed was predestined by the Creative or Demiurgic activity of the earth. There remains the predetermination of life upon the level of the material energies. This we shall reserve to the next section.

Before passing on, we must revert to the scheme of Creation outlined in Vol. II.**** With our present knowledge of the immensity of the Creation, it seems reasonable to interpret the doctrine of creation as

described in Genesis as referring specifically to the earth and not to the whole universe. This would require, in turn, that some measure of delegated creativity must be invoked to link the Supreme Act whereby the Universe was brought into existence with the detailed working out of the consequences. Delegated creativity implies the separation of agent and instrument without denying the instrument of some of the powers that are proper to the agent. Thus St. Gregory Palamas who

* Cf. Vol. I, p. 216 and pp. 430-2.

** Cf. Vol. I, pp. 442—4, Creativity and Sub-Creativity: 'that which is distinctively solar is the hypernomic, creative element by which the sun exists as a manifestation of the universal affirmation.'

*** The three kinds of future region were discussed in Chapter 42, pp. 89-93.

**** In Chapter 34. We refer particularly to Section 12.34.3, the Second Tetrad of Creation. There is much in this section that requires revision in the light of researches undertaken since Vol. II was written in 1957. Nevertheless, there is some merit in the Hypothesis of Existential Creativity (Vol. II, p. 273) according to which the 'Sun is the image of the Primal Creation'.

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treats the working of the Divine Power as a complex of energies such as love, goodness, etc., allows these energies to pass into the Creation which thus receives a secondary deification.* Similarly, in our present study, we see that the creative and unitive energies, though properly referred to the Cosmic Individuality, nevertheless enter into the sun, and appear again in the Demiurgic Activity of the Earth and even of Man when he enters the Psychoteleios Order.

It is difficult to reject the view that there have been subordinate creative acts within the immense freedom with which Existence is endowed by and from its Source. If this notion is rejected, the whole universe either becomes a mechanism set in motion at its inception and preordained to work itself out inexorably and perfectly; or it becomes an even less acceptable faulty mechanism that can go wrong, but cannot be put right except by setting aside the laws of its own creation. On either interpretation God becomes a remote, inaccessible Absolute and theism and atheism are rendered, for all practical purposes, identical doctrines.** The notions of determining conditions and energies lead to the conclusion that the Creative Will of the Sun is not a wholly independent power, but rather a mode of operation of the Universal Will.

When, therefore, we say that life on the earth is foreordained by the Creative Will of the Sun, we are not saying anything other than that the appearance of life on the earth is the result of an activity in which the Sun transmits the Unitive Energy (E 2) and the Earth the creative energy (E 3).

We now have to see how far these notions can be reconciled with accepted views as to the origin and evolution of life.

17.44.2. Evolution and Predestination of Life

The history of life on the earth is a recent addition to man's knowledge of himself and his world. Until the nineteenth century, life and man's place in it, were studied with little or no attention to the significance of the past—that is, of traces. Since Darwin, the study of traces has assumed a dominating importance. New and improved techniques are giving man new and astonishing ways of studying traces—radioactive dating is perhaps the most unforeseeable from the standpoint of the last century. As this chapter is being written, new developments are taking place in almost every field connected with the origin

* Cf. J. Meyendorff, *A Study of Gregory Palamas*, 'the idea that creatures participate in the divine energies', p. 223. The subject was shortly discussed in Vol. II, pp. 273—5 in the general context of the 'Creation of the World.'

** This has always been the objection, insurmountable to the religious conscience, against all philosophical doctrines of Absolute Monism.

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and development of life; and, by the time it is read, much will be out-of-date.

We cannot hope to put forward a definitive array of facts. In some fields, such as the origin and cause of great climatic changes, the facts themselves are altogether in confusion. In other cases, they are so rich in their content and implications that only a few specialists can discuss them with any confidence. We can do no more than offer a scheme of interpretation, in accordance with the guiding principle that all must make sense or nothing does. It seems that our notions of time—and its extension in eternity and hyparxis—can provide a framework into which both presently known and not yet known facts will find their place.

Few fundamentalists are left today to dispute the general picture drawn by geologists and palaeontologists of the succession of events that have led to the existence of the Biosphere as we know it at the present time. Disagreements appear, however, as soon as we seek an interpretation or explanation of the picture. The phylogenetic sequence is written in the sea bed and in the rocks but the phylogenetic mechan-

ism is not so certainly established. Nevertheless, most biologists are satisfied that organic evolution by the mechanism of genetic variability and the operation of natural selection will account for nearly all the traces of past life on the earth. If this mechanism is to be taken as the sole means whereby life has arisen from the elementary substances of the earth's surface, it is necessary to invoke the principle that any possible event however improbable will occur if a large enough number of chances are offered to it.

Since nearly every biologist—and in the wake of the biologists, virtually all others, including philosophers and theologians, who discuss these questions—assume that the doctrine of the fortuitous arising of the present world situation is at least plausible, we must examine the arguments very carefully. The only satisfactory way of deciding the question is by considering the probability a priori that a particular explanation will work. The basic notion is that of order-disorder that we took as our starting point in Chapter 42. It is indisputable that the biosphere is a state of matter that is very highly ordered compared with the rocks, oceans and atmosphere of the earth. The question is whether this high degree of order could have arisen accidentally—remembering always that ordering requires an action contrary to the second law of thermodynamics which states that random changes lead to a more probable and less ordered state.

Now, if order is to increase, there must be some means of conserving the order already gained. Otherwise order accidentally arising will be

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accidentally lost again. The experience of physical science shows that order fluctuates over a very small amplitude about a state of disorder. In all our experience, we find that, left to themselves, complex structures tend to disintegrate and revert to simpler forms. On principle, therefore, the spontaneous arising of a very high degree of order by random processes is highly improbable.

Before we examine the question more rigorously, let us summarize the present position of experiment, observation and theory concerning the origin of life. It is assumed that the primitive atmosphere was very different from today, containing appreciable concentrations of ammonia, methane and other hydrocarbons as well as water vapour and nitrogen; but very little oxygen. It is also assumed that the solar radiation may have been more intense and have included more active wavelengths and that there were far more frequent and varied electric discharges. All these conditions would favour the synthesis of organic compounds including amino-acids known to be intermediate stages in

the formation of proteins. Such reactions are in most cases endothermic and therefore improbable; but the earth's crust at that time could have furnished metals and oxides that could act as catalysts and enable even very improbable reactions to develop successfully.

All these assumptions are plausible and some of them have been verified experimentally, and it has been widely supposed that this is enough to demonstrate that the arising and evolution of life by fortuitous combinations is at least theoretically possible. Involving, as it does, the simplest and most natural possible mechanism, this is to be preferred to complicated and artificial accounts that invoke supernatural agencies. When we examine the situation more closely, however, a very different picture emerges.

In the absence of a direction, random processes tend to iron out distinctions and level down structures. The hypothesis of the fortuitous origin of life postulates the formation of very complex molecules by the polymerization and combination of simpler forms. The simplest self-reproducing substances known—the deoxyribonucleic acids—involve the combination of thousands of elementary groups each of which is unstable in isolation and far more likely to disintegrate than to find the appropriate partner for combining—even if the groups are present in fairly high concentration. In the diagram, each line represents a possible step.

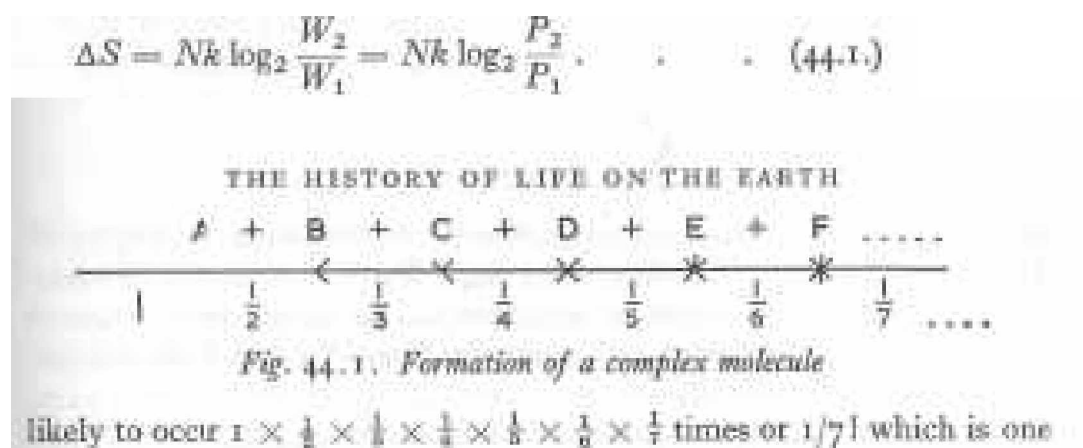
Given the first group A and assuming it is equally likely either to disintegrate or to meet group B, the disintegration likelihood of A + B before meeting C is 2: 1 and so on. The combination of seven groups is

chance in 5040. When there are a thousand combinations to be made, the probability of a thousand consecutive steps being made is 1 in 1,000!, a number so large as to be outside the bounds of possibility within the existing universe. We may ask why order varies inversely in a factorial ratio. There has to be an accumulation of order. Not all the order can come by one and the same process. Synthesis of nitrogen compounds under electric discharge, polymerization at catalytic surfaces, structuring owing to the steric advantage of one type of molecule over another and the various other mechanisms that have been suggested may all be operative: but they are also mutually opposed. Consequently, all the order that is built up is vulnerable and the greater the order the greater the probability of regress. It is this that leads to the factorial formula rather than the familiar exponential of simple 'yes or no' choices.

It may be objected that once self-reproducing organisms are produced, the probability of continuation is greatly increased and that the factorial should be replaced by an exponential ratio. This may be true, but the required number of chances remains forbiddingly large. This can be seen from calculations made by Professor Harold Blum starting from the consideration that order corresponds to negative entropy

on the one hand and to information on the other.* There are the verifiable, and indeed obvious, facts that the biosphere as we know it today represents a very high state of order and that human culture represents ; further immense increase of order. This is maintained through energy transformations at the expense of the solar energy. The Sun-Earth system as a whole is losing order owing to the radiation of energy at lower levels than that of the source. The energy for photosynthesis is provided by an inflow of radiation and an equal amount is being radiated away, but in the form of far larger numbers of quanta at lower energy than those received. The changes in the Sun-Earth system can be represented by:

* H. F. Blum, *Form and Structure in Science*, 1964, and *Dimensions and Probability of Life, Nature*, 1965, Vol. 206, pp. 131-2.



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where W is the number of arrangements representing the degree of disorder and P the probability of the state. If AS represents the change of entropy in an increment of astronomical time, e.g. time measured by the rotation of the earth, W2 is greater than W1 and by the second law, P2 is greater than P1.

The order lost by the system, Sun-Earth, is, in part, gained by the system biosphere. Moreover, we know that over the ages the order of the biosphere has increased with time. Our problem is to assess the probability that this increase of order—or increase of information—can

have occurred by random combinations. We can draw some guidance from the operation of a digital computer to which is presented a succession of questions, each requiring the answer yes or no. If each question can only be asked on condition that all the preceding questions were answered affirmatively, the selection of answers is an increase in order with corresponding decrease in probability. We may describe this relationship by:

• (44-2)

where J stands for virtue* and represents the amount of order attained and b is the number of questions answered; b_2 is greater than b_1 so that ΔJ is positive and corresponds to negative entropy.

Let us now consider changes in the structure of an array of atoms resulting in mutations or steps capable of being transmitted. Here again each step (a) is an increase of order and (b) depends upon the previous steps not only being made, but preserved. Mutations that undo any of the earlier steps break the phylogenetic sequence. We can postulate 'elements of order' that must be accumulated in the right sequence and preserved all the way through. In this case the increase of order in terms of the number of elements accumulated is given by**

(44-3)

where f is the number of elements of order that correspond to a stage in the process. Here f_2 is greater than f_1 and the probability ratio p_2/p_1 is less than unity. In other words, increase in virtue or order grows less and less probable as the number of elements of order is increased. When the number is very large the probability of reaching the end

* Cf. Vol. I, p. 159-

** Based upon Blum, loc. cit., equation 3.

point is very small indeed. Blum* estimates that a thousand million elements of order, at the very least, have been accumulated in producing the state of order now existing in the Biosphere; and this leaves out of account the chemical and bio-chemical stages before sexual reproduction started and also the conscious and creative stages by which present-day human culture has reached its prodigiously complex structure. Blum assumes that the change in probability is inversely proportional to the number of elements and hence that 'the probability of biological evolution having reached its present state would be 10^{-9} .' This is certainly an optimistic figure, for it does not allow for the accidental extermination of mutants that had already accumulated a high degree of order.

The prodigious amount of order represented by these figures is very hard to grasp and assess in terms of our common experience. It is, in-

deed, so unusual as to be unthinkable and we had best supplement the numerical data by a specific example. We shall consider the order that is stored up in the reproductive mechanism of a very simple living creature, the bacterium *Escherichia coli*. This is less than a ten thousandth of an inch in diameter and it would take thousands of millions of millions of bacteria to make up the bulk of a single human body. Its reproduction is controlled by a single chromosome that consists of a single molecule of deoxyribonucleic acid (DNA) that has the property of reproducing an identical replica of itself from protein, including the base thymine that can be made radioactive by replacing hydrogen by tritium. The molecule will then take photographs of itself (autoradiographs) at different stages of its reproduction. The bacterium under favourable conditions of nutrition can reproduce by fission in twenty or thirty minutes, and in this time the replication of the chromosome must be completed.

All this seems simple enough, until we learn something about the chromosome and its structure. *Escherichia coli* has been studied for many years and it has recently been shown that the chromosome consists of a double spiral chain joined to form a continuous ring that is a thousand times longer than the bacterium itself and must therefore be coiled up tightly to fit in.** This single molecule contains more than

* Loc. cit., p. 132, 'About a million species of living organism are recognized today, and we may conservatively estimate that at least one thousand mutations were concerned in each one.'

** These details are taken from an article The Bacterial Chromosome by John Cairns in the *Scientific American* January 1966, pp. 37-44. The illustrations in the paper greatly help in following the description and the interested reader is advised to study it and also reports on the work of Meselson and Stahl at the Californian Institute of Technology, that of Kornberg at Washington University and that of Cairns himself at the Australian National University.

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$$\Delta J = \log_2 \frac{b_2}{b_1} \quad \Delta J = q \log_2 \frac{f_2}{f_1} = q \log_2 \frac{P_1}{P_2} \quad .$$

200,000,000 atoms, arranged in most beautiful intricate patterns, every one of which has its precise place and function in the entire process of reproduction, nutrition and life-cycle of the bacterium. This pattern must be exactly reproduced in the minutest detail every time the bacterium divides and it must be the same in millions upon millions of little creatures of the same species. It is unimaginable that such an extraordinary mechanism could have come into existence without some organizing and directing influence. The amount of order present in a

single chromosome of one cell of *Escherichia coli* is so great that Blum's estimate of a thousand units for a species needs to be multiplied ten thousandfold to give a true picture. But this is not really the point. Not only is there a great quantity of order, but also order of a very high quality—that is to say, a most intricate and beautifully contrived pattern. If this is true for a simple bacterium, the complexity of the reproductive system for the higher animals cannot even be rightly regarded as a 'mechanism', but rather as a supremely beautiful work of creative art. The more we learn about the way life 'works', the less plausible does it become to regard this working as the product of an undirected array of chance happenings.

When we further consider the development of human culture on the assumption that it has been due to blind chance—that is the processes of random variation and natural selection—another enormous improbability confronts us. Blum's cumulative probability for (a) the origin of life (b) the evolution of the Biosphere and (c) the development of human culture is 10^{-18} or a million, million, million to one against the occurrence. Even this extremely small likelihood is, according to our calculations, far too optimistic, for it does not give due weight to the hazards of the pre-biological stages of synthesis, where the likelihood of degeneration increases with each added element of order.

We can now test numerically the argument that however improbable the present situation may be, there have been enough chances to make it conceivable. If we assume only 100 steps in the accidental synthesis of a self-reproducing protein the odds against its occurring by accident are 1:100! The remaining steps may be 10^{-15} as suggested by Blum. This makes a cumulative probability of less than one in 10^{100} . The total mass of the earth's atmosphere is estimated at 10^{21} grams equivalent to 1040 simple molecules of nitrogen, methane or ammonia. Assuming chemical transformations occurring throughout the atmosphere and reactions occurring at the rate of a million a second, there would be some 1023 reactions in a thousand million years. The total number of reactions theoretically possible is 1063 against the 1085 required to

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produce one viable self-reproducing protein molecule. This gives a likelihood of one in a hundred thousand million million, which makes the process inconceivably improbable. If it is suggested that surface catalysts could both accelerate the process and protect the reactants from disintegration: we must reduce the number of molecules to those able to be in contact with suitable metallic or oxide surfaces. The figure of 1040 falls dramatically to 1015 and the probability remains far too low to allow random reactions to be regarded as a conceivable mechanism for the arising of life.*

This is not to say that random reactions could not produce polymers of high molecular weight: but that such polymers would be only one

stage in the whole process. In later stages, the disintegrative influences of random energy discharges would be more and more likely to break the entire structure down and long before a viable self-synthesizing molecule was obtained, the regressive trend would swallow up any hopeful combinations.

When we turn our attention to the evolution as distinct from the origin of life, we have to think in terms of far smaller numbers of units: in this case organisms capable of sexual reproduction. Against the number of elements of order, i.e., 10^9 according to Blum, we have a maximum of 10^{10} generations with an average successful mutation of one in a million: so here the odds against the success of random variation and natural selection are at least a hundred thousand to one. But, as we saw, a large proportion of successful mutations disappear, so that the true odds run into hundreds of millions. Up to now, we have considered only a single line of evolution. If we take into account the delicate adjustment of different kinds of organism to each other in the Biosphere, the odds become astronomical.**

The development of culture by random processes and natural selection is a far-fetched notion that need not detain us. At the very least, it can be regarded as extremely improbable that the present state of human culture could have been reached by a sequence of undirected and purposeless steps.

The conclusion that we are bound to draw from all these considerations, is that the fortuitous origin and evolution of life and human culture on the earth must be rejected as contrary to the well-established laws of probability and thermodynamics. So far we have considered only the

* Cf. Majorie Grene, *The Knower and the Known*, London 1966. A detailed critique of the doctrine of fortuitous originism given in the appendix. In spite of several studies exposing the weakness of the statistical 'demonstration' that fortuitous originism is at least tenable, it continues to be widely and uncritically accepted.

** Cf. *Infra*, p.

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earth as it existed when life appeared. From the larger standpoint of universal evolution, the hypothesis of fortuitous origin is not so attractive—even from an atheistic standpoint—as it appears at first sight. It has to take the condition of the primitive earth as a datum. Presumably the earth also appeared by a series of chances. But, however far one pushes the problem back, sooner or later the question of origin arises in a form where chance is no longer meaningful. It is meaningless to say that the existence of the universe is 'more likely than not'.

This is, as is well recognized even by mechanistic biologists, not the only serious difficulty. Inert matter is insensitive, life is sensitive; when and how did sensitivity arise from insensitivity? Again, man is conscious and entertains ideas of value and purpose. Inert matter is unconscious and the whole argument in favour of mechanistic theories is that they do not require any assumptions as to conscious purposes at the origin of life. How then could consciousness and purposefulness have arisen in a world from which they were previously totally absent?

The usual reply to these objections is that there must be some kind of consciousness even in inert matter—even, as some say, in the atom. All that has happened is that this atomic dispersed consciousness has accidentally got itself organized into men and women. The least that can be said is that such arguments are evidence of a negative faith in atheism as remarkable as the positive faith of the theist. The one believes that mere chance can work miracles and the other believes that God did it all, without the slightest idea of how it could have been done.

In our time, both theist and atheist are equally in a quandary before the progress of science. We see before us a world so incredibly rich and complex that neither naive atheism nor naive theism can account for it. We need a world picture that may not satisfy our insatiable human need for certainty, but that will at least make some sense of the totality of our experience. One unmistakable sign of the times, and, as we should say, a message from the future, is the unwillingness of men to close their eyes to difficult or unpalatable data of experience. We do not want to sweep our intractable problems under the carpet. The aim we have set ourselves in this book is to develop a world picture adequate to include not only all we know but also our inexpressible intuitions of Truth. We must now submit this world picture to the verdict of history.

17.44.3. The Plan and the Pattern

Planets are improbable modes of existence. If our experiences were associated with a star lacking a planetary system, we could scarcely imagine that such bodies as planets could exist. If we were accustomed

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to temperatures of tens of thousands of degrees and upwards—which, contrary to popular ideas of hell-fire, would not incommode the soul—we could not conceive matter in the solid state, nor bodies in any way resembling those of plants or animals.

If we could place ourselves in imagination at the centre of our galaxy and so enlarge our field of vision and change our time scale that we could examine its structure, we should see two hundred thousand million stars in complex motions, prodigious intensities of energy, and countless millions of other galaxies spreading out through space. We should see no solid matter, for planets would be too small and too dark to be

visible. What we find on one scale is quite unpredictable from another. We would no doubt regard the hypothesis of planetary existence as wildly improbable. As wildly improbable, perhaps, as the suggestion that life could exist on a planet would appear to a visitor who happened to alight upon a barren satellite. Remembering the conclusion we reached in Chapter 42 that unexpectedness is a mark of the hyparchic future, we are encouraged to look for an improbable and unexpected plan* that might have entered the mind of our planet.

The earth's 'present moment' is a conception that we must now explain. It embraces a range of energies extending beyond those organized in mind, for the earth is not only conscious, but creatively conscious. The earth can be conceived as a Higher Intelligence and so associated with the notion of the Demiurgic Powers that are to play a decisive role in the development of our theme. The 'mind' of the earth is in process of evolution and this process may be said to have started with the implanting of the 'pattern' of Life. Again, this 'mind' is a 'greater present moment' and the history of life is being enacted within the Present Moment embraced by the Great Mind of our planet. Before the plan was conceived, the mind of the earth slumbered: its consciousness was not organized and its creative powers were exercised by the superior Intelligence of the Sun.

Let us start then with the hypothesis that life appeared and developed on the earth in response to a plan that arose in the hyparchic future of the earth's mind. The plan was not produced in time; it was rather a work of pure Illumination.** We said also that it must be an act of the

* Cf. Jellaluddin Rumi, Mathnawi Ma'nevi, Book II, v. 1796: 'How often will they say when the cover is lifted: this, verily, is not what we expected.' Rumi and other great Sufi poets and mystics had, and gave expression to, intuitions of what we call eternity and hyparxis that have been for the writer both signposts and encouragements in pursuing these hazardous speculations.

** The term Illumination was introduced in Chapter 43, Section 16.43.5.6, to designate the co-working of the Unitive and Creative Energies.

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Creative Will of the Sun. As we have seen, the operations of the will in the hyparchic state of non-potential virtuality have no power to bring about their own realization in the present moment of time.* For this, they must take shape as an eternal pattern. This transformation of the solar act takes place in the mind of the earth.** The virtual pattern is

effectual only if it is associated with potential energy, thereby passing into the eternity of the present moment.***

We have at this stage two elements. First, there is the Illumination of the sun. We may even say that the nature of the sun is to be affirmative since it is centred upon/the creative energy (E 3). Second, we have the Intelligence of the earth. This also is the very nature of the earth, which is centred in consciousness (E 4). It still remains necessary to account for the initiation of a causal process within the present moment of time, corresponding to the first appearance of life.

Three entirely different explanations can be envisaged:

1. As we are concerned with history, we must have an element of value as well as of fact. This immediately suggests the category of contingency, **** the first in the scale of values and the one that corresponds to dispersed energy (E 12) in the scale of energies. We can, therefore, invoke an action that has some of the character of blind chance postulated in the mechanistic theories. But we must introduce another element as well. We can imagine that under the influence of an organizing pattern of potentialities, the chemical combinations necessary for the auto-synthesis of nucleic acids or whatever may have been the first self-reproducing protein, could have taken place.|| This suggestion has

* Cf. Chapter 42, p. 55.

** This is why we regard the earth as a sub-creative entity. Cf. Vol. I, p. 447. Vol. II, p. 274.

*** The reader must remember that these are not arbitrary statements, or the result of an 'inner illumination'; they follow directly from the character of the geometry of six dimensions. It is true that the application of these results to the sun and earth are suggested by observations unconnected with the geometry. Fechner in *Tagesansicht gegen Nachtsansicht* made similar suggestions in 1877. Jaquetta Hawkes in *Man and the Sun* describes the many beliefs associated with the creative role of the Sun God. She

does not venture to connect the ancient myths with modern science though she comes near to it in the end.

**** Cf. Chapter 38, Section 14.38.2.1. The value involved here does not lie in the random distribution of atoms and energies as such, but in the opportunity this randomness offers for a constructive process to be set in motion.

****We recall here the third law of Synchronicity: the Law of Organization and Disorganization, Vol. II, p. 53. Reference is made there to the connection between this law and the processes of life. 'Life would have no special quality if it were wholly determined by existential laws. It is the feeling for the essential quality of life that touches us when we contemplate the struggle of organization and disorganization and its outcome in the will-to-live.'

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nothing strange in the light of the theory of organizing force-fields that some embryologists have postulated to guide the development of the organism from the fertilized ovum. According to this explanation, the energies of life remain latent and only enter step-by-step as suitable material bodies develop.

2. We may invoke, on the contrary, a very high action. Assuming that life is necessary for the Cosmic Harmony,* we may say that Divine Compassion in order to permit the Creation to triumph in the War with Time, enters directly into the material world as the Illumination which brings about a mutual action of inert matter, wholly subject to time, and the pattern of life, wholly virtual in eternity. According to this hypothesis, Love acts as the Immanent Divinity that unites the Creativity of the sun which the Intelligence of the earth.**

3. We can also see the action in hierarchical terms, whereby Divine Compassion releases the power of Illumination to awaken the Intelligence of the earth to the task of providing itself with a Mind that is eventually to arise in the Biosphere by the advent of Man. 'Divine Compassion' here is to be understood as the highest operation within the existing world; that is, the coalescence of Transcendent (E1) and Unitive (E2) energies with the Will of the Cosmic Individuality. The Earth-Mind is in the Hyparchic Future and, as before, issues as the potential pattern of Vital energies by which the evolution of the Biosphere is directed.

Let us put the various suggestions into the form of a comprehensive hypothesis. This can take the form of a series of propositions.

1. The existence of life on the earth is the realization of a plan, the fulfilment of which is ordained out of time—past, present or future—by the Creative Will of the Sun: an operation of the Supreme Will.

2. The Will of the Sun operating in the hyparchic future of the earth conceives the plan of a self-reproducing mode of existence capable of sustaining sensitivity and eventually organizing it to provide the earth with a mind that could be transformed into Soul. The plan requires that its realization should be progressively more and more self-directing,

* One of the main conclusions of Vol. II. Cf. p. 337: 'We have reached the conclusion that Life, in all its multitudinous forms occupies a central place in the pattern of all Existence.'

** Love and Wisdom stand beside the Creator as His hand maids. Cf Proverbs 8.22: 'The Lord made me His when first He went about His work, at the birth of time before His Creation began. Long, long ago before the earth was fashioned, I held my course.'

Already I lay in the womb, when the depths were not yet in being, when no springs of water had yet broken' (R. Knox translation). The whole of this passage gives an almost uncanny picture of the situation we are trying to evoke.

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and therefore the arising of beings capable of acquiring Individuality was inherent in the plan.

3. The earth in a state of pure Intelligence, but without a mind, accepted the plan and converted it into a pattern of life capable of evolving from the simplest beginnings to become eventually its own Mind.
4. The three acts of will do not take place within Life's own present moment. They are entirely in the hyparchic future of the sun and the earth. There is no actualization and no material event.
5. The present moment appears when the virtual pattern becomes a potential pattern and so 'begins to exist'. This requires a finite apocritical interval that varies according to the strength of embrace of the earth's Intelligence.
6. The actualization begins at the lowest level of the material energies and works its way step by step through the essence classes. At the start there is the highest degree of consciousness—that of the earth—and the lowest level of materiality—that of random motions. The actualization gradually builds in the intervening levels. In this way the direction of the event—that is, the appearance, development and realization of life—passes into life itself.

The hypothesis propounded in this form may appear to be the wildest speculation if not simple fantasy. It must be said, however, that we have constructed a scheme that accounts for the history of life on the earth without invoking either creation ex nihilo, or blind chance. It is neither theistic nor atheistic, for it does not assert that life on earth comes straight from the hands of a Supreme Being, Creator of the Universe, nor does it deny that such a Supreme Being exists. The scheme allows for the undisturbed operation of the laws of nature. This, from the standpoint of scientific enquiry, is perhaps its most valuable feature. It is not an invented notion, but a structure built up step by step from the properties of the fundamental geometry of Vol. I. It allows for deter-

mination and causality wherever these are found in the material world, and it also leaves scope for free choice and responsibility within the world of life.

It is fair to emphasize that no such scheme could be constructed in terms of classical notions of space and time. There would be no room for the Illumination that is postulated as the initiating factor. Modern atheism largely bases its case upon the contradictions between any notion of a supernatural will and the obvious realities of nature, science and commonsense. The suggestion that there could be a non-temporal act of will appears to be either an absurdity or a misuse of language.

This kind of objection has not the same force as it appeared to have fifty years ago. Then it seemed as if natural science was riding home on the tide of mechanistic explanations that eventually would include life and consciousness, and set mankind free once and for all from the superstitious belief that there is a god. The successive crises in theoretical physics and the belated recognition that no simple mechanical explanation (i.e. one that invokes nothing but atoms and fields of force) would work in biology, and perhaps also the prodigious achievements of astrophysics, have made scientists cautious in asserting that they know even the kind of explanation of natural phenomena they are looking for.

The principle we have followed is that the only kind of explanation that can be accepted is a total explanation. We are very far indeed from claiming to have found it; but at least we can say that by reasoning from simple geometrical premises, we came to the conclusion that there must be a condition—that we have called the hyparchic future—in which the Will can operate without being involved in actualizations in time and space.

The hyparchic future has hitherto interested us as the condition of creative activity. It is also the condition that enables us to reconcile conflicting elements in our immediate experience. In our study of the War with Time, we saw how the present moment with its ever changing content also contains traces of a past that does not seem to change at all. We concluded that there is an hyparchic past that is in process of self-realization; but this does not tell us what 'self-realization' means. We can partially interpret the traces of the past in terms of the structures and regularities we observe in the present; but only partially, for the present does not provide us with an integrative principle. Its very nature is disintegral and we are driven to search outside the present for an understanding of what it means. Hitherto, this search has been confined to the traces of the past. We look for explanations of the past within the past. Such explanations must invoke some kind of causality: absolute, relative or statistical. The last implies that randomness is ultimate and the first that there is a structure in the world that is guaranteed by the past and known from the past. It cannot be satisfactory to derive the notion of progress from the past alone and so we return to the future—the hyparchic future—and look for a purpose and

a plan. We must not forget that purpose and plan have not meaning unless they are projected into a future that exists. So we are brought back to the hyparchic future as;he region in which transformations are independent of time and therefore can reconcile causal and purposive accounts of one and the same situation.

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We shall, therefore, start our enquiry by postulating a structure that includes both purpose and plan. A plan implies a sequence of actions that will transform a possible situation into an actual one.

We can conceive a temporal process as developing continuously under the influence of pre-existing causes. When there is an eternal pattern, there will also be different levels of actualization; but not necessarily discontinuities. When, however, the process is fully subject to hyparchic conditions, it will be impregnated with periodic or cyclic features. When projected into time this results in the step-wise transition with which we have become familiar in such diverse fields as quantum mechanics and genetics. The property of step-wise or discontinuous progress must certainly be operative in the history of the earth, if we are right in our supposition that it is predominantly conditioned by an overall hyparchic plan. Now everyone will allow that the traces of the past do show unmistakable evidence of progress by stages and so we have at least an agreed starting point. Nevertheless, though they can be known from the traces of the past, they can only be understood with regard to the hyparchic future.

The stages will be studied in time-sequence and we shall need a suitable nomenclature for distinguishing them. For this purpose we shall adapt and extend the terminology favoured by most geohistorians which refers to forms of life rather than to rock formations. The following scheme will suit us.

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The meaning of the stages and the explanation of their characteristics and durations will be developed in the succeeding chapters. The table is set out at this point, for convenience of reference only. Stages 4-7 are recognized by geologists. Stages 1-3 are speculative as to duration, but are in general agreement with commonly held views. The term

'hyperzoic' is used to indicate the entry of a factor that goes beyond life itself: that is, consciousness.

17.44.4. The Primitive Earth: Amorphous Stage

So far as is known to us at present, the earth and other planets of our solar system were formed between 3,000,000,000 and 4,000,000,000 years ago—the higher figure being more probable. The material from which the earth is made is so different in composition from the sun, that it seems likely that it was formed independently. Some astronomers believe that suitable material may be dispersed throughout our galaxy in the form of dust and fragments and that the sun has swept them up in its travels. Others believe that we are made from the debris of a star that exploded catastrophically as a super-nova, for only the conditions of inconceivable intensity of energy concentration so obtained could have produced the heavy atoms that are fairly abundant on the earth. The generally agreed, and very important, conclusion is that a very high level of potential energy must have been present when the earth was being formed. There must have been, for example, a far higher proportion of radio-active elements than there are now, including trans-uranic elements whose half-life is too short to have left traces after four thousand million years.

It is reasonably certain that at first there was no material in the crystalline state—no rocks, no mountains and oceans as we know them now—but gases and fragments of solid material moving at random and slowly forming simple chemical substances like nitrogen gas, water, sodium chloride, and carbon dioxide. We can say, then, that in the scale of essence-classes, the earth started at the bottom of the scale, and can call this the Amorphous Stage.

Now we have seen that the first two essence classes—dispersed energy and simples—cannot form pentads.* There would be no reflux of the spirit, no arising of more complex forms, without some pattern-forming influence. At this stage, there is no possibility of response on the part

* Vol. II, Chapter 35, p. 297: 'In the ground-state, there is no pattern or quality.' Again, p. 298: 'It is the emptiness, the void, of the ground-state that gives it the force to attract the essence-qualities that it needs.' We have here the essential counterpart of the suggestion made in the last section that contingency can allow the eternal pattern to penetrate into the random motions.

	Stage	Characteristics	Starting Date (Millions of years B.P.)	Duration
1	Amorphous	The Precrystalline Earth	4,000	1,500
2	Azoic	Crust, Oceans Silt and Clays	2,500	800
3	Hypozoic	Soil and Sexless Algae	1,700	600
4	Proterozoic	Sexed Life	1,100	500
5	Palaeozoic	Plants and Invertebrates	600	370
6	Mesozoic	Vertebrates and Advanced Plants	230	170
7	Cainozoic	Mammals and Birds	60	58½
8	Hyperzoic	Mind	1½	

Fig. 44-2. Eight Stages of Earth History

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of the existential component of the dyad. The spirit of the earth was pure essence; the fragments of its future body, mere existence.

Nevertheless, this first stage was of decisive importance for all future events. The eternal pattern now begins to project itself into a spatial distribution recognizable in energy gradients, or the distribution of materials in zones or layers. The material distributed itself in spherical layers, thereby allowing a gradient of conditions and substances from the central core to the outer atmosphere. There was much greater material mobility than now, so that the dominating condition was that of random motion and heat energy, the latter liberally supplied by the radioactive elements in even greater quantity than the radiant energy received from the sun. In the rapid currents and vortices created by the potential energy gradients within and surrounding the condensing earth, stable combinations would not be formed for a very long period of time.

During the stage of relatively free motions, both radial and zonal, there would be a segregation of the elements and their elementary combinations, corresponding to the essence-class of 'simples'. This does not mean that no simple substances existed in the first stage, but that they were not segregated. Thus, the segregation into zones would have been the main characteristic of the second stage. This included the formation of the predominantly iron core and the various layers up to

and including the solid crust. This would apply whatever the hypothesis adopted regarding the origin of the earth itself.

The formation of zones is a necessary precondition of the appearance of life. We have no grounds for supposing that the segregation of simples was brought about under the influence of the 'life pattern' we have postulated. The most that we can say is that the earth could have formed in a different way. Instead of the polyspherical pattern of core, mantle, lithosphere, hydrosphere, atmosphere and cosmosphere, the elements of which the earth is made could have made other compounds that would have retained the water and most of the gases in the solid state. There would have been little or no water on the surface and much less atmosphere—in fact a condition such as appears to obtain at present on the planet Mars. Had this happened, life as we know it could not have arisen. Life requires fairly narrow limits of temperature and protection from the full intensity of the sun's ultra-violet radiation. Without oceans and atmosphere we should have had neither.*

* According to some views, the early earth may have had little free water, most of it being combined with solids as hydrates. The formation of the oceans would then have been a special process and its occurrence at the opportune moment would be even more suggestive of a plan.

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These considerations are inconclusive for we can say that because the earth developed as it did, life was able to come; or we can say because life had to come, therefore the earth took the form that it did.

The more we know of the process (and it is still very little) the more remarkable does its exact regulation appear. The earth's crust had to be just what it is and not a thousand other kinds of surface that might equally well have formed. The amount of free water to form oceans had to be neither too small to regulate temperature, nor so great as to cover the whole earth and produce continuous tides and currents in the molten magma beneath the crust. No stable form could have developed under either set of conditions.

We have as the first stage in the history (or rather pre-history) of life on the earth, the formation of concentric spheres or zones of differing constitution, but all on the first four energy levels. In other words, we have the earth as a material body permeated by the four material energies. Where, if anywhere, were the energies of life? The obvious difficulty of believing that sensitivity and consciousness could be produced by chemical reactions of inert matter, has led materialistic and mechanistic scientists to make the assumption that these properties must be associated with all matter and only make themselves apparent when living bodies having a high degree of organization have evolved.* Such

hypotheses are unsatisfactory inasmuch as they do not account for the transition from the 'atomic' to the 'organic' state of consciousness. They must be made more precise and the mechanism of integration must be formulated if they are to be convincing. This is just what we are able to do by recognizing four vital energies and assuming that they have been present with the material of the earth since it was first formed.

The mechanism whereby the plan of life-creation was first converted into an eternal pattern and then realized as a structure in time and space can be conceived somewhat as follows.

The Creative Energy (E 3) penetrates into the pre-existent hyle field** in the unextended, non-successive state of virtuality. It imprints upon this field a system of periodicities that corresponds to the total plan to

* This idea is inherent in all emergent doctrines of evolution, including those which admit of a 'syntropic trend' in the universe. The idea of the 'sensitivity' of matter goes back at least as far as Maupertuis in the eighteenth century. It was proposed again by the mathematician Clifford at the end of the nineteenth century, and is current today.

** Hyle does not enter into existence unless it is associated with all four determining conditions. In Vol. II, pp. 30-32, we suggested the addition of a 'seventh degree of freedom' to our six-dimensional geometry, which 'would allow transformations different in kind from those of presence, actualization, potentiality and recurrence, and yet interconvertible with them' (p. 31). Our intention was to avoid the mutual exclusion of Fact and Value.

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be realized. This can be accomplished only under the condition of *hyparxis* where the action of the will upon existence can be direct and unmediated by existence. This gives us the link between the two aspects of the earth's nature as Life's Mother and Life's Prison.*

We could conceive 'living machines' without the possibility of soul and we could conceive 'living spirits' without the possibility of transformation. The first are wholly Fact and the latter wholly Value. The purpose of the creation of life is evidently far more subtle and far more difficult than either of these: it is to make possible the arising of independent, responsible Individuals able to do what no machine and no spiritual entity (or 'Angel') could accomplish. The contradiction between the two natures is so complete that it can only be resolved in non-existence. The pre-existent state of hyle could apparently just serve the purpose. There the plan of life could escape the dilemma of being imprisoned in matter or failing to be born. Hence the phrase used in

Vol. II 'Life's Mother and Life's Prison'. The operation is performed by the Demiurgic Intelligences associated with the Earth.**

The next stage is the projection of the pre-existent pattern into the eternal or potential state of hyle. This gives the pattern of the biosphere. *** As this pattern is wholly potential, it is independent of time and therefore accompanies life throughout the thousands of millions of years of its history.

The pattern bears the stratification of existence that we found to be all-pervasive. **** This stratification of levels in eternity projects itself into a stratification of zones in space. We have already noted that this stratification began at some very early stage in the earth's history. There were concentrations of the material energies from the earth's core to the outer atmosphere: and there were also concentrations of vital energies not yet associated with living forms and therefore still in states of potentiality.

At this stage there was an almost complete partition between the existential and the essential components of the future Biosphere. The six 'lower' energies from heat to vitality belonged to the 'visible earth'

* Cf. Vol. II, Chapter 34 and especially section 13.34.4., pp. 275-7.

** Ibid., p. 277, where the Demiurgic Intelligences are called the Heavenly Host. The 'Second Creation' of Section 12.34.4. is the very process which we are now seeking to elucidate.

*** Cf. Vol. I, p. 420: 'The eternal pattern of the Biosphere contains all the potentialities of autonomic existence actualized over a period of many millions of years.' Again, ibid.: 'The biosphere should represent the transition from autonomic to hypernomic existence . . . hypernomic existence penetrates into life at the point of contact between two phases.'

**** Cf. Vol. I, Chapter 9.

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and the six 'higher' energies to the 'Unseen Earth' of Section 12.34.4. These correspond, mutatis mutandis, to the distinction of Fact and Value without the intervening Domain of Harmony. This Domain comes into realization as the vital energies begin to interact and build up structures capable of self-renewal. From two hexads, we pass to the three familiar tetrads of Hyponomic or Material, Autonomic or Vital and Hypernomic or Cosmic Existence. The Autonomic world is that of the four energies: constructive, vital, automatic and sensitive.

The creative action of the Demiurgic Intelligences thus falls into four phases:

1. The transfer of the plan from the hyparchic future into the pre-existent hyle-field.
2. The projection of the field as a pattern in Eternity. This is the formative and regulative pattern of the Biosphere.
3. The projection from eternity into space to produce the multi-spherical zone system of earth energies.
4. The initiation of the temporal process of realization by the appearance of the first self-renewing forms of life.

We have at this stage four distinct elements:

1. The Material Basis of Life. The chemical elements and energy concentrations of the earth's surface and atmosphere and the special conditions induced within the polyzonal system by the sun's radiation.
2. The Vital Basis of Life in the Eternal Pattern. Energies E 8 to E 5 in potential states.
3. The Sensitive Structure of Life that at first is present only as an 'idea' in the Earth's Intelligence.
4. The Soul Structure which is wholly virtual and takes no direct part in the actualization. The earth is not born with a soul; although it is the 'Abode of the Heavenly Host'.* The Intelligences of the Demiurgic Powers transmit the Creative Plan that originates in the sun, and could not originate on any lower level, for it requires the Illumination that recognizes the need and the means of satisfying it.

We can picture the 'Unseen Earth' as 'Essence' in which no contact with the material world has yet been made. This 'Essence' bears the sensitive image of the Pattern of Life History. Gradually 'Essence' will acquire the content that will lead to the birth and maturing of the World-Soul. There are many stages to be passed and two thousand million

* Vol. II, p. 277

in man.

17.44.5. The Formation of the Earth Surface:

Azoic Stage

The first stage of life's history may have lasted for hundreds of millions of years until the formation of the crust was complete. Then began a gradual transformation by interaction between the different zones. Lavas seeped through the solid crust and liberated water and gases to produce the early atmosphere and oceans. No doubt there were free gases and water vapour in the first stage, but it is likely that most of the elements entered into chemical combinations and that the primitive ocean was of far less extent than it became in the second stage; which corresponds to the appearance of the crystalline essence.

It has been estimated that the rate of percolation of lava through the inner crust of the earth is about 0.8 millimetres a year. Assuming that this rate has not greatly changed, the present crystalline outer shell of the earth—which is some thirty miles in thickness—would have taken several hundred million years to form. The combination of complex silicates (the predominant constituent of the fluid interior), under the action of water, carbon dioxide, nitrogen and sunlight—from which the ultra-violet radiation would be effectively filtered—produced the first true crystalline substances which were the primitive rocks.*

The crystalline essence is characterized by the possession of an actualized pattern. This was an immense step in the evolution of the earth, for it means that the organizing pattern—which in the first stage could produce only a separation of zones but no structure—was now producing specific forms upon the scale required for the future arising of life. A new zone had appeared that was able to produce enduring forms, the precursors of things. These, as we saw, are the first weapon to emerge in the War with Time.** It has proved a marvellously successful weapon within its own limitations, for it has preserved to this day traces of its own origin.

These traces are the most ancient azoic rocks and particularly the andesites that predominate in the earth's crust. We shall speak of the andesitic layer as the characteristic manifestation of the crystalline stage. It is not wholly fanciful to compare the andesitic layer to the epidermis

* Ice-crystals are probably present everywhere, even in outer space, but water belongs to the essence-class of simples and ice is not a true crystalline essence according to our definition (Chapter 35, Section 13.35.7) since it cannot be transformed into soil (Vol. II, p. 300).

** Cf. Chapter 42, Section 16.42.4.

of an animal body for it has analogous functions. Firstly, it is a protective coating over the molten and mobile magma that lie below the inner shell. Secondly, it is a regulator of temperature through the absorption and release of water. Thirdly, it is an excretory organ, enabling the interior lavas to make their way to the outer surface. It may be that the hydro-carbon oils and petroleum that play so great a part in the present moment of man's history were already being produced in the crystalline stage. Fourthly, it is the support of the sensitive and vital energies and in this way performs a function analogous to the skin which is the support of the sensitivity of the animal body. All our organs of perception are modifications of the epidermis and all life on the earth is derived from the material of the andesitic layer.

In order to assess the truly historic significance of the rising of crystalline essences, we must take into account their extreme rarity in the universe. Not more than one million millionth part of all the masses of the known universe is likely to be in the crystalline state. Not only is it absent in all stars (and, probably, in the great planets like Jupiter) but even on planets like the Earth and Mars, it is contained in a layer on the outer surface which has passed through the organizing action that converts simples into crystals.

Its quantitative rarity does not diminish its cosmic significance. A crystalline body endures and has an actualized form. This is the first step towards life. But as we shall frequently find in our study of history a step back must be made in order to go forward. The crystalline structures cannot have the capacity for selective response that is one of the conditions of life. They are restricted to certain definite forms..*

17.44.6. The Soil and the Sea: Transition to The Hypozoic

Life joins battle with time by the weapon of self-renewal. The first condition of self-renewal is exchange and before life could come on the earth there had to be conditions that allowed a free exchange of materials and energies between bodies. Such conditions could be provided either by the crystalline rocks or by the fresh waters of the primitive ocean.

The problem was solved in two entirely different and complimentary ways. On solid land, the rocks were converted into clays and the clay became soil. The ocean became saline by the leaching from the rocks of soluble salts. On land, colloids, and in the ocean, ionized salts, provided

* Cf Vol. II, 13-35-7: 'Crystalline solids have a fixed pattern but lack power to change from one form to another' p. 298.



two media of exchange of incomparable versatility and effectiveness. It is possible to picture the situation that existed on the earth about two thousand million years ago. There was very little oxygen in the atmosphere, only thick blankets of cloud. A vast continent was probably the parent of nearly all the present land masses of our earth. The ocean covered nearly all the southern hemisphere and the present Pacific. There was no Atlantic ocean, for the continents of America, Africa, Europe and Asia were all one. There were probably high mountains, arid and windswept, on the surface of which the soil was being formed by erosion and by the seepage of water and hydrocarbons through the crust. Heavily charged and sluggish rivers carried silt and salts into the seas surrounding the primaeval continent. We will refer to this as the Hypozoic stage. On all the earth and in the oceans there was no life; but a new kind of existence was coming into being. Slowly, slowly for about five hundred million years, colloids, with their active surfaces, were forming on land and in the sea. Salts were dissolving and ionizing the waters. The new form of existence is that which we called the essence-class of the soil or 'edaphos.' Its outstanding characteristic is its adaptation to exchanges of materials and energies.* As we contemplate the half milliard years that preceded the arising of life, we cannot help asking if all this was mere accident. Air, earth and ocean were being groomed for their role as the steeds of life. Was there no groom, no guiding intelligence behind all the preparations? Or are we to believe that it all happened fortuitously and that life and consciousness appeared because the conditions happened to be favourable?

According to our hypothesis, the wholly natural sequence of physical and chemical transformations was directed and guided by the eternal pattern of potential energies that was present (as it is always present) in the present moment of the earth's own Mind. A very long time was required for the transformation because of the relatively feeble coupling of the potential energy field and the actual situation in the crystalline surface of the earth.

Let us compare this with the usual views. Nearly all current theories of the origin of life assume that the earth itself is, and always has been, indifferent to life. These theories presume that, for two or even three

thousand million years, all transformations on the earth were governed solely by the laws of physics and chemistry and that there was no kind

* Cf. Vol. I, Section 4.10.6: The Transitional Hypothesis of Active Surface, p. 199: 'The step in the hierarchy of existence made in passing from composite existence to active surface turns mainly upon the new and enhanced significance given to energy by its partition between different constituents of the system.'

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of plan and purpose in it all. Since it is generally agreed that life processes cannot be described without reference to their purpose, we are asked to believe that there was a transition from a terrestrial existence devoid of direction, or purpose, or sensation or consciousness to the Biosphere as we know it today (in which all of these are inalienable characteristics) and that this transition was made by accident. This is to ask us to accept a breach of continuity, a violation of the homogeneity of the natural order, that should be as repugnant to the scientific conscience as it is to common sense.*

17.44.7. THE Birth of Life: Hypozoic Stage

The arising of self-renewing entities provides a convincing demonstration of the influence of a guiding pattern. But we must take all aspects of the event into account. More than a thousand million years ago (possibly nearly twice as long) life made its appearance. There is no reason to doubt that it did so in the form of a chemical compound that had the power of self-renewal or reproduction. We have said that unexpectedness is a mark of the hyparchic future. We may add that inevitability is a mark of the eternal pattern. In retrospect, it seems inevitable that life should have arisen as it did. Seen in terms of the pre-vital earth, life must be taken as wholly unexpected!

The usual view can be called the 'hypothesis of environmental indifference'. This requires that life should explain itself. Having no parentage and no friends, life appears on earth as a lonely orphan. The orphan develops in a strange way, to become unrecognizable. This is what we may call the 'funnel' conception of history. At first, life is an insignificant and inexplicable phenomenon lost in the ocean of inert indifference that surrounds it. All is inert: all terrestrial matter and all solar energy that activates it. The germ of life, in the form of some self-synthesizing nucleic acid derivative, lays the foundation of genetic reproduction. The necessary factors of variability and natural selection come on the scene and organic evolution gets going. Ignoring, for the moment, the still unresolved difficulties of accounting for the appearance of 'new' genes, one dominant form of life succeeds another. The 'lower' forms are eliminated or relegated to a state of stagnation and eclipse. The funnel grows narrower and narrower. From the innumerable

* Cf. L. S. Henderson, *The Fitness of the Environment*, New York 1913 Henderson's argument is intended to demonstrate that life on the earth must be almost if not quite, unique in the universe, having regard to the precise adjustment of physical conditions that are indispensable for life as we know it. See also E. Huntington *Mainsprings of Civilization*, New York, 1945, pp. 16-26.

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species of invertebrates, one or two pass on to the chordata, thence to mammals; out of mammals, primates, and from primates to man. At this point, history proper begins and purpose, significance, consciousness and free-will appear, unheralded upon the earth.

Some such view is almost inescapable if we deny a priori that there can have been any purpose or plan already existing. The accidental concurrence of favourable conditions at the right moment could be admitted without postulating any direction or purpose. But we are entitled to ask what 'favourable' means in this context. How are we to say that conditions are favourable, except in terms of what happens later?

There is something suspicious in any view of history that makes one moment the culmination of the evolutionary process. It is scarcely plausible to hold that three billion years of earthly history had no direction or purpose until man appeared. To find oneself at the centre of some vast circle, usually means that one is the victim of an optical illusion. Rather than believe that significance began with man, we should prefer to regard the entire history of the life on the earth as one Great Event that is significant above all else in its integrity and relevance to a Plan that originates beyond the earth itself. Within the total event, every subordinate event represents a contribution to the whole. If we suppose that the Plan requires the overcoming of separateness, then we should say that the value of the contributions is not to be assessed by their actual future results, but by their place within the Plan that is conceived outside Time itself—in the Hyparchic Future.

We can make here a clear distinction between the Plan and the Pattern and hence between two doctrines of Creation. The commonly held view is that Creation means one of two things: either complete and detailed fashioning by the Creator of the entire universe and every part of it; or else, the launching of a process that, after its inception, is governed by law without renewed Intervention, or at most Intervention of the very special kind exemplified in the Incarnation of God as Man. The second alternative is preferred by Christian theologians such as de Chardin who seek to reconcile Christian faith with belief in mechanistic evolution. The first doctrine states, in effect, that the detailed Pattern of the Creation is foreordained, and the second restricts the Divine

Act to the creation of the Plan. According to our view, neither of these is adequate. We hold that there are both Plan—in the Hyparchic Future—and also Pattern—in the Eternal Potential Energy field.

This seems to be the only way to give a reasonable account of the transition from material to vital structures required for the origination of life. We can see the complexification of inert structures leading to

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active surface and organic complexes. These are accounted for by the properties of the four material energies from heat (E 12) to plastic energy (E 9) Then we see living matter capable of self-reproduction. This requires a new kind of energy that we call the constructive energy (E 8). Here the pattern must have been intelligently created on the level of the material energies. We can understand this only if we allow an intervention of the Demiurgic Intelligences to take place at the stage of the specific construction of self-reproducing molecules. The work must be done at the point where it is required, by the formation of a potential energy field having the complexity necessary to catalyse the formation of the particular molecule.

The two operations are quite distinct. The Plan links the hyparchic to the eternal by the WILL-BEING creative act. The Pattern links the eternal to the temporal by the BEING-FUNCTION creative act. The Demiurgic Intelligences thus become involved in Existence in order to accomplish their task of enablement. The Enabling Act is required to enable the non-living to acquire the organization needed for life.

We shall now attempt to set up a descriptive model to assist in clarifying the stage by which the Transcendental Will brings about the arising of living forms endowed with organized sensitivity. We can distinguish four ascending and four descending stages that meet upon the level of the sensitive energy (E 5) The ascending stages are:

1. Transition from active surfaces to active structures. The constructive energy E 8 is organized by coalescence with the vital energy E 7 that carries the pattern of the organic complex to be constructed.
2. The active structure acquires the power of self-renewal. It is organized by the automatic energy E 6, as an actualized complex.
3. The self-renewing molecular complex acquires form and function by the organizing influence of the sensitive E 5 which carries the pattern of the speck to be actualized.
4. The sensitive energy is organized by the conscious intervention of the Demiurgic Intelligence.

The four descending steps bring about the situation wherein the Demiurgic intelligence can act effectively.

1. The Source of all life is the Creative Operation ordained or decreed upon the level of World VI by the Universal Individuality. This is transferred from the Transcendental Energy (E 1) which is not committed) any form of Existence and the Unitive Energy (E 2) as an Act of Love. This act can be called the 'Evocation of the Possibility of Living Forms'.
 2. The Creative Operation is transformed into the Foreordained
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Plan on the level of World XII by coalescence of the Unitive and Creative Energies. It is wholly virtual: that is an Act of Will.

3. The foreordained Plan is transformed into an Eternal Pattern by coalescence of the Creative (E 3) and the Conscious Energy (E 4). This is the level of Intelligence and at this stage the Demiurgic Powers assume responsibility for the realization of the Plan within the existing world. The Grand Present Moment of earthly history is now set up, but only as a potential pattern. It is not yet in actuality: but it is in direct contact with the earth situation as a creative influence.

4. The creative influence is transformed into an Organizing Pattern. It is now a field of potential energies produced by the coalescence of the consciousness (E 4) and sensitive energies (E 5). Here we meet and combine with the fourth stage of the descending series so that there are seven in all. The level is that of World XLVIII in which there is a distinction of universal and particular determining conditions.*

The operation depends upon the coalescence of consciousness and sensitivity effected by the Demiurgic Will. This operation continues throughout the present moment of earthly history. Our immediate concern is to see how it brought about the formation of living matter at a particular moment of time.

It is pretty certain that the attributes of life entered into actualization by stages and our scheme provides for such a progressive actualization. Even before there was self-renewal, there must have been some kind of sensitivity. Chemical complexes not capable of auto-synthesis could nevertheless be associated with energy in the sensitive (hyparchic) state.** The extremely implausible hypothesis of a direct transition from

inorganic matter to entities capable of self-renewal or even- reproduction can be replaced by a more convincing scheme of organization of inorganic groups through energy in the sensitive state under the influence of an eternal pattern. In the process, the sensitive state of hyle is brought into organization—the 'properties of life' emerge. ***

We can now make an attempt to reconstruct the great event that was

* Cf. Vol. II, pp. 204—206. There is a partition due to the distinction between the descending or universal process and the ascending or particular process. 'We have universal time, and particular time. The first ... by which the cosmic scheme works out its grand pattern. Particular time is a single time of actualization.

** Cf. Vol. I, p. 356-7: 'There is no sensitivity either in the actual or the potential states of matter, but only in the third or reconciling state.' Also, 'since the condition of hyparxis is imposed on all existence, it follows that everything that exists must have its measure of sensitivity, but there is a qualitative difference between sensitivity with and without organization.'

*** The 'sensitivity' of life is a being-property, cf. Vol. I, p. 355. In Vol. II we associated Being with structures of energies cf. Chapter 32.

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the emergence of the first true living form on the earth. The secret must be connected with the unique properties of the element nitrogen that can reverse its role in chemical combination, so that it can be either electro-positive or electro-negative. Nitrogen gas is stable and almost inert in the atmosphere as it is today, and it is only brought into an active state by ionizing radiation. This must have been almost absent during the long second period of preparation; but it is probable that when the ocean was stabilized, the cloud curtain disappeared and a great part of the carbon dioxide was dissolved in the water. It is quite possible that the sea was alkaline due to ammonia in solution and this would enormously increase the amount of carbonic acid it could fix.

The result would be that the veil of the sky was drawn aside and the sun's radiation of all wavelengths poured down. The ionosphere, no longer isolated by water vapour and carbon dioxide, would enter into active electrical exchanges with the lower atmosphere. A scene of unimaginable splendour must have presented itself if only there had been eyes to see it. Those who have witnessed the aurora borealis in its full magnificence can attempt to picture the whole surface of the earth bathed, not only in all the colours of the rainbow, but also in the infra-red and ultra-violet spectrum. Not only the sight but the sound also must have been awe-inspiring, for the discharges of lightning must have been continuous and of an intensity unknown in our time. It was the dawn of the Hypozoic era.

Under such conditions, nitrogen becomes the most active of elements* and can enter into combinations of the most varied kinds with the other elements of life: carbon, oxygen and hydrogen. The organizing potential would tend to select and stabilize those that corresponded to the requirements of life. The 'threshold of self-renewal' would be approached in countless ways.

There then occurred a phenomenon, familiar in nature, of a jump over the threshold. Here probability can rightly be invoked. The jump into self-renewing existence is so unlikely that countless millions of near misses must have been scored until finally living forms appeared.

Here we meet with one of the great perplexities of life when we try to understand it without reference to any plan or purpose. If life had arisen from random, undirected chemical combinations, we should expect to find innumerable living forms unrelated to one another, instead of which, we discover an underlying unity of structure that can be

* We have only to remember that all the high explosives until the advent of the atom bomb, nitro-glycerine, T.N.T. and the rest, are nitrogen compounds and that all life processes turn upon the versatility of this remarkable element.

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accounted for only by a common origin or a common plan. However great may be the differences in form and function between acellular, sub-cellular, unicellular and multi-cellular plants and animals that developed later; we find that they are all maintained and renewed by mechanisms which, though immensely complex, are yet remarkably similar. Chlorophyll is the great agent of energy fixation. Haemoglobin is the great agent of oxygen transfer. One haemoglobin molecule contains more than ten thousand atoms of hydrogen, carbon, nitrogen, oxygen, sulphur and four atoms of iron. A chlorophyll molecule consists of a few hundred atoms centred on magnesium. Yet the active agent in haemoglobin—the substance haemin—and chlorophyll are both intimately connected with porphyrin C which enters into all living tissue. It is impossible to doubt that these immensely complex structures were built up from a common pattern. There are only two ways of accounting for this situation: one is to postulate a common causal origin; the other is to postulate a common purposive pattern.

On the assumption that a self-reproducing form arose fortuitously, only one of the alternatives is possible, and it is the answer that we find in the textbooks of biology. Only one single self-reproducing molecule was produced initially and from this one tiny being—probably a spiral assembly of amino-acids less than a millionth of an inch in diameter—all life has descended.* Truly a miracle if there ever was one! And yet, on the hypothesis of fortuitous synthesis of a self-synthetic protein, no

other answer is possible. The odds against one such synthesis happening fortuitously are so great as to make the hypothesis in any case very dubious. But the odds against two identical or almost identical molecules appearing separately are quite prohibitive. Not a thousand million years, but a million million years and many million planets would be need to give such a coincidence a chance of occurring.

But the hypothesis itself does not ring true. Throughout life as we know it, we observe the tendency to seek safety in numbers. A hundred million spermatozoa to fertilize one ovum is the method on which life relies in nearly all its operations. Why should it have been otherwise at the most crucial moment of all?

Moreover, it is most unlikely that the crucial step—if it was possible—should have been made once only. We all agree that prodigious numbers of combinations must have been thrown up under the conditions described. It is unreasonable to suppose that one, and only one, self-

* None of the recent work on the synthesis of organic molecules, such as those to be found associated with living entities, vitiates this picture. The crucial point is the arising of a self-reproducing molecule—for that is the inception of living processes.

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reproducing molecule was possible. If one, why not a hundred or a million? But each one would have been different—some so completely different as to have led to self-reproducing forms unlike anything we can imagine.

We must therefore explain how a particular kind of chemical structure was produced and continued to be produced in large numbers all over the Earth. For this must have been what actually happened—it is indeed necessary in order to account for the survival of the creatures. There is only one possible explanation: all the forms must have been produced according to a pre-actual pattern.

It is hard to imagine a much more important conclusion than this. If it is correct, then it provides decisive factual evidence in favour of our hypothesis of an organizing potential pattern. This in turn gives our account of the origin of life the phenomenological basis that it has previously lacked.

17.44.8. The Organizing Patterns of Life: Work of Demiurgic Intelligence

We have been concerned, hitherto, to demonstrate the need to postulate an organizing pattern to account for the arising of the immensely complex structures that have the property of auto-synthesis or self-

renewal. We have still to consider what kind of structures were required for life to have developed as it has done. Two main needs must be satisfied. First, there must be bodies to enable the functions of life to operate; and, second, there must be supplies of energy to make the bodies work. The first has been met mainly through nitrogen compounds, particularly proteins; the second by means of carbon compounds, mainly carbohydrates and fats.

It is impossible to doubt that the two problems were found independent solutions, yet solved in combination. It would have been useless to produce a self-renewing organism dependent upon food and not also ensure that food supplies were available.

The solution of the problem of self-renewal was found in amino-acid structures of such complexity that we had to invoke the organizing pattern to account for them. The problem of energy was solved by a very simple reaction—the separation of the hydrogen and oxygen of which water is made and the use of the hydrogen in conjunction with carbon-dioxide to make carbohydrates—that is sugars and starches. The difficulty in this case comes from the fact that a high concentration of energy in the right place and in the right form is needed to bring it about. The only source of energy readily available in sufficient quantity was solar

radiation. Now water can be split into hydrogen and oxygen by very high temperatures, but then the hydrogen will not make a stable compound with carbonic acid gas. A strange, almost unbelievable, way round the difficulty was discovered. An extremely complex and most improbable compound of magnesium with nitrogen and the other elements of life—the chlorophyll that gives leaves their green colour—brings about an intricate dance of the elements in the sunlight and the dance ends with carbohydrates and free oxygen gas. This astonishing process is the support of almost all life on the earth.* Without it, life would disappear within a generation, for the dead bodies of plants and animals would soon be used up and there would be nothing to replace them.

If chlorophyll has always been necessary to support life—and all evidence goes to confirm this—where did the first chlorophyll come from? Chlorophyll is synthesized in the leaves of plants by special proteins and it has to be combined with a protein to give what is known as chloroplastin, without which it is destroyed by light and so is useless for its purpose. It was, therefore, not enough that the chlorophyll-making protein should come accidentally into existence; it also had to be fortunate enough to meet the right kind of protein to preserve it: and the two proteins are completely different. If anyone imagines that the production of chlorophyll was a lucky accident, he cannot have

studied its structure. We have tried, in this exposition, to avoid difficult technicalities that might confuse the non-specialist reader, but the structure of chlorophyll is such an important factor in understanding the origins of life, that we shall show it in the conventional shorthand of the organic chemist.

This remarkable structure, so reminiscent of the tetrad with its four nitrogen atoms each linked with entirely different kinds of groups, can perform operations that surpass all the resources of modern science to emulate. It converts, with high efficiency, the energy of sunlight into chemical energy and constructs the building materials of which all living bodies are made. At the same time it sets free the oxygen so tightly bound up in water and maintains the composition of the atmosphere in exactly the right proportions to sustain life. It works on so prodigious a scale that three hundred thousand million tons of carbon compounds are produced every year. The turnover of carbon dioxide and water is so

* A few bacteria and slimy algae can do without chlorophyll, and substances like carotin can rather ineffectually extract carbon from the air. Cf. Vol. II, Section 12.32.7

for discussion of the role of higher energies in the anabolic transformation of the lower

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great that the oxygen of the atmosphere is renewed by green vegetation about once every century.

No chemist, whatever his genius and his persistence, could have guessed that the structure depicted in Fig. 44.3. could perform such marvels. Even knowing how it is put together, chemists have not yet found out how to make it.

When we remember that chlorophyll alone is helpless to perform its operations—it needs to be combined with a protective protein and supported on a suitable body—the hypothesis of fortuitous arising seems more untenable than ever. We can confidently assert that some organizing influence was at work.

Hitherto we have assumed that an organizing pattern in eternity could be invoked to account for the improbable events that initiated the life story of the earth. But now we seem to stand before a special kind of intelligence. So far from finding any evidences of a supernatural act that sets aside the laws of physics and chemistry, we find an uncanny insight into the almost limitless possibilities they offer for brilliant manipulation of the material forces.

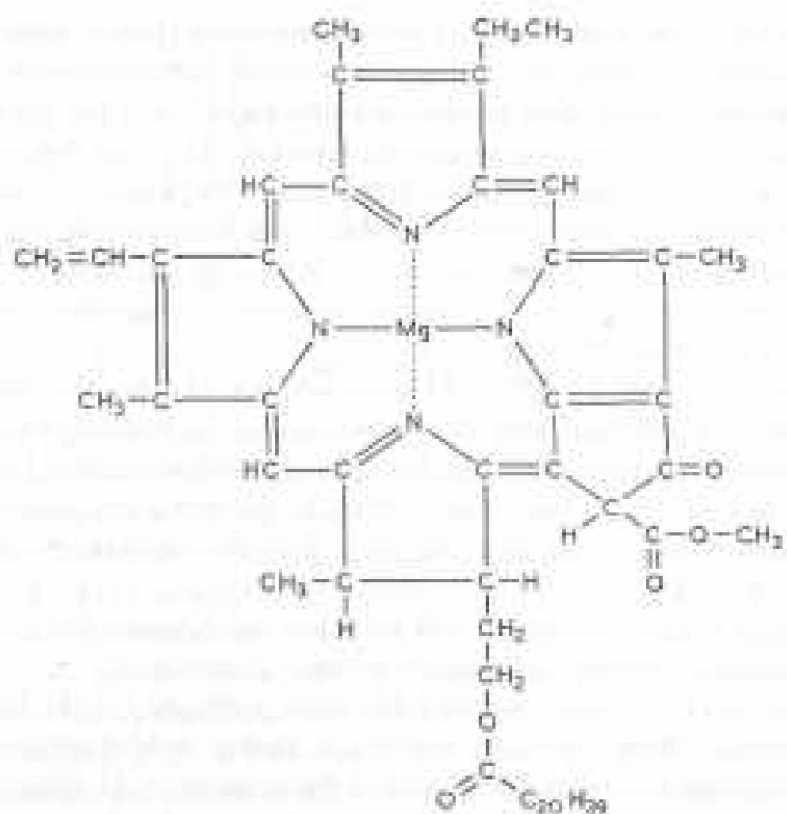


Fig. 44.3. The Structure of Chlorophyll

It seems that we must look for something more than a static pattern merely existing forever in the eternal present of the earth's mind—a more versatile agent is required. We can picture an intelligence of a high order, able to see both what is required, and also the resources inherent in the situation, producing the required pattern of potentialities at the time and place that it is needed* We have already, in Volume II, postulated such intelligences in the Demiurgic Essences.** We put forward the view that 'the Demiurges are the sources of the essence-patterns of the Biosphere.***

What we postulated in Vol. II on a priori grounds (the need for a seventh pentad between man and the Cosmic Individuality) now becomes a necessary principle of explanation of the very practical question, how the two life processes were initiated: protein auto-synthesis and carbohydrate photo-synthesis. We shall put the explanatory principle into explicit form:

Demiurgic Powers associated with the earth were responsible for producing the potential patterns upon which life was constructed.

Here we can recall the conscious direction postulated at the beginning of this chapter. Such direction requires a deep insight into the properties of earth existence combined with a freedom from its limitations.*

It will be remembered in connection with human experience, that we have postulated a Higher Wisdom.**** We may economise in concepts by uniting the notions of Higher Wisdom, the consciousness of the earth, the Demiurgic Intelligences and the production of organizing patterns into a single hypothesis which is that of the participation of Demiurgic Powers in the initiation of the processes of life.

17.44.9. Vegetation and the Cell: Transition to the Proterozoic

Before life could develop its full powers and functions, a further stage of preparation was needed. Independent locomotion and the power to change the environment are conditions for the exercise of the Will in

* Cf. 16.42.9, p. 62. This can be seen as a 'reconciliation of causes and purposes' within the present moment.

** Vol. II, Chapter 35, Section 13 .35 .13 : 'The Demiurges are the essences that bear the responsibility for regulating the operation of universal laws' (p. 315). Again, 'evolution would stop if there were no agencies to provide for the conscious renewal of the process wherever and whenever it is threatened', *ibid.*

*** *Ibid.* p. 315.

**** Cf. Chapters 42 and 43 where we have described a mode of existence in which will combined with intelligence could operate in the hyparchic future, yet intervene in the present moment.

***** Especially in Chapter 41, Section 15.41.3.5.

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the existing world. Before they can come, there must be means of storing, releasing and using the appropriate energy (directed energy E 11). This calls for engines and sources of energy that the engine can carry about with it. These requirements are so well catered for in all vertebrate and most invertebrate animals, that we take them for granted. We shall not go through the same detailed analysis as we have just devoted to chlorophyll and photosynthesis; but here again we have the evidence of pattern.

Before life appeared there was no combustible material and probably very little oxygen. Under the intense electrical conditions described

earlier, all metals and other elements that could form stable oxides would have done so. Hydrogen would be in the form of water and most carbon exist as carbon dioxide. We have just seen how the means of extracting hydrogen and oxygen from water was provided, but not the material support required to enable chlorophyll to do its work. We know now—in retrospect—that this was supplied by vegetation. From the study of calcium carbonate formations of the hypozoic period and other evidences, palaeobotanists have become convinced that a primitive form of vegetable life existed in the oceans, and perhaps on land also, which was the only form of life for many hundreds of millions of years.

There are indirect evidences of life in rocks about two thousand million years old—from the beginning of the Hypozoic Era. Carbon has been found in forms that indicate an organic origin. Primitive limestones have been found in many parts of the world that are at least as old. Plant bodies in which the carbon has been replaced by silicon have even been found—with traces of proteins—in rocks that are two thousand five hundred million years old. The archaean algae, *corycium enigmaticum*, and the cryptozoon (probably wrongly believed at first to be an animal) belong to a time some 1,400,000,000 years before the present.

The development of this life depended upon another decisive step, no less extraordinary than those that went before: the appearance of the first living cell. The simplest cell contains a hundred thousand million atoms of hydrogen, carbon, nitrogen, oxygen and special elements like iron, magnesium and sulphur, and these are built into the most complex interacting structures. We begin to realize that we cannot lightly say, 'a living cell came into existence'.

Cells, as we saw in Volume I,* are a very remarkable stage in the ascent of the scale of existence. They stand at the threshold of independent existence in virtue of the property, not possessed by any lower

* Vol. I, Chapter 20, Section 8.20.3. Cells are there defined as sexipotent entities capable of reproducing an existence similar to their own.

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form, of 'having a well defined distinction of an inside and an outside'. Electron microscope studies have shown how the inside and outside of a cell is subtly divided by a complex and dynamic boundary. It establishes sharp potential gradients, while allowing a very free exchange of substances. For this reason alone, it is exceedingly difficult to see how a cell could have come into existence by degrees or by accident. The point is as important as any of those that have gone before, because the first cell was the ancestor of all living things.

We are not suggesting that the first cell was made in the way that a team of bio-chemists might attempt to make one.* We are committed to the rule that everything that happens in nature obeys the laws of nature. This means that innovations—unexpectednesses—cannot arise from pre-existing causes. But we reject any kind of anti-natural intervention. So once again we are left with the organizing influence of potential patterns under the guidance of the Demiurgic Wisdom. This suggestion is particularly applicable to the problem of the first cell; because it is generally agreed that something like an organizing potential must operate in cell-division and reproduction.

It appears to us that the real problem in accounting for the appearance of cells is two-fold. First, there is Virchow's dictum—*omnis cellula e cellula*—to the effect that we have never found cells to arise from non-cellular material. Second, there is the property of 'within-ness'. How could a 'droplet of protoplasm' create a potential energy barrier that acts selectively on the passage of chemical substances, rejecting some and accepting others? The simplest explanation seems to be that of a Demiurgic Intelligence making use of properties of protein-carbohydrate complexes that biology and biochemistry have not yet discovered.

The next step is to suppose that a living cell was not only provided with means of nutrition and reproduction, but also with a nucleic acid derivative that could synthesize chlorophyll and combine it with the protective protein to make chloroplastin. We then have the first plant. It was, no doubt, a primitive form of algae and it was almost certainly produced in the shallow water near the shore of the *primaeval* ocean.

The algae that are familiar to us are the seaweeds and lichens. More than 18,000 species of algae have been identified. They are probably more varied and fantastic in appearance than any other form of life. It inspires awe to look at the fronds of seaweed still clinging to the rocks

* Cf. Fox, *A Theory of Macromolecular and Cellular Origins*, *Nature*, Vol. 205, for an account of 'evolutionary experimentation'.

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of every shore in every climate and reflect that what we see has descended directly from ancestors that lived two thousand million years ago.

Throughout these long ages, algae have been the principal hosts of chlorophyll and produce hundreds of thousands of millions of tons of vegetable matter every year and release proportional amounts of oxygen into the atmosphere.*

We can picture the first algae appearing as a blue-green patch that survived the hazards of its birth. The patch would gradually spread and diversify. At first it would draw from an atmosphere poor in oxygen and rich in carbon dioxide and possibly hydrocarbon gases like methane that have since disappeared. In the course of time—millions of years—the patch would have grown to spread all over the earth, invading the deep ocean and the dry land where it would find the beginnings of soil in clays and schists. All the time it would be drawing in carbon and releasing oxygen until it had changed the face of the earth. The air would have acquired more or less its present proportion of oxygen, nitrogen and carbon dioxide. Methane, ammonia and other combustible gases would have been burned away in flashes of electric discharges as soon as the oxygen concentration increased beyond three or four per cent. Also, during this time the primitive soil, consisting of clays and granitic detritus, would begin to collect humus from the dead algae. To this day, algae penetrate where no other life can go—to high snow mountains, to the arctic regions and to bare exposed rocks and desert sands.

Thus the humble algae conquered the earth and transformed its surface and atmosphere, accomplishing in two or three hundred million years the most prodigious tasks—unconsciously, and with the rudimentary sensitivity that is confined to the single cell. The years passed, millions upon millions. New kinds of rocks were formed by the concentration of calcium and magnesium carbonates. The floor of the ocean stored up the never-ending rain of algal remains that floated down through the waters, and so prepared for the future sedimentary rocks with which we are familiar. The ocean bed rose and fell. The great central continent began to split up and its fragments migrated south and

* It has been seriously suggested that if the human population of the world continues to grow at its present rate, we shall be reduced to feeding upon algae as the most prolific and efficient source of edible matter to be found on the earth. It may be also that when coal and petroleum and even fissionable material to produce atomic energy are all exhausted, algae will enable us to exist indefinitely upon solar energy and we shall then kill off all other kinds of animals and plants to make room for ourselves and our food supply. To complete the fantasy we may imagine that mankind will become exhausted and indifferent to life and allow the algae to spread and spread over the earth until it reverts to the condition of a thousand million years ago, and everything starts all over again.

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west. The great magnetic currents under the outer shell twisted and turned the surface about the earth's axis bringing the poles now over land now over ocean, and the climate changed from torrid to glacial and

back again. Still the algae continued their indomitable work, perhaps rejoicing unconsciously in the new fantastic forms and conditions of life that they were creating about them.

At first, all reproduction was asexual. The blue-green algae (the cyanophyceae) which were, perhaps, the earliest living complexes, were and are clusters of cells of the simplest kind. They contain protoplasm and a small sac which shelters the precious chloroplastin. Under a microscope, they look like formless masses of jelly. Taking in simple substances from the surrounding medium and making their own carbohydrates by photosynthesis, the cells grow until the cell wall is stretched. It then pinches in two and produces a pair of new cells wholly independent of one another, but made from the same mass of protoplasm. Their cells renew themselves endlessly and they have no birth and death as we know it.*

The protoplasm of the algae has been in continuous existence by self-renewal for about two thousand million years; and, having won its private war with Time, will no doubt continue—perhaps even after all other forms of life, including man, have disappeared. The algae came into existence endowed with their own kind of immortality and it is there for us to witness today.

It was a static immortality that could not manifest the higher powers of life. Unconscious, insensitive and scarcely even automatic—the algae lived on and on performing a prodigious service for all the forms of life that appeared later, and which were to overtake and pass them.

17.44.10.

Sexual Reproduction and the Germ:

Proterozoic Stage

The seeming stability of algaic life was to be shattered by one of the great unexpectednesses of history: the arising of sexual reproduction. By this stroke, the mechanism of evolution was provided and an entirely new situation was created. New species could arise through the redistribution of hereditary characters, and all the varieties of living things could develop without disturbance of the order of nature. An even more significant transformation was concealed in the apparently trivial transition from reproduction by mitosis to reproduction by

* Cf. Vol. I, pp. 377-9. The section on the sexipotent cell entity is relevant here, e.g.: 'It is very necessary to bear in mind the relativity that attaches to being-words such as birth and death ' (p. 378).

meiosis. By this simple means, the possibility arose that living forms at some future time would become responsible for their own progress.

The separation of sexes in plants and animals took place a thousand million years ago at least and possibly a few hundred million years earlier. The great event has left no trace to tell us when or how it occurred. The step from the blue-green algae to the green species involved a most complicated reorganization of the cell structure. The blue-green algae have an almost structureless cell adapted for the one function of capturing sunlight and making food. The green algae cells have a nucleus with the marvellous reproductive system of chromosomes and genes that has continued to serve its purpose for a thousand million years and is much the same in the humble seaweed as it is in man.*

To judge by the still living species of algae, there were probably various false starts. In some cases, a number of cells join together to invigorate the stock. In others, buds and sex organs are almost indistinguishable. Nevertheless, the step, when made, was decisive and has determined the whole course of subsequent history. How are we to account for it?

Since natural selection depends upon the variability that only sex will allow, it cannot be invoked here. Natural selection came from sex, and not sex from natural selection. Apart from the difficulty of proposing a causal mechanism, such as variation and natural selection, the extraordinary and complex structure of the reproductive cell can scarcely have arisen by chance. The recent discovery of the role of deoxyribonucleic acids and their derivatives has helped us to see how the hereditary mechanism works, but it makes its arising more baffling than ever. These protein complexes are of unimaginable ingenuity—evidences of a master-craftsman indeed. Such an idea appears to be either fantasy or a figure of speech as applied to a world peopled only by seaweed. For this reason, no doubt, it is rejected in favour of the almost impossible act of faith that asserts that genes, chromosomes, cell nuclei and all the mechanism of self-reproduction arose by chance.**

* One difference is in the relative size of the gametes, which in the algae are almost identical, whereas in man the ovum is thirty-five thousand times greater in volume than the spermatozoon. The inner structure is also more complex in the higher animals, but the similarities far outweigh the differences. Sex always exemplifies the same basic pattern.

** This may read like special pleading. Most biologists would say that some kind of organizing principle was at work but deny that there was intelligence or consciousness.

This is dishonest reasoning. No 'organizing principle' could have done what was required unless it has the very supernatural attributes that the mechanistic biologist rejects. There is really no middle way between admitting a conscious intelligence and

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Our solution follows the same lines as before. The mechanism of sex was fashioned by the Demiurgic Intelligences through the arising of organizing patterns in the 'present moment' of the blue-green algae. But this is not a complete solution, because with sex, a self-creative power entered into life. With sex also came death, for with sexual reproduction the parents' substance is not simply transmitted, but transformed into the body of a new entity. Birth, sex and death came into existence together.

These are cosmic realities of too high a rank to be created by the Demiurgic Intelligence alone. There must have been a higher mandate that preordained birth, sex and death, so that life might become conscious and that beings might arise in whom an independent will could be established. How high a rank, and how far up the scale of Being we must go to find the origins of these three elements we cannot say—but we must certainly go at least as far as the Creative Will of the Sun.

We ascribed the Creative Act by which life on earth was preordained to the union of the Affirmative Will of the Sun with the Receptive Will of the Earth. This union is the archetype of every act of sexual union that takes place on the earth. As innumerable myths confirm, men have, from before the dawn of history, been aware of this union and its significance. In one form, it enters into all fertility cults and worship of the Earth Mother. In another it is at the centre of all sun worship and all identification of the sun with the Creator God.* Myths contain a perennial truth that each age must express again in its own language. The dominant language of our day is that of natural science and any truth that is not expressed in scientific language is likely to be ignored or rejected. Fortunately, in recent years, the language of science has thrown off some of the narrow and rigid concepts of the nineteenth century.** The principal changes that we ourselves have introduced concern the determining conditions and the relativity of Being. In developing our account of the origins of life, we have not gone beyond the limitations of our own language.

We shall say, then, that birth, sex and death entered the pattern of life on earth with the translation of the plan, decreed by the will of the sun in the hyparchic future via the pre-existent hyle field, into the eternal present of the earth. The three characteristics could not be realized

* Cf. Jaquetta Hawkes, *Man and the Sun*, London, 1964, where the creative role of the sun is shown to have occupied men's minds at all ages and in all cultures.

** Our debt is mainly to physical scientists like Einstein and Planck, whose relativity and quantum theories have imposed changes not only of language but of logic, and to psychologists like Freud and Jung who have shown that myths express realities that science has to rediscover and restate.

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until life was ready for them. Life had to learn to live before it could learn to be born and die. These are technical or functional developments. Once life was well established—and the blue-green algae had peopled the earth, and filled the air with oxygen and the soil with humus—the next step was a technical innovation which established the sexual function. We shall find the same combination of Will-plan, Being-pattern and Function-technique at every stage.

Sex appeared probably more than a thousand million years ago—more or less simultaneously in the protozoa (unicellular animals) and the protophyta (algae). What really appeared was the germinal essence that is common to all forms of life reproducing sexually. We should add a fourth character to the three cited and that is the power of locomotion that is naturally associated with sex since the two gametes have to move towards one another in order to mate.

The first abundant and clear traces left by plants and animals belonging to the essence class of the germs were left in rocks of the Cambrian period that began about five hundred million years ago. By that time, differentiation had made great progress. Until more delicate methods of detecting early forms of life in the pre-Cambrian rocks are discovered, we shall remain with a 'dark age' of more than five hundred million years during which animals and plants learned how to be born, to mate and to die.

We need not go into detail in explaining the well-known mechanism of meiosis whereby the two parents contribute equally to the new eternal pattern. There is no reason to doubt that the mechanism of genetic variation and natural selection came into operation during these long ages and that it singled out the most successful animals and plants for survival. What is more doubtful, is whether it had much to do with progress. No form of life has survived so long as the blue-green algae. In their own way, they are wholly successful. Why should they have been superseded by sea-breeding plants, and why should animals have appeared? Diversification in itself is not progress. We all agree that mammals are the most 'advanced' animals and that vertebrates are more advanced than invertebrates. And yet there is incomparably greater variety and viability in the invertebrate phyla than in any other form of life.

The truth seems to be that natural selection weeds out the functionally unfit, but it does not do more than this. Progress must be due to some quite different factor, which will admit transformation of Being and reconstitution of Will.

It is very likely that the earth underwent terrible convulsions at the

end of the pre-Cambrian period, the rocks of which lie quite differently from the older rocks beneath. This is no doubt one reason why we have almost no traces of the animals and plants of the Proterozoic stage. Another is that they all had soft bodies which would be preserved only if they happened to be fossilized.

By the time traces began to be left—which brings us into the Palaeozoic Stage—all the great divisions of the invertebrates were represented. The most important in number, variety and effectiveness are the Arthropoda, whose bodies are constructed in segments which can form appendages serving as jaws, antennae, legs and claws. They have simple nervous and respiratory systems and can adapt to the most varied conditions of marine and land life. They can swim, crawl, fly, burrow. They live sometimes singly and sometimes in huge colonies, such as the ants and termites. If any form of life is 'fit to survive' this can be said of the Arthropods; and, indeed, they have survived and continue to be by far the most numerous kind of animals, and the most varied. In spite of their relatively small size, the combined mass of all the Arthropods outweighs all other animals from the elephant to the worm. Why should the supposedly purposeless and undirected working of natural selection have produced other and less robust forms of life?

As we look at the situation, we should say that the role of the germinal essences was to develop the functions of life and to leave being alone. This task was successfully performed. The functions of the germs taken in their totality are more varied than anything that went before or followed after. But they have not even the beginning of a mind—because they have no organized sensitivity. They are born and they die, countless millions every minute. The economy of the biosphere depends upon their activity. They have the most varied powers of locomotion and astonishing skills as weavers, builders and chemists. They can even communicate effectively as has been demonstrated in the colonizing insects. Their sexual instincts are as powerful as in any form of life and they use magnificent devices to bring the sexes together as we see in the beauty of butterflies and dragonflies.

Yet, in all this, there is no organized sensitivity (E 5). All that is organized is the automatic energy (E 6) and we know from the observation of our own behaviour and experience that the most intricate and

skilled actions, including effectual communication, can be obtained with automatism alone. This does not mean that sensitivity is absent—all life is sensitive—but that it is not organized, so that there can be no 'experience' as we know it. There is no 'mass of sensitivity'—or sensorium—on which experience could be registered.

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The picture we form of the germinal world is that of life without a mind. But it is also life in search of a soul* and this search is to be attributed to the separation of the sexes. The creative powers entered into living forms and they were bound to go towards its Source. This is the true explanation of progress. The Plan is at work and its Demi-urgic Agents are preparing the next step.

17.44.11. The Organization of Sensitivity: Palaeozoic Stage

Hitherto, our time scale has been measured in hundreds of millions of years and the traces these ages have left us are so meagre that we can reconstruct them only by conjecture. Soon after the end of the Proterozoic Era, with the Cambrian Epoch which began about 600,000,000 years ago, there are abundant traces of plant and animal life. It is so abundant and so diversified, that it is evident that we are meeting life with a long and successful history.**

The predominant germinal forms in the Cambrian rocks—the Trilobites—were very akin to the Crustacea, which had quite an elaborate body-structure. Their eyes had many thousands of separate lenses and their bodies were furnished with numerous appendages for free-swimming and for grasping and eating the algae that abounded. In this early period, there were already highly developed arthropods and we might have expected this phylum to be the leaders of life into its new phase. Instead of this, in the succeeding Ordovician and Silurian strata, the prevalent fossils are of a more primitive kind: invertebrates with almost no functions but eating and reproduction such as the Graptolites (which were once thought to be a sub-class of the Coelenterata). The Graptolites, though mere jelly-fish in body, had elaborate skeletons of which millions have been preserved by transfusion with iron sulphide. Life was preparing for the organization of sensitivity and for this a new kind of body was required. The Graptolites were in themselves a dead end and their present-day descendants are the most insignificant and helpless of creatures: but they had a true skeleton and we may conjecture that they were an experiment made to enable new kinds of tissue to be developed.

To interpret the next event that occurred about five hundred million years ago, we must endeavour to visualize the Plan of the Creation of life.

* Cf. Chapter 39, Section 15.39.6.4. The germinal essence is the source of the human ipseity.

** Cf. Lake and Rantell, *Geology*, 3rd edn., p. 310: 'The most remarkable feature of the Cambrian fauna was its complexity. Though the earliest known to science, it was by no means primitive in its constitution.'

We see it emerging from the hyparchic future to evoke the pattern of life. We see it in the mind of the earth itself as an infinitely complex pattern. And we see it in space and time as the actualization of the work of evolution. The Plan is that the earth should develop its own soul through the soul-stuff of mankind. This plan requires and will require, more and more, living beings capable of attaining Individual Souls. The Pattern of development is an organizing field of potential energies which is, step by step, realizing itself in the 'present moment' of time. One of the great steps was the organization of sensitivity in order to prepare the way for the arising of minds. This step belongs to the Palaeozoic Stage.

The animal essence has not the kind of mind that man has acquired, nor can it acquire such a mind. But it has one of the principal ingredients of the mind, in the form of organized sensitivity. This comes with the coordination of perception and action through a mechanism that allows for selective response. In fully developed animals, this is achieved through the nervous system and the brain. The nerve ganglia, as we know well from our experience, are points of concentration of sensitive energy (E 5). Without them the organization of sensitivity would not have been possible.

The step made is recognized by zoologists as the appearance of the Phylum of the Chordata, of which the sub-phylum of Vertebrata is by far the most important. Even the most primitive chordata had a central nerve cord, that distinguished them from all other forms of life. It ran dorsally and was hollow, containing spinal fluid. No traces have been left of the earliest chordata: the earliest specimens found in the Silurian rocks—the marsipobranchi—were already quite specialized. Among the millions of fossils found in the Cambrian rocks there are no chordata, and so we cannot identify even the class of invertebrates from which they developed.

As has happened in every case, we are before an 'unexpectedness'. We may conjecture that the Demiurgic Intelligences were able, at every stage, to make fuller use of the already actualized situation. The first chordata were small fish-like creatures whose nearest surviving descendants are the lampreys. From these, two main great branches separated: one produced the true fishes and the other all kinds of land

animals. It seems clear, however, that some kind of organized sensitivity appeared as soon as the nerve cord was developed. Almost at once the chordata developed an interior skeleton including a skull.

The interior skeleton has a great advantage over the segmented body of the arthropods because it supports the soft parts of the body during

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growth. This not only allows the vertebrates to attain much larger sizes, but also gives time for the development of the power to coordinate the functions. The third great advantage enjoyed by the chordata was the acquisition of independent blood vessels and a heart to circulate the blood.* Thus, from the start, the chordata were endowed with the three elements: interior skeleton, nervous system, and circulation of the blood, that eventually were to enable man to develop his three 'brains'.**

It seems hard to escape the conclusion that the organization of sensitivity, as it later developed, was foreseen from that moment, 500,000,000 years ago, when a new kind of creature began to swim in the Cambrian seas. We cannot help being struck by the radical nature of the change that marked the new step forward and by the absence of any trace of the parental forms. And yet it is as certain as anything can be of which we have no direct evidence, that the chordata came from some branch of invertebrates. Here, once again, the hypothesis of an organizing pattern and of guidance by higher intelligences seems the most reasonable explanation. These intelligences would certainly have selected the form most capable of undergoing the necessary mutations and the right moment when environmental conditions were favourable for the change. It is the intelligent use of the natural situation that distinguishes our theory of evolution from both supernatural interventionism that sets aside the laws of nature and the mechanism of blind causal laws. This point is particularly well illustrated in the emergence and development of the chordata.

As soon as vertebrate animals appeared, life began to take a hand in its own evolution. The possibility of selective response given by the cord meant that there could be adaptation to environmental change, and the diversity of forms possible in the chordate phylum opened the way to natural selection and survival of the fittest in the Darwinian sense. This could not have happened before the notochord evolved: to suggest otherwise is to put the cart before the horse.

Good evidence of this is provided by the appearance of the Amphibia, the first of the chordates to succeed in living at least part of their lives out of water. They came during the Devonian period whose old red sandstone gives evidence of a time when living conditions on the earth were dry and difficult. The retreat of the oceans from many areas was

an environmental factor conducive to the survival of forms of life capable of adapting themselves to the new conditions. On the whole,

* This also involved the development of haemoglobin — dispersed in other forms of life. Metabolism became far more efficient and integrated.

** Cf. The brief description given in Chapter 39, Section 15.39.4.2.

the period is poor in fossil remains. Some of the older groups such as the trilobites became rarer and less diversified. The soil was enriched by the exposure of the ocean beds with age-old deposits of limestone and clay. Vegetation advanced to new forms, including an immense variety of ferns and primitive trees, some of which—the eospermatopteris—grew to a height of a hundred feet with slender stems crowned by a great head of branches and slender leaves. The Devonian period lasted for fifty or sixty million years and by the time it ended animals with true sensitivity were well established in most parts of the world.

The heroes of the time were the amphibia: true vertebrate animals with a three-chambered heart, well-coordinated functions and considerable ability to adapt to changing environmental conditions. Some, such as the frogs, that survive to this day, exemplify to a deceptive extent the outward form of a warm-blooded animal. Their importance for our theme derives from the well-coordinated development of sight, hearing and smell with locomotion and other uses of the four limbs. With this coordination, the amphibia are capable of independent behaviour that breaks away, if only to a very small extent, from simple automatism.

Although the amphibia differ both anatomically and physiologically from their predecessors, their true significance should be called psychological—that is, a matter of sensitivity. The frog is a very different kind of creature from, say, the spider or the crab. If we intently observe the behaviour of these three—a chordate, an arachnid and a crustacean—we cannot doubt that the first has some degree of organized sensitivity (including perceptiveness and selective response) that the other two lack. We are not surprised, therefore, to learn from the palaeontologists that the earliest amphibia—the Embolomeri—had twelve cranial nerves and that its skull enclosed an authentic brain.

The Devonian period was succeeded by the moist warm climates, in most parts of the world, of the Carboniferous period, when the oceans again advanced and vegetation made one of its spectacular steps forward to produce the great swamp forests from which our coal measures were formed. The vegetation at this time, produced concentrations of deposits—sometimes of enormous extent—of metallic oxides and sulphides. These were very probably concentrated by the selective action

of the sap and root cells of carboniferous vegetation.* The material resources upon which modern industry is based owe much to the remote carboniferous age—300,000,000 years before the present.

Whereas the hard conditions of the Devonian period called forth the

* V. M. Goldschmidt, Lecture to Research Staff of B.C.U.R.A., 1943, Coombe Springs.

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power of adaptation latent in the vertebrate pattern of life, it was the luxuriance of the Carboniferous that permitted the early animals slowly to develop their varied powers and functions. The Reptilia developed—probably from ancestral stock among the labyrinthodont amphibia soon to become extinct. The seed ferns were the dominant form of vegetation and they also were to disappear from the scene.

These abrupt endings of many promising lines coincided with the Permian epoch that brought to an end the Palaeozoic Era—that, as we have seen, was not by any means the start of life. The major achievement of the Palaeozoic Era was the establishment of the chordata and the beginning of organized sensitivity. The Era lasted almost 370,000,000 years and ended when profound changes occurred in the state of the earth's surface and climate.

17.44.12. The Organization of the Earthly Symbiosis: Mesozoic Stage

The earth is not, on our hypothesis, indifferent to the life it bears, and its material structure has been an important element in the history of life. It undergoes profound transformations; most of them deep in the interior, but some affecting the outer surface. According to views now generally accepted, the solid shell floats upon a fluid middle region that in turn surrounds a quasi-rigid inner core. The fluid region is in constant motion. Enormous energies, mostly from radioactive decay, are absorbed in this motion; at times, the energy is imparted to the outer shell so that it begins to rotate. The result is to move the north and south poles to new positions. When the poles are over the oceans, the winter cold is dissipated by ocean currents and the world climate is generally equable. When the poles are over continental regions (as they are effectively at the present time) polar ice-caps are formed and there are marked contrasts between the seasons in all but tropical zones.

From the palaeomagnetic evidence, it seems that during the great wanderings of the poles between 500 and 250 million years before the present, there existed two great land masses. During the 30,000,000 years of the Permian these began breaking up to form the continents, and drift into their present positions.*

* It has been suggested that these land masses —'Gondwanaland', including Africa and South America, and 'Laurasia', including Europe, most of Asia, and North America—were, some 450 million years before the present, part of one great land-region called 'Pangaea'. According to one hypothesis, the Earth was originally about one eighth of its present volume. During expansion, the primal crust became part of the first land mass. Measurements do indicate that, during the Permian, the earth's radius was less than it is today.

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The poles eventually wandered into positions in the North Pacific and the South Atlantic oceans.

During the Carboniferous age, the continental areas were low and widely flooded by shallow seas. During the Permian, great mountain ranges were forced to heights greater than the present Himalayas. There were harsh climatic conditions with deserts in some regions and glaciers in others. These conditions resulted in a tremendous destruction of life. Not only did innumerable species and genera disappear, but even major orders among plants and animals, such as the seed-bearing mosses and the placoderm fishes. The trilobites disappeared forever with many another form of life prominent in the early seas.

The Mesozoic Stage which followed, lasted for 170,000,000 years, ending some 60,000,000 years ago. It was one of the glorious periods in the history of life on the earth. The climate recovered slowly. The great mountains subsided or were eroded and once again a regime of mild climates without winters, and land areas mainly flat and marshy was established.

Roughly half of the period, corresponding to the geological Triassic and Jurassic periods, was occupied in laying the foundations of the great step forward that was to be made. If we accept the notion that the pattern of life has been present throughout history in the mind of the earth, we can imagine that the earth created the exactly appropriate conditions for the next stage in the organization of sensitivity.

The Cretaceous Period—especially the last twenty million years—was one of the most favourable climatically that the earth has known. The impression we gain in contemplating the traces it has left is, above all, one of harmonious and coordinated development. A brief survey will illustrate the point.

At the end of the Jurassic, relatively mild orogenic activity had raised mountains like the Alps and Himalayas and drained some of the swamps. After conditions had settled down there was a long period of exception-

ally mild climates. During this time the insects reached their maximum development and at the same time the flowering plants—the angiosperms—became the dominant vegetable life of the land areas. The dinosaurs and other reptiles dominated the animal scene, but also were evolving the first flying reptiles and then true birds. Most important of all, the first warm-blooded animals were beginning to flourish and diversify, producing both the marsupials and the mammals.

It is obvious that insects and flowering plants are closely linked; but mammals, also, found their most appropriate foods among the angiosperms—grasses and leaf-plants. The question we have to ask and try

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to answer is whether these developments are best interpreted in terms of blind natural selection or guided natural selection. We should re-examine this question here, although for earlier periods when life first appeared—and was followed by birth, sex and death—it seemed clear that no blind mechanism could account for what happened. The arising of insects, flowering plants and mammals and their subsequent development is generally regarded as providing the most conclusive evidence for the adequacy of the theory of natural selection—in the Neo-Darwinian form which combines it with variation and mutation.

Let us consider then the usual argument. The theory of random variability by gene mutations with natural selection by the environmental conditions is the most widely held by mechanistic biologists. According to this theory there is no 'direction' in evolution except that induced by selection pressure. Breeding, or the crossing of hereditary characters also acts at random, but can produce systematic changes. It can easily be shown that this mechanism, given sufficient frequency of mutations, can produce new species and that a new species may be stable—i.e. able to resist the effect of disruptive mutations.

What the theory fails to explain is progress as a concept intelligible in itself. This is frankly recognized by its leading proponents such as Julian Huxley and Dobzhansky.* To meet this difficulty, both biologists and philosophers have evoked some kind of notions of inherent direction as in Naegeli's Orthogenesis and Osborn's Aristogenesis. These are doubly unsatisfying for they neither explain themselves nor the tendency of life to diversify in zig-zag manner rather than move in straight lines. The completely mechanistic explanation has the merit of avoiding unexplained and mysterious 'trends' and 'forces' but it makes nonsense of progress.**

The difficulty of explaining progress is not the only objection. Another equally important one is ecological—that is, the evidence of coordination and harmony in the development of the Biosphere as a whole. There is not the slightest reason why this should come about by minimal chance mutations of genes in individual animals. Mutations take

time to give results. R. A. Fisher has calculated that a favourable mutation giving a one per cent advantage to the mutant and occurring with the usual frequency of one in 100,000 fertilizations, may be

* Cf. J. S. Huxley, *Evolution, the Modern Synthesis*, London, 1942, and T. Dobzhansky, *Genetics and the Origin of Species*, New York, 1951.

** A recent article by a biologist (Prof. H. Sandan, *New Scientist*, Vol. 29, No. 489) makes this quite explicit. 'The route is, in reality, more like the drunkard's walk—a series of random steps, each one of which makes the chances of reaching any particular goal more remote.'

expected to establish a new species of animal in half a million to a million years.*

The observed changes over fifty million years, in many genera well represented by fossils could be interpreted in terms of this mechanism; but it does not account for the coordination of development as between, let us say, flowering plants and insects. There are many extraordinary features of this coordination, such as the complex interlocking life cycles where the larval stage of an insect must exactly correspond to the flowering cycle of a plant, or the extremely varied forms of protective mimicry and coloration. For such developments to have come by independent lines of random gene mutation would scarcely be possible in ten thousand million years. There are well-established lines of development such as the step-by-step transformation of the Ammonite *Lyperoceras* to the *Pleuroceras*. But this does not involve coordination with any other line. The same is true of the oft-cited family tree of the horse from *Protohippus* to *Equus*. But it is not at all certain that these examples require mutations. They might have been achieved by selective breeding, ** based on the variability of the genetic constitution that goes beyond what is actually ever observed.

The observed fact of evolution is accepted by all. The great part played in it by genetic mutation and the selective influence of the environment both living and non-living is also unquestioned. That this eliminates weak strains and even species ill-adapted to the environment or to a change in environment is also common ground. We should also agree with the strict mechanists in rejecting vaguely defined agents such as the 'elan vital', or 'trends' such as orthogenesis. We do, however, affirm that no mechanism without intelligence will account for the facts in their totality. The mistake consists in arguing from a particular instance of adaptation to a general principle of blind, undirected evolution.

We have said that this principle cannot be made to account satisfactorily for progress. Nor will it account for coordinated development. Both of these required a directive intelligence, if the results observed were to be obtained within the time available and within the conditions that existed.

Now let us look at the situation from the other viewpoint; that which

* With plants and insects the time is much shorter. The ecological harmony of the Biosphere introduces another order of improbability for a 'chance' evolution.

** Darwin based the main conclusions of the Origin of Species on the observed parallelism of selection by man in breeding plants and animals and selection by survival of the fittest in nature.

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sees the earth itself as the bearer of the pattern of the life that is developing, and the Demiurgic Intelligences as guiding the process within the limitations of the laws governing the transformations of energy.

We place ourselves in our imagination on the earth exactly one hundred million years ago. We see about us endless vistas of marsh and upland covered with vegetation, flowering tree, shrubs, grasses, and marsh plants. The air teems with insects: far more and in far greater variety than we have ever seen in our day. There is a feast of colours and fantastic shapes. In the swamps the dinosaurs are still dominant and in air flying reptiles and some birds—though mostly still with teeth. If we know where to look we shall see small mammals and marsupials enjoying the damp warmth of a perpetual summer.

There is an immense harmony of life here on land and also in the ocean. The zooplankton teems as never before or since, producing countless millions of tons of skeletons that are later to make the chalks and limestones from which the period has gained its name Cretaceous. In the sea, there are all the main families of fishes also brilliant in colour and fantastic shapes.

All is beauty and fantasy, and there is no one to see it but we imaginary visitors from a distant future. But let us endow ourselves with eyes that can penetrate into the unseen levels of eternity, and an intelligence that can know what is hidden in the hyparchic future. We find other onlookers besides ourselves: Demiurgic Intelligences whose bodies are made of consciousness and are therefore invisible to the eye of man. These Intelligences are not only watching, but working. They are supremely skilled in what we call today genetics and ecology. They

know how to produce potential energy fields that will bring about the mutations required for the pattern of life they are engaged in realizing. But they are also saturated with the love of beauty. Some of them have also a lively sense of humour that expresses itself in form and colours that have no 'survival value', yet contribute a most needed element to the aura of sensitivity in which the earth is bathed.

They are no blind, nameless hands drawing random genes out of the nuclei of tiny cells. They are Mighty Intelligences that can survey the whole world scene. They weigh the atmosphere and see that the concentration of carbon dioxide and water vapour, and of other special constituents still unknown to science, must be changed to meet the needs of the new forms of life. The foraminifera in the ocean are set to accomplish the task by the simple miracle of draining the carbonic acid of the ocean into their own skeletons. They calculate the time available before the next migration of the poles, knowing that the Mammalian

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Order must be brought to such a state of differentiation and development that it will survive the rigours to come.

If we have the discernment that our imagination endows us with: we can see that these Demiurgic Intelligences, though immeasurably more powerful than our own, are not infallible. Some of their experiments fail and the lines of development die out. These are later to be called by learned biologists 'non-adaptive' trends. Some experiments, as with the molluscs, are made to obtain definite information about the transformations of proteins.

So we might go on, fascinated by the marvels and the beauty, but awe-struck and amazed by the Intelligences that make it possible. We should also recognize the limitation of these powers which operate under the determining conditions of space and time. They have to realize through actualizing and this is an infinitely difficult art—so difficult that it can never be perfectly accomplished.

But we have to leave the scene and return to the twentieth century of the Christian Era, to the age when human science begins to draw aside some of nature's veils, and ask ourselves if we have seen a delightful mirage or a reality. Was that world of a hundred million years ago created by Intelligences or by blind chance? The answer we give will probably be determined by our prejudices, for we have not been able in very truth to place ourselves in the perspective of the distance past and we remain the slaves of the Zeitgeist that rules our present. The idea of discarnate intelligences was for a time popularized by Maxwell's Sorting Demon* but it has long ceased to be fashionable. That, for most people, is the end of the story.

Yet the earth of a hundred million years ago, was not a meaningless, senseless dance of mutating genes and a posturing of unseen beauties. Somewhere in it all there was a germinal awareness. This is the term that evolutionary scientists use for our 'organized sensitivity',** and there is no doubt that it made a great step forward during the Mesozoic Era. The developing sensorium within life was to be the foundation of mind,***

* Maxwell showed that energy could be concentrated by an immaterial being able to open and close a weightless, frictionless door so as to trap the faster moving molecules of a gas at uniform temperature and so produce a temperature difference between two regions. Though intended only to illustrate the principle that intelligence can get the better of the Second Law of Thermodynamics, the present writer has long been convinced that the 'sorting demon' corresponds to a real mode of existence.

** Cf. Julian S. Huxley, *On Living in a Revolution*, London, 1944.

*** Cf. Chapter 39, Section 15.39.5 .4. The human mind is a combination of sensitivity and consciousness, and, ultimately, extends into the subconscious regions of the automatism and the supraconscious region associated with creativity. The developing structure of mind is the theme of the following chapters.

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within individual organisms as distinct from the total mind of the Earth. We get, for the first time, the impression of the sensitive unity of the Biosphere. The interrelations of plants, insects and other arthropods, reptiles and the early mammals, had become organic and necessary for the total functioning. We can begin to speak of ecological sensitivity.

Ecology is the science of the interrelations of plants, animals and their total environment, living and non-living. It is 'science in depth' inasmuch as it embraces all the essence classes: crystals, soil, plants, germs, animals and men. The visible manifestations of the ecological unity of life are the so-called 'food web',* the stratification of populations from below the soil up to shrubs and trees and the periodicities of diurnal and nocturnal activities. The entire life in any region is an integrated whole. This integration must have been completed in Cretaceous time and it entitles us to attribute a common directive pattern to every region.f It seems to us that this is a strong argument against the atomic uncoordinated evolution that is required by a purely mechanistic theory. The coordination of activity of thousands of millions of organisms arising independently cannot be accounted for by causal mechanisms alone. Some integrative principle must be evoked, and whatever form it may take, it is incompatible with causal mechanism being the sole agent.

If, however, we are allowed to postulate the organization of sensitivity or preparation for mind, then we may be permitted to regard the Mesozoic Era as one in which life was developing a sensitivity so organized that it could respond cooperatively to the guiding patterns offered to it by the Demiurgic Intelligence.

17-44-13. THE Refinement of Sensitivity: Cainozoic Stage

Our time scale makes another change as we reach the seventh stage of our journey and approach the Cainozoic or New Life Era. We plunge again into the rigours of a transition period. The Mesozoic Era ended with powerful disturbances of the earth's crust probably associated with a fresh migration of the poles. The climate deteriorated, probably because of the reforming of the polar ice-caps. There was a considerable regression of the oceans accompanied by a sharp reduction of the tropical zone. All life was submitted to a severe test and most of it was found wanting. In the oceans, the ammonites and many genera of ancient fishes died out. On land, the great saurians failed to make the grade and rapidly lost their dominating position. Vegetation, too, was

* Cf. W. C. Allen et al: Principles of Animal Ecology, 1949.

** Cf. The Law of Common Presence, Vol. II, p. 47.

severely tested: flowering trees and plants gave place in the northern climates to ericaceous genera and even tundra. There was, almost certainly, a tremendous devastation among the arthropods.

During the Cretaceous Period, when the earth was almost free from seasonal changes, insects and arachnoidea could live for years and develop powers of which only traces remain in the species that are now living. We observe strange skills among the insects, such as the language of the bees and the ability of a moth to recognize and find its mate at a distance of several miles, but we do not know how these skills were acquired. It may be that skills more extraordinary, and insects and other arthropods nearer to conscious beings than those that have survived, were among the victims of the climatic change. It is certain that entire phyla, known only to specialists because they left no descendants, such as the creodonts, titanotheres and the uinatheres became extinct.* The stage was set for the emergence of the New Life that was to prepare the way for the arising of conscious beings.

One class of animals—the mammals—was successful in adapting to the harsh environment, though not without casualties. The Allotheria, rodent-like mammals with absurdly prominent teeth, failed and disappeared. The marsupials became extinct in the northern latitudes.

The emergence of the mammals as the dominating form of life in the Cainozoic is often cited as evidence that genetic variability and natural selection were the only mechanisms operative. The argument is that the severity of the conditions put a high survival value on warm-blooded, fur-bearing animals and that chance mutations which produced the required genetic characters would lead to a fairly rapid spread of the favoured strains. This argument is hard to accept in view of the evidence that warm-blooded fur-bearing animals arose during the favourable climates of the Cretaceous period. The mutations had already done their work before the conditions that favoured the new forms of life had made their appearance. This seems to have happened again and again in the phylogenetic sequence and no mechanistic explanation has ever been put forward that would account for it. It is tacitly assumed that whenever a new strain has established itself, it must have been endowed with a survival value superior to its competitors. It is hard to see how the climatic conditions of the Cretaceous, that favoured the survival of the great saurians, could also have been responsible for the natural selection of marsupials and mammals. None of these difficulties

* These are not cited only for the fascination of their names; they are of interest for our theme inasmuch as their structure was not adapted for the refinement of sensitivity and they were, therefore, unwanted in the next stage of evolution.

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arise if we accept the theory of predestination from the hyparchic future. The mammals appeared according to a directive pattern that gave them a future survival value.

The earliest mammals were egg-laying, breast-feeding little creatures whose descendants are still with us in the duck-billed platypus and the Australian ant-eater. From them descended the marsupials with their three-way vaginal passage that gave protection to their tiny young.

Early in the Cainozoic Era came fresh catastrophes that decimated life in the Northern Hemisphere. The Continental drift, or other causes, cut Australia off from the Eurasian mainland—also it would seem from the attention of the Demiurgic Intelligences, concerned with the future. So we have almost direct evidence of the way life develops when it is left to the operation of genetic variation and natural selection alone. The marsupials underwent a series of mutations to produce the great range of animal life that dominated the Australian continent before continental animals were brought from the West. There was, however, no progress remotely comparable to what happened in Asia and Africa.

The placental mammals probably first appeared in the region that is now Central Asia. There is no apparent reason why they should have come in the Palaeocene between fifty and sixty million years ago. It was not until the dying up of the land areas in the Eocene period that

the placentals were forced to migrate and populate the earth. Few fossil remains were preserved (hence the name Oligocene) over a period of about twelve million years of dry hot climates when vegetation suffered as badly as animal life.

Half the Cainozoic Era up to the present had passed before conditions really favourable for Mammalian development made their appearance. This was the Miocene Period when the earth enjoyed climatic conditions of exceptional mildness with a very extensive tropical zone and immense areas of grassland and steppes. There were probably no polar ice caps and the poles were probably situated in the North Atlantic and South Pacific. This allowed free movement in the Arctic Regions, so that the spread of animals and plants was greatly facilitated. The friendly climates lasted for nearly twenty-five million years, interrupted by violent earth movements that occurred about twelve million years before the present.

Such were the environmental conditions in which most of the Mammalian genera known today were established and flourished. The dominating mammals were massive beasts such as the Mastodon, Dinosaurium and Rhinoceros. Large carnivores flourished, hunting the vast herds of aurochs, bison, deer, sheep, goats, suids and giraffids. In the

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forests both monkeys and apes were gaining in size and variety. There were also many genera of rodents, insectivores and other arboreal mammals. Of the reptiles, only those which could take to water such as crocodiles and snakes survived.

If we look back seven million years from the present, we see a world not so very different from that seen by the men of our kind who lived seven thousand years ago.* The main difference would be the almost total absence of great mountain ranges and a higher proportion of shallow waters. It was the Golden Age of the Mammals. Some of the mammals best known to us, such as the horse and the elephant, had not yet developed their characteristic features. Hipparion, the forerunner of the horse, was an insignificant little creature with three toes. On the other hand, the sabre-toothed tiger must have been a more terrible animal than any modern man has had to meet.

Genetic variability and natural selection alone could not have resulted in the diversification of mammalian genera and species. The specialization of the mammalian genera certainly goes beyond the needs of survival. Natural selection gives a directive towards uniformity by eliminating in the population all that is less than the most successful. There is an almost limitless potential for variation in the genetic constitution of every species together with the effect of random mutations. But it is well known that in a large and freely moving population the tendency is to breed towards uniformity and not diversity, ** The natural diversifying factor is the geographical distribution of environmental influences. These certainly acted to separate varieties adapted to local conditions, but they cannot account for the generic differences that are so remarkable throughout the mammalian order. In any case, during the Golden Age of Mammals the earth's climate was for nearly twelve million years remarkably uniform. There were few mountains, high plateaux or other orographic features to favour speciation. These arguments are not decisive, but they certainly encourage us to seek beyond the operational and environmental factors for an explanation of the peculiar pattern of mammalian form and function.

Even today, after the Ice Ages and Man have eliminated so many species of animals that flourished in the Pliocene, we are struck by the wealth of life in the great game reserves of Africa and Asia. Why should there have arisen several genera of herbivorous animals, several

* 7000 b.p. was the post-glacial climatic optimum with a wide tropical belt not unlike the middle Pliocene.

** This argument is cogently developed by M. Vernet in the *Evolution of the Living World* and *La Grande Illusion* de Teilhard de Chardin, 1964.

genera of predators to hunt them, and many genera of arboreal mammals?

An evident distinction between mammals and reptiles is in the form of sensitivity. Every mammalian genus and even species is unique in its perceptions and feelings. The same is true for the birds—perhaps to an even greater degree. With reptiles and fishes, there is no such uniqueness; we use the term 'cold-blooded' with good reason to designate the reptilian character. It would not be true to say that reptiles and fishes are without sensitivity; the point is that all the many genera of cold-blooded vertebrates have the same pattern of feeling, whereas among the mammals the differences are far more striking than the similarities. Among the predators, the tiger and the wolf, the eagle and the owl, are as different as human beings in their perceptions, feelings and behaviour. The mammals and birds reproduce the whole gamut of human feelings: courage and timidity, gentleness and ferocity, curiosity and indifference, restless activity and sleeping indolence, patience and excitability, love of solitude and love of the herd, submissiveness and domination, perseverance, irritability, adaptability, conservatism and

every mode of sexual activity: all are to be found in one or another of the mammalian or avian genera.

According to our hypothesis, this is no accident nor is it the result of environmental influences. It is a necessary stage in the realization of the predestined Plan of life on the earth. In the mammals and birds, sensitive energy is more highly organized than in any of the earlier forms of life. It also appears to be organized in a totally different manner in certain plant extracts which can produce specific changes in sensitivity in birds and mammals as well as in man. Now, we know that sensitive energy (E 5) retains the imprint of experiences even when it is separated from the influence that arouses these experiences. This is seen, above all, in the phenomena of memory and recall—though recall is only possible with a true mind.

The process of refinement probably began at a very early stage and resulted in the slow disengagement of sensitivity from the earthy substratum. With vertebrate animals, the organization of sensitivity was highly developed, but no differentiation was yet possible. With the mammals and birds, sensitive energy began to acquire a range of characteristics. The process is somewhat analogous to the diffraction of white light by a grating. If the lines are randomly distributed in direction and spacing, the transmitted light is grey. If they are regular, we obtain the colours of the spectrum. We can regard the mammals and birds as a diffraction grating and the sensitive energy as white light that

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is separated into its constituent colours. The analogy breaks down because light does not 'remember' its past whereas sensitivity has precisely that property of retaining imprints.

Our psychological experience shows us that the retention of images is very weak compared with their reception. It takes years for a child in the state of maximum sensitivity to acquire images that can be recalled as abstract concepts. The traits of character imprinted from conception on the mind-stuff are scarcely affected by an entire lifetime devoted to changing them. The permanent fixation of characters in free sensitive energy—that is sensitivity not associated with a self—must take an incomparably longer time. Life probably required not hundreds, but thousands or even millions of generations to produce the highly differentiated mind-stuff that is needed for the formation of human selves. We are, thus, back in the scale of geological time. The twenty million years of the Miocene and Pliocene periods were probably not more than enough to prepare the ground for the arising of man.

This argument is reinforced by study of the traces left by the early Primates, the precursors of the human organism. Primates were probably evolved before the end of the Mesozoic Era. They were certainly present in the early Cainozoic, when the Prosimii, or Lower Primates, nourished over most of the world. These were generalized little animals, who lived mainly in trees and ate fruit and insects, but they seem also to have lived on the ground and to have had a variety of diets, like squirrels and other small rodents today. Their modern representatives are the tree shrews, lemurs and lorises and the spectral tarsius—which has a more highly developed brain than any other animal of the same size.

It is from some basic prosimian that the Anthropeoidea, or Higher Primates, began to develop during the Eocene. From the end of that period and the beginning of the Oligocene, fragments of fossil jaws have come from Egypt, Burma and Europe, which strongly suggest experiments towards the higher primates. Oligocene fossil remains of small generalized apes have been found in Egypt, and from the beginning of the Miocene onwards ape-like fossil jaws and teeth of the 'Dryopithecus group' have been found in Europe, Africa and Asia. These primates were relatively unspecialized. But they are distinguished by ability to grasp with hands or feet, by a tendency to develop the sense of vision at the expense of the sense of smell, and by a general propensity to cerebral development. It is, however, most important to observe that primates, such as apes and monkeys, lack many human characteristics which are strongly marked in other families of mammals. Thus, there are wolf-like and sheep-like men, but we do not find wolf-like monkeys or sheep-like

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apes. In man alone, the many subjective characteristics observable in all the genera of mammals and birds are combined with characters.

All warm-blooded creatures are linked by a common and highly organized sensitivity. This sensitivity is both adaptive and stable, and it enables animals to feel in a way that is almost entirely absent in reptiles and fishes, not to mention the lower forms of life. It seems plausible to suppose that the pattern of sensitivity common to mammals and birds is derived from a common structure. This point is commonly overlooked because of the use of morphological and functional characteristics for purposes of classification. Morphologically, mammals and birds have diverged from a common reptilian stock. Functionally, they have differentiated in response to environmental pressures and opportunities. There is, however, a third and more important criterion and that is the capacity for experience. Applying this criterion we observe, not divergence, but convergence towards the type of experience that we find integrally in man alone.

The theory of Demiurgic Intelligences and the Hyparchic Future can now be carried a stage further. We can see in the Age of Mammals the first clear indication of the intention to secure the cooperation of

life in its own evolution. It is very commonly said in these days that we are entering a phase of evolution in which for the first time life will cooperate in a process hitherto blind and purposeless.*

Our view is totally different from this, inasmuch as it ascribes both a purpose, and a plan for its realization, to the entire history of the earth in all the seven stages studied up to this point. The conscious direction of the process is, initially, wholly exterior to the present moment—it is in the hyparchic future. Step by step, it enters the present and, with this, the present moment itself expands. The organization of sensitivity (Stage 7), was an immense step towards the transfer of responsibility into the present. Its refinement and differentiation was the last stage before the appearance of man on the earth. We see in this stage, evidences of a more intimate participation of the Demiurgic Essences within the present. The mammalian genera are more than collections of individuals, they are concentrations of mind-stuff, **

* Cf. P. Teilhard de Chardin, *The Future of Man*, Eng. trs., 1964, p. 212, 'The Darwinian era of survival by Natural Selection (the vital thrust) is thus succeeded by a Lamarckian era of Super-Life brought about by calculated invention (the vital impulse). In Man, evolution is interiorized and made purposeful . . .' This implies, as de Chardin does in many other passages, that evolution prior to man was purposeless: a doctrine directly contrary to our own.

** Cf. Vol. II, 13.35.11, on the Animal Essence Class: 'Each animal transforms life-energy into a particular quality of experience.'

Each animal genus, as a whole, is to be regarded as an entity having a mind of its own. This mind is made 'Intelligent' by the penetration of the Demiurgic Power which is thereby enabled to use it as an instrument of action. We may say—with appropriate reservations as to what this means—that the Demiurgic Intelligences can be 'embodied' in the animal genera even though individual animals exist below the level of mind—i.e., they are not conscious. The Golden Age of the Mammals was a great 'Present Moment' of twelve million years. It came out of the past by way of genetic transmission and other causal mechanisms. But it also came out of the hyparchic future by way of a plan. Thus the Cainozoic Era of Life on the Earth completed a cycle. The gradual entrance of the Demiurgic Powers into the present by a series of astonishing innovations has been the path of progress. The eighth stage that we are about to study was the beginning of a new cycle.

Chapter Forty-five

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17.45.1. The Hyperzoic Era

Our first task must be to explain what we mean by the 'Hyperzoic Era'. In Vol. I we divided existence into the Hyponomic, Autonomic and Hypernomic realms. Life lies entirely within the second. In Vol. II we similarly distinguished three tetrads of Energies: Material, Vital and Cosmic. Consciousness (E 4) is the coarsest of the four cosmic energies. Sensitivity (E 5) is the finest energy of life, so that the separation, organization and refinement of sensitivity all fall within the Autonomic Realm. When, however, consciousness is added we enter the Hypernomic realm, and for that reason the stage of evolution in which consciousness appears will be called the Hyperzoic Era—not because it leaves life behind, but because it adds something that goes beyond life. We retain the form '-zoic' to indicate that we are concerned with a stage in the evolution of life; but from henceforward, the emphasis will be upon mind leading to soul. The immense significance of the penetration of consciousness into the sensitivity of living organisms is not only that this makes possible the arising of selves, but that it is an awakening of the Mind of the Biosphere. Through the human mind, we see that the Biosphere begins to acquire the faculty of reflection, so that the earth becomes related to itself in a new way that goes beyond life alone.

The study of the Hyperzoic Era presents us with a new problem inasmuch as we are in the midst of it, and therefore cannot study the totality of this stage of evolution through its traces, as we have done with the others. We have adopted the view that the part cannot be understood without reference to the whole. We must, therefore, make at least some attempt to construct a picture of the whole Era, even though we cannot say how events will turn out.

We have a few elements to help us:

1. The concepts of hyparchic plan and eternal pattern.
2. The notion of Demiurgic Intelligences working in the Hyparchic Future.
3. The traces of earthly life during the last few million years.

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4. An estimate of time-scales from our knowledge of the past.
5. The evidence that sensitivity developed by differentiation and refinement in the Cainozoic Era.
6. Man and his nature as they can be studied in the present.

7. The course of events in the historical period.

Out of these seven elements we shall attempt to construct the history of the present Era without undue emphasis upon the immediate past and present that are, inevitably, the most powerful subjective influence upon our modes of thought.

We shall start with the problem of time scales. Within the last century, history has come to mean the History of Progress. Old ideas of static history (Greek and Roman), of cyclic history (Vico and Spengler) or of history leading to a stable state of affairs (Hegel, Marx and Engels) have all been swept away by the growing belief in Universal Evolutionary Progress. Still more recently, a new and startling idea has come to the fore: that of Accelerated Progress. No one doubts that there is evidence of sustained accelerated progress in many fields. Statistics show that the output of science and technology has for a long time been increasing at an accelerated pace. Industrial productivity even outstrips the growth of the world's population, which as everyone knows, is also advancing at an accelerated and alarming pace.

Moreover, accelerated progress seems to be a law of nature.* From Fig. 44.3, we can see that each of the great Eras since the earth was formed was shorter than its predecessor. This has not escaped the attention of scientists and is emphasized by writers on Evolution. The time-scale of Evolution is not that of the clock marked by equal intervals, but more like that of a stone falling to the ground.

If we are to make an estimate of the probable duration of the Hyperzoic Era, we cannot simply calculate the lengths of the preceding Eras and make an average. We cannot even assume that each succeeding Era is a fixed fraction of the previous one, for this requires an untested hypothesis regarding the law that governs progress. But we have to make some assumption as to the 'measure' of progress. We shall take each major stage as representing an equal evolutionary increment. This is probably justified by the observation that each stage is a Creative Act proceeding from the same Source and therefore is likely to involve equal increments of creative energy (E 3). There can be no possible doubt that the Evolution of Life on the earth has moved ahead at an

* Cf. A. Bertalanffy, one of the founders of General Systems Theory, Year Book, No. 1, 1950. He gives exponential growth as one of the basic laws of nature.

accelerated pace. Even if our identification of the seven steps is seriously at fault, the acceleration remains. We could have taken the existential hypotheses of Vol. I: these would also have given eight steps. The Essence Classes of Vol. II would have given six steps from dispersed energy to man. We should have used the accepted classification of zoology and botany if these could give us recognizable steps or stages;

but, as is well known, no measure of evolutionary progress has ever been proposed, let alone generally agreed. On the whole, our eight-term scale seems to fit the data and it has the decisive advantage of agreeing with the generally accepted views of geo-chronologists.*

The simplest accelerated motion is that of a falling body where the increase of speed is proportional to the time since it began to fall. If we suppose that progress, P, obeys a law of this kind, we should have:

$$\{$$

$$(45.1)$$

where k could be described as the creative impulse. This law would apply if the impulse were continually at work. Now this does not fit our hypothesis of successive impulses given to a process that has its own principle of evolutionary advance. The situation can be compared to the law of compound interest: the more you have the more you receive. In such situations, the time taken for equal increments of progress diminishes more rapidly than if the rate were constant. This gives a relationship of the basic form

$$(45-2)$$

t is time before present and t₀ is the time of starting. When t = t₀ P = 0, i.e. no progress has yet been made.

We can test this relationship by plotting equal increments of progress P against the logarithm of the time. Taking the time-scale of the table in Fig. 44.1, we obtain the curve of Fig. 45.1 overleaf.

If (45.2.) had been the correct form of the relationship, the curve would have been a straight line. It has, however, the shape of a power

curve:

$$(45-3)$$

*Absolute geo-chronology is a new science based entirely—so far as geology is concerned — upon the decay of radioactive substances, particularly the potassium-argon ratio for very old and carbon 14 for very recent ones. This method of dating is equivalent to using a clock that ignores subjective states.

$$\frac{dP}{dt} = kt \quad P = -k \log t/t_0 \quad P^* = -P_0 \log t/t_0$$

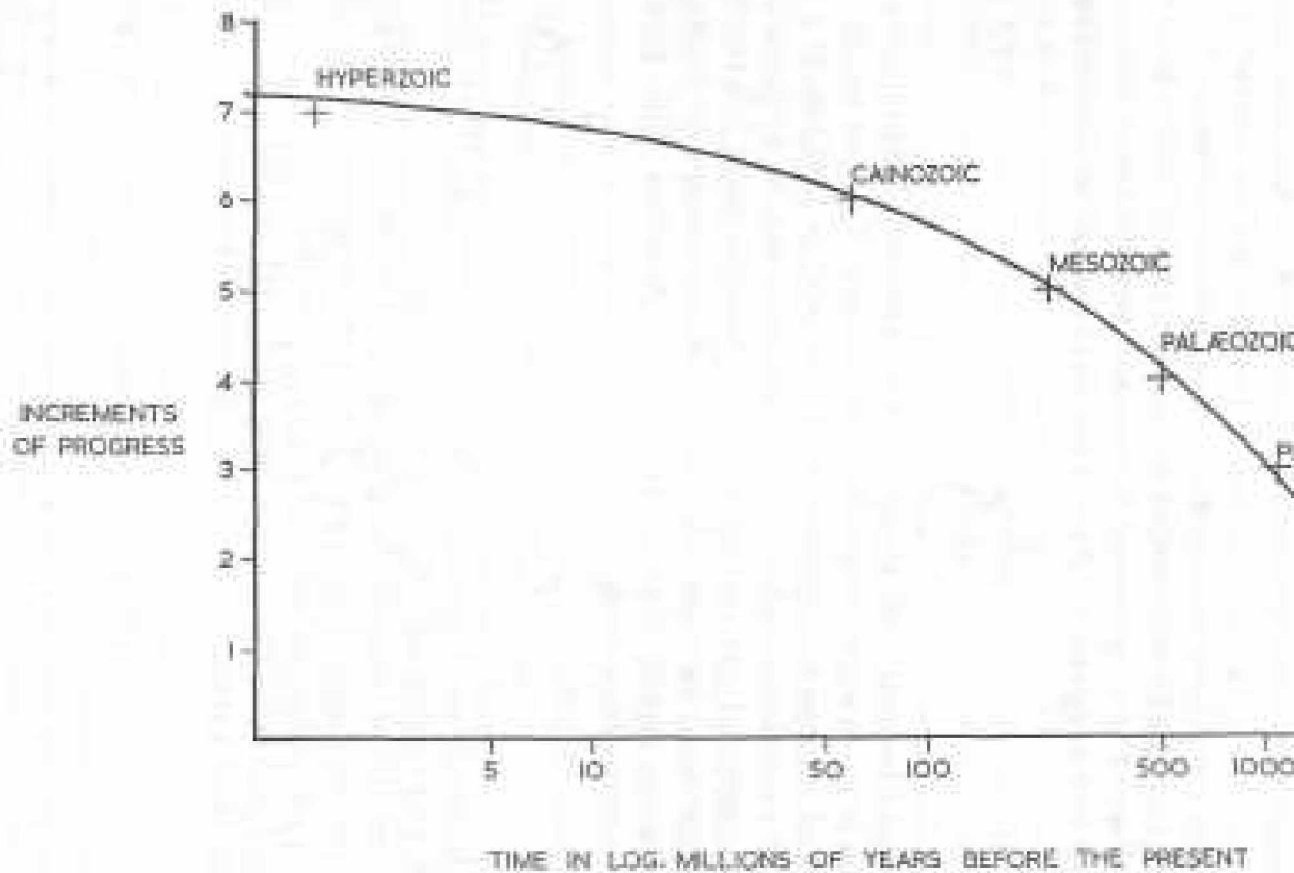


Fig. 45.1. The Rate of Progress of Life

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This suggests that there are two distinct factors at work, one of which is connected with the process itself—the logarithmic relationship—and the other with the conditions of observation—the power relationship.

The three constants would thus be interpreted:

t_0 = time when the earth began

P_0 = unit of progress

n = foreshortening effect of present moment of the observer.

The last constant is of special importance as it indicates that the assessment of progress depends upon the 'power of embrace' of the mind that makes the observation. For a small mind, there is no progress as the time-scale is reduced until all appears stationary. For a very great mind, the entire life of the earth is converging at an accelerated pace

towards the fulfilment of its plan. This can be called 'objective eschatology.'

On account of the arbitrary character of the exponent n , we cannot use the expression (45.3) to measure progress except for times remote from the present. This condition is satisfied when time is measured in millions of years, but not when we count in centuries, which are periods of time commensurate with a single human life.

Notwithstanding this limitation and the considerable uncertainty in fixing the dates at which the early Eras began, the expression does yield some valuable information.

1. A real acceleration of progress has always characterized the development of life on the earth.
2. Progress cannot be assessed objectively for times near to the present moment because the 'subjective exponent' n will falsify our evaluation.
3. The advent of mankind on the earth can be identified with the beginning of the eighth Era about 1,500,000 years before the present.
4. The history of man on the earth is likely to develop at an accelerated pace according to the law expressed by (45.3).
5. After making due allowance for the 'subjective exponent' we should expect the completion of the eighth Era within the next half-million years and perhaps very much sooner.

In connection with the last observation, we should make it clear that we cannot, in any case, extrapolate the curve of Fig. 45.1 back to the present moment. The logarithmic curve has no zero. The point is that we do not find an eighth step of progress intercepted by the curve within the last 100,000 years, and may therefore suppose that this step is still to be realized.

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17.45.2. The Cycles in Human History

We must distinguish between cycles and stages. The latter belong to the working out of the plan of life on the earth. They are not cyclic

and as we have just seen, they do not occupy equal intervals of time. There is a totally different way of looking at history which is to regard it as the life cycle of an organism—in this case the whole of mankind. Every living organism has a rhythmical structure: we pulsate, breathe, sleep and wake, we have our seasons and our years. These rhythms remain more or less constant in their periodicity even though the tempo of living may change. This is true of the individual man or woman who develops progressively and yet retains the rhythms of life and functional activity.

This consideration is important because it helps us to reconcile three views of history: the progressive, the static and the cyclic. Each of the three is valid but applicable only to one aspect or department of life.

As we have no records of cycles of human activity for much beyond five thousand years ago, we have to act on the principle that the wildest guess is better than blank ignorance. We can, for example, make assumptions as to the periodicities of human activity that are too long for observation and see if they suggest shorter rhythms falling within recorded history and therefore susceptible of verification. Since all the rhythms of life are directly connected with the rhythms of the earth—including those due to its motions with respect to the sun and the moon—we shall make the further assumption that the major astronomical rhythms are reflected in the cycles of activity of the Human Race.

To complete our set of 'wild guesses', we shall suppose that the pattern of activity of mankind is analogous to that of individual man. Some processes—mainly instinctive—continue day and night. Others have a diurnal rhythm. Some are influenced by the seasons and the years. Others again seem to follow longer cycles variously estimated at seven, eight or nine years. There are also the organic rhythms of the heartbeat and respiration measured in seconds, and rhythms of perception measured in milliseconds. All these—we may suppose—are reproduced in the Human Race as a whole, but on an immensely greater scale of time.

We shall now translate our 'wild guesses' into a series of assumptions.

1. The total life of mankind will be the duration of the Hyperzoic Era. The curve of Fig. 45.1 indicates a maximum of 2,500,000 and a minimum of 1,500,000 years for its duration. We shall take 2,000,000 years as the best available guess.

2. The life of mankind—hereafter to be called the Human Era—will be divided into as many 'Great Years' as the life of individual man is divided into small years, i.e., about eighty.

3. The Human Era will be divided into about ten Ages each lasting 200,000 years. These are suggested by the eight-year periodicity of the individual discussed in Chapter 40.

4. There will be eighty cycles corresponding to the year. These have a periodicity of 25,000 years, which will be recognized as approximating to the period of the precession of the equinoxes—about 26,000 years. We shall call these 'great years' Great Cycles.

5. Minor cycles corresponding to the lunar month of 28 days should be discernible. The period is almost exactly one thousandth of 80 years and the equivalent for the Human Era would be 2,000 years. This can be identified with the Epoch to which we have assigned a period of 2,000-2,500 years.*

6. Sub-cycles equivalent to the diurnal cycle of individual life would last about 65 years. This corresponds to no well-defined periodicity in human life. It must not be forgotten that day and night is a local phenomenon and that the distinction almost disappears if averaged for all mankind. It does not quite disappear because the distribution of population is not uniform. Most people are awake when it is midnight on the International Date-line that runs through the Pacific Ocean. We shall find that short-term interlocking cycles of local activity do occur all over the world, especially in nations and other human societies.

7. None of the cycles can be related to the realization of the pattern of the Human Era. This latter is likely to follow the law of acceleration given by the expression (45.3). This agrees with human experience which shows that the transformation of Self-hood into Individuality starts slowly; but, if not interrupted, gains speed until the final stage is almost instantaneous.

We have now constructed a scheme in which the Human Era is one of the major stages of the realization of life on the earth—and also a complete cycle in itself, having its own periodicities and rhythms. The scheme must stand or fall by its usefulness as a means of interpreting history. At least we have a picture of human life on the earth as a whole. Assuming it began 1,500,000 years ago, three quarters of the race has already been run. We should be entering a stage of acceleration that is still far short of the maximum. If the pace seems too hot for us today: it may become hotter still for our descendants.

We have to remember the basic assumption that the Eighth Era is

* In the present work, the term was first used in Vol. III, Chapter 41, Section 15.41.7.4. The notion of Epochs is extensively applied in the last four chapters.

that of the transition from sensitivity to consciousness. This is the best expression we can give at this stage to the Pattern of the Era. The destiny of mankind is to become an Intelligent entity. We must now take up the story from where we left it in the last chapter: at the end of the Golden Age of the Mammals.

17.45.3. The Start of the Hyperzoic Era

The period we are now about to enter was formerly called by geologists the Quaternary or Recent period from the character of the alluvium which is its main contribution to the rocks on the earth's surface. This nomenclature has been abandoned by most authorities in favour of the Pleistocene, which means life closest to our own. We have chosen to call it the Hyperzoic Era because it has been associated with one of the very great stages in the development of life on the earth. The three names: Quaternary, Pleistocene and Hyperzoic correspond to three ways of looking at the situation. The first looks at the material world, the second at the world of life and the third looks further to see, in the coming of man, a factor that transcends life itself. Each of the three terms represents a valid and important interpretation of the traces of the past and the pattern of the future.

The Cainozoic Era ended, according to our views, with the Pliocene. As with each of the major stages, the eighth was heralded by major crustal perturbations. Mountains and plateaux were raised high above sea level. The oceanic record shows that the change was sudden and that climatic changes occurred abruptly. Many great mountain ranges which seem to us an almost inevitable and permanent feature of the earth's surface—the Alps, the Himalayas and the Caucasus—were still insignificant a bare two million years ago. The former Tethys sea which ran from present-day Malaya to the Caspian passed through the region that now supports the highest mountains in the world. The Andes and the Rocky Mountains date from the end of the Cainozoic.

It is hard for us to picture the tremendous upheavals, the almost continuous earthquakes, innumerable volcanic eruptions and tidal waves, lasting certainly for thousands of years, that must have accompanied the orogenic catastrophes. The sunlit peaceful earth of the Miocene had been growing colder and the crustal disturbances began to make themselves felt at least five million years ago: but the powerful thrusts that altered the face of the great continents came so suddenly that it is hard to understand how such great changes could have occurred so rapidly.

It can well be imagined that animal life suffered severely during this time of catastrophe—but there was more to come. In the midst of the

crustal disturbances, a profound climatic change brought on the first Ice Age for two hundred million years. Since then, Ice Ages have come

and gone, producing climatic changes more dramatic and rapid than at any earlier period that has left such clear traces.

We are not directly concerned with the geological history of the earth itself, apart from its role in the history of life; but the glaciations have played so great a part in the history of mankind that we must pause to consider their origin and the probability of their return. There is, unfortunately, no agreement among geologists, climatologists and geophysicists as to the cause and origin of the Ice Ages. A very interesting theory put forward by Ewing and Donn has not been accepted by the majority of workers in the field. This theory is in two parts: it ascribes the major change of climate to the migration of the poles and the fluctuations of glacial and interglacial conditions in the Northern Hemisphere to the opening and closing of the Arctic Ocean.*

The migration of the poles, formerly regarded as impossible, is now seen to be a normal state of affairs on account of the intense energy gradients in the molten magma on which the outer crust floats. Enormous quantities of energy are liberated by the radioactive decay of long-life radioactive elements like Potassium-40. Since the masses are not uniformly distributed, convection currents are set up. Thus the interior of the earth, supposed until recently to be more or less motionless, is now believed to be far more active than the surface. It is altogether plausible to suppose that the great crustal perturbations that have left their traces all over the earth were the accompaniment of a shift of the entire crust that brought the North Pole over the Arctic Ocean and the South Pole over Antarctica—that is, to their present positions. This shift need not have occurred with extreme rapidity: we have ten million years of the Pliocene during which—as we know from palaeobotanical evidence—the climate of the Northern Hemisphere was steadily growing colder.

Let us suppose—as the evidence of the lines of magnetic force in old rocks seems to indicate—that, in the Miocene, the North Pole was over the North Pacific at a latitude, by our present reckoning, of 750 N. This would suffice to dissipate the winter cold by ocean currents and produce the equable climate of the Golden Age of Mammals. To reach its present position, the pole would have to travel a distance of some 1,400 miles. If the migration began at the beginning of the Pliocene—and of this there is climatic and other evidence—it would have had some ten million years to cover the distance. This means an average motion of

* Maurice Ewing and W. L. Donn, *Science*, Vol. 123, 1956, pp. 1061-6, A Theory of Ice Ages I and Vol. 127, 1958, pp. 1159-62, A Theory of Ice Ages II.

about nine inches a year. The energy required for this is within the estimated limits of the magmatic currents. Thus there is nothing implausible in the theory of polar migration.

The Arctic Ocean one or two million years ago was certainly different from what it is today. We have seen that great mountain-building processes were about to occur. It is likely that the Arctic Ocean acted as a reservoir which received warm water from the Atlantic far more abundantly than the present Gulf Stream and that it poured out enormous quantities of icy water down the present coast of Greenland. In summer the combination of continuous Arctic sunlight and warm water would produce enormous evaporation and this would be precipitated as snow over Greenland and Western Europe. In this way, the glaciers would build up as long as they were fed with snow from the Arctic.

This could not continue indefinitely because the withdrawal of water in the form of ice would drain the Arctic reservoir and eventually the entry of the Gulf Stream would be closed. Then the Arctic would soon freeze over and the supply of snow would cease. The Atlantic Ocean would suddenly warm up and being cut off from the Arctic would warm the American Eurasian continents, thus bringing about a period of warm climates.

In due course the Glaciers would melt, the oceans would rise and the Arctic again become open. A new cycle of glaciation would set in. But it would not be so severe nor so lasting, for mountains would, meanwhile, have risen in the oceans: the Lomonosov ridge that shields the Arctic Ocean would reduce the time taken for the closing of the gap through which the warm waters entered from the Atlantic.

We have not considered the South Pole because it does not affect our history so directly; but the theory explains admirably why it is that there has been continuous glaciation of Antarctica as against intermittent glaciation in the North.

Such approximately is the ingenious theory of Ewing and Donn. As we have said, it has not been well received by other workers in the field. Two colleagues of Dr. Ewing, whose work will greatly help us in our next stage, consider that the best explanation of the Ice Ages is to be found in postulating a variation in the intensity of solar energy. This also is quite plausible but, as Sir George Simpson has shown, it runs into difficulties. If the sun sends less heat to the earth, evaporation of the oceans must diminish and, if that happened, where did all the snow come from? Simpson, therefore, made the remarkable suggestion that Ice Ages are caused by an increase in the sun's heat.* But this does not

* G. C. Simpson, Ice Ages, Nature, Vol. 141, 1938, pp. 591-8.

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agree with recent evidence that the equatorial regions had grown colder during the last ice age.* It seems likely that the Ice Ages were produced by a complex action to which many factors contributed. Suffice it to say that the Hyperzoic Era has been one of the most disturbed periods in the history of the earth's crust. We happen to be living in a very quiet period and find it hard to imagine that our remote ancestors had to contend with conditions before which modern man with all his technical resources would find himself helpless. It is against this environmental background, that we must look at the origin and history of the human race.

17.45.4. Chronology of the Human Era

The traces we have of the Hyperzoic Era come from four main sources: geological, climatic, organic and cultural. The radioactive materials in rocks and organic remains are sources for absolute dating. Climatic changes are recorded in rock and ocean-bed, and indicated in the remains of living forms. The location of fossil remains in rocks which can be dated give us the temporal sequence of species, upon which we rely for our picture of evolutionary changes. Remains of artefacts are traces of past cultures, and indicate the stage of the development of mind.

In order to construct a picture of the stages of man's evolution we need to know first of all about the major climatic changes which influenced its course. We require as accurate a chronology of these changes as is possible. The duration of the main climatic conditions—especially those of the Ice Ages—is an important clue to the processes at work developing the rudimentary powers of the early men. Unfortunately, agreement on dating is difficult to find.

Estimates of the duration of the Pleistocene—or, as we call it, the Hyperzoic Era—have varied from 300,000 up to 2,000,000 years.** It is only very recently that reliable figures have become available. This may seem surprising since this is the period nearest to, and indeed including, our own time. But the methods normally used for dating

* Cf. J. A. Coetzee, Evidence for a Considerable Depression of the Vegetation Belts during the Upper Pleistocene on the East African Mountains, *Nature*, Vol. 204, pp. 564-6.

** The lower figure of 300,000 years is based on oceanographic studies by Emiliani published in 1961. It is now clear that he failed to reach the earlier glacial sediments. The commonly accepted date for the start of the first glaciation of Gunz has until recently been 500,000 years before the present. Evidence is rapidly accumulating to show that this also is far too short. Major surprises may still await us and the chronology of the present section must be taken as the best that can be made of a difficult job (November 1965).

geological strata of earlier periods prove too inaccurate for more recent times.

We have radiocarbon dating, but unfortunately it cannot stretch much beyond 30,000 years before the present. Although potassium-argon dating can easily reach back beyond the onset of the first great Ice Age, at the moment experimental techniques are still undergoing refinement and standardization. This means that datings are often subject to revision. The radioactive decay of potassium-40 occurs in igneous deposits, whereas the decay of carbon-14 is found in organic remains. Potassium-argon dating is therefore applied to basalt and volcanic ashes, and can give indications of the age of associated fossil remains. Geology and palaeontology provide stratigraphy—that is an ordered sequence of strata of rocks and remains. This amounts to an unsealed chronology. Radioactive dating is providing a scale, but the uncertainties which arise in the stratigraphy often render dates ambiguous.

There are many kinds of trace of climatic changes, but only a few can be directly dated. Pollen analysis will give a clue as to the kind of vegetation associated with remains, and hence the kind of climate. Fossil remains will indicate the climate by the predominance of animals which flourished within a certain range of temperatures—though this can vary from region to region. Then the glaciers scratched, polished and eroded the rocks over which they moved, and left deposits. These traces can be valuable clues to the movements of ice-sheets and their order of duration.

In the deep ocean bed, the sediment stores a record of the major climatic changes. Continuously, sediment rains down to the ocean floor. It is partly mineral, and partly organic. The minute animal and plant skeletons which have gathered on the floor prove excellent recorders of the major climatic changes associated with the Ice Ages. The habits of these creatures are known—some are warm and some cold-water dwellers, some became extinct at the onset of the Ice Ages, others evolved new species at specific and known times.

The traces left by the glaciers are confused. This is not surprising as each successive wave of glaciation obliterates almost all the traces of its predecessors. The messages left by the glaciers are so hard to interpret that until recently the greatest experts have been in doubt as to the number and duration of the glaciations. The two kinds of trace—the erosion or scratching of underlying rock surfaces by the moving mass of ice and the composition and physical state of the material transported by the ice—have been superimposed upon by successive

waves of ice and subsequently weathered, covered by alluvial deposits or entirely eroded by wind and water. It is, indeed, astonishing under the circumstances that a remarkably consistent picture has been built up, showing among other features that the Ice Ages on the American and European continents were contemporaneous and passed through similar phases.

Palaeobotanical and palaeozoological investigations show that the mean annual temperatures in Europe and North America had been steadily falling over the last 60,000,000 years—since the time of the Palaeocene. The curve begins to oscillate as it enters the Pleistocene, showing the traces of the great glaciations. The picture we can draw from the evidence is far from simple: there were probably seven oscillations between cold and warm and back again which are usually grouped into a scheme of four main Ice Ages. None of these was continuous. An intermission of warmth within a major glaciation is called an interstadial; while one between major glaciations is called an interglacial. Authorities variously ascribe a phase of warmth to either of these categories.

For Europe, four main periods of cold are distinguished, the last three of which are associated with extensive continental glaciation.

Wurm (Glaciation)

Eem (Warm interglacial)

Riss Complex (Glaciation with warm period)

Holstein (Warm Interglacial)

Elster Complex (Glaciation with warm period)

Cromerian (Warm Interglacial)

Kedischem Complex (Periods of cold and warm)

Fig. 45.2. European Climate in the Pleistocene*

The classical 'Ice Ages' (the Gunz, Mindel, Riss and Wurm) are variously correlated with the palaeobiological findings.

In the lower latitudes there is clear evidence of pluvials roughly contemporary with the European and American glaciations.** The task of interpreting the traces of pluvials is formidable. The position and extent of ancient lakes and river terraces, the composition of fossil soils and evidence of the raising of sea beaches due to the withdrawal of water

have all to be taken into account. Conditions can vary enormously over a very short distance. Investigations in Africa have revealed four main

* Data taken from Butzer, *Environment and Archaeology*, Table 2, pp. 22—3.

** Cf. Sonia Cole, *The Prehistory of East Africa*, Chapter 2. ' . . . many attempts have been made to correlate pluvials in low latitudes with glacials in high latitudes, agreement has by no means been reached. It does appear probable, however, that the pluvial periods in the tropics were broadly contemporary with glacial periods elsewhere, though it seems most unlikely that they fit exactly', pp. 59-66.

pluvials, but there are signs of other fluctuations giving a variety of climates.

Land evidence could not establish a reliable chronology. The recent investigations of the ocean bed have proved more fruitful. For a long time it was assumed that the ocean bed carried an undisturbed deposit of silt and organic remains, but only in 1948 were the first deep cores obtained. More recently, it has been found that the ocean bed has not been free of disturbances. Slow moving 'turbidity-currents' caused by the slumping of silt on ocean hills can drastically affect the continuity of the record. In many places, actual tectonic disturbances have left their mark. Many years of patient correlation between hundreds of incomplete cores were needed before a complete record became visible. Eventually, a few complete specimens were recovered which verified the picture. The remains of organic life which we mentioned before mark the major climatic changes. In this way, a complete map of the Pleistocene has been constructed by the workers at the Lamont Geological Laboratory and elsewhere.*

The entire period has been dated by extrapolating rates of accumulation of deposit derived from radioactive dating on recent periods to cover the whole of the Pleistocene. Different textures in the cores are correlated with different rates of accumulation. At different locations and different times, the rate varies considerably. Comparisons between the datings from contemporary cores gives a check on the method. Extrapolation of this kind is, however, never completely free from uncertainties.

The results of these oceanic studies confirm the generally held belief of geologists that there have been four main glaciations, but their identification is far from agreed. The Lamont workers place the onset of the first great Ice Age 1,500,000 years ago. Potassium dating of igneous material in Africa associated with the beginning of the Pleistocene puts it 2,000,000 years before the present. Discrepancies increase-

but in the opposite direction—when we consider the later Ice Ages. Thus the Mindel is dated by the potassium-argon method c. 400,000 years before the present by workers in Africa, whereas Ericson-Wollin place it 1,200,000 years ago.

The traces investigated by the Lamont workers are well fitted to show up only the main features of the climate of the Pleistocene. Much of the

* The scientific results and the story of the sixteen years of research that led up to them are admirably described in *The Deep and the Past* (1964) by David B. Ericson and Goesta Wollin of the Lamont Geological Laboratory, Columbia University, of which Maurice Ewing is Director.

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detail available in the land record is lost. As the Holocene is approached, extrapolations from the data of the curves proves increasingly inaccurate. The situation from the Mindel to the Riss glaciations remains an open question. With the Wurm, however, we are forced to adopt the conventional time-scale that begins the glaciation between 70,000 and 80,000 years b.p. and not the 115,000 years b.p. of Ericson and Wollin. This unfortunately makes the dating of the Eemian or Riss-Wurm interglacial almost indeterminate beyond some neighbourhood of 100,000 b.p.

We shall adopt the broad chronology of the Lamont workers up to the time of the Eemian interglacial.* Because of the intricate correlations between stratigraphy and dating we shall then revert to the conventional datings for the Wurm as outlined by Oakley.**

The first Ice Age of the Pleistocene, the Gunz—probably the same as the Kedischem complex of mid-latitude Europe—began about 1,500,000 years ago and lasted about 125,000 years. When the period is designated by the fauna we have the Villafranchian which represents fauna transitional between the Pliocene and the Pleistocene. It begins towards the end of the the Pliocene when it is known as the Early Villafranchian. The Early Pleistocene then corresponds to the period of the Gun and is correlated with Late Villafranchian. It would appear that the onset of the Gun was much more gradual than previously assumed and some authorities now extend the Pleistocene backwards to correspond with the Villafranchian. We shall keep the beginning of the Pleistocene at 1,500,000 b.p. following Ericson and Wollin—and in fact this would seem to represent the beginning of the actual glacial period—and term 'Villafranchian' the period of gradual onset between that date and the end of the Pliocene. In other respects, we shall adopt the proposal of Woldstedt, followed by vertebrate palaeontologists, and place the beginning of the Middle Pleistocene at the start of the Gunz-Mindel inter-

glacial and the beginning of the late Pleistocene at the start of the Riss glaciation.

The Gunz-Mindel interglacial lasted for about 170,000 years and was followed by the longest period of glaciation in the two phases of the Mindel Ice Age or Elster Complex. It prevailed for 145,000 years until 1,060,000 b.p. The Holstein or Mindel-Riss interglacial that came after was the longest period of temperate climate in the whole of the Pleistocene. At times, the climate was as warm, and the tropical regions reached as far north, as in the Miocene. It lasted for 640,000 years until 420,000 b.p. when began the Riss-complex. The 'Riss-Wurm' or, 'Eemian'

* Ericson and Wollin, loc. cit., p. 209.

**Cf. Frameworks for Dating Fossil Man, p. 21 and p. 44.

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interglacial that followed can be dated to some interval about 115,000-70,000 b.p.

The final Wurm glaciation was one of the most severe in its impact both on fauna and on the eco-systems in which man found his material support. It is also known in much greater detail than the others. It falls into three phases separated by interstadials. Early Warm lasted from about 75,000 to about 45,000 b.p. interrupted by temporary retreats of the ice-front when came the main Gottweig interstadial which allowed much greater movements of fauna and men than were possible under severe glacial conditions. It was the prelude to the main Warm glaciation when severe conditions prevailed over most of Europe. The South of England and the main continent remained relatively free of ice but suffered under severe temperatures—the annual mean was less than—2° C.—especially in central Europe which lay between the Scandinavian and the Alpine glacial sheets. The conditions were tempered by the Paudorf interstadial around 28,000-26,000 b.p. In Late Warm came the most intense period of cold during the Brandenburg stage ca. 20,000 b.p. It began to fall off with the Boiling interval ca. 13,000 b.p. and between 12,000 and 11,000 b.p. came the temperate interstadial of the Allerod oscillation. By this time, the ice-sheets in Northern Europe had retreated into central Sweden. For convenience, we take 11,000 b.p. as the agreed ending of the time of glaciation.

Phase

Gunz Ice Age

Interglacial (Cromerian)

Mindel Ice Age
 Interglacial (Holstein)
 Riss Ice Age
 Interglacial (Eem)
 Early Warm
 Gottweig Interstadial
 Main Warm
 Paudorf Interstadial
 Late Warm
 Allerad Oscillation

Years b.p.

1,500,000-1,380,000
 1,380,000-1,200,000
 1,200,000-1,060,000
 1,060,000-420,000
 420,000- ?
 ca. 100,000
 75,000-45,000
 45,000-35,000
 35,000-28,000
 28,000-26,000
 26,000-12,000
 12,000-11,000

Fig. 45 . 3 . Chronology of the Ice Ages

No one can pretend that any scheme yet put forward is satisfactory and the working compromise we have adopted is justified only in reference to the broad chronology of the human species. With the end of the Warm we reach the beginning of the historical period, for traces

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were left which enable us to build up a fairly continuous story of human history concerning the past 11,000 years. Such, then, is the main physical background against which we have to construct a picture of the time and the manner of man's first appearance on the earth and the subsequent development of his mind.

17.45.5. The First Men

As with all other progressive transformations, the arrival of man on earth was a gradual process that began very slowly and gained momentum at an increasing rate. In the form of prosimians, the Order of Primates had made its appearance at the beginning of the Cainozoic Era and was thus contemporary with the ancestors of other great mammalian orders that survive to this day, such as the Insectivore, Rodentia, Carnivora and the odd and even-toed Ungulates from which deer, horses

and cattle have descended. The Suborder of the Anthropoidea, to which monkeys, apes and man belong, probably began to evolve from some basic prosimian about fifty million years ago and came into prominence during the Golden Age of Mammals more than thirty million years later. It was like each of the other mammalian groups it having its own characteristic sensitivity, in which curiosity and adaptiveness played a major part. Apes and men are classed in the Superfamily of the Hominoidea, containing the families of the Pongidae, represented today by the gorilla, chimpanzee and orang, the Hylobatidae* or gibbons, and the Hominidae or man.

By the end of the Oligocene times, about 25,000,000 years ago, most of the prosimians had disappeared and at least three distinct trends in the Hominoidea had probably developed: one towards the Pongidae, one towards the Hylobatidae, and one towards ape-like creatures called Proconsuls who differed from pongoids in the structure of their teeth, absence of simian shelf and other features. It is not impossible that a fourth trend towards the Hominidae had already appeared. Remains of a small generalized ape called *Propliopithecus* have been found in the Oligocene deposits of the moderately hot, wooded area of the Fayum, and it is thought possible that a group at the *Propliopithecus* level of evolution may have been the direct ancestors of apes and men.* It is even probable that by early Oligocene times species ancestral to living man had already differentiated from those which led to *Dryopithecus* and subsequent great apes.**

By early Miocene times, several groups of hominoids were certainly

* The Evolution of Man, edited by Sol Tax, 1960, Vol. II, p.17.

** Nature, 1965, Vol. 205, No. 4967, p. 139.

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represented in Africa. These included true pongoids, whose remains have been found with those of monkeys and galagos and who may have lived in forests; two types of ancestral gibbon, which had not yet developed the excessively long arms with which they now swing from branch to branch; and the proconsuls, who were capable of standing and walking more or less erect part of the time, and who varied in size from small to almost as large as gorillas. Many proconsuls and one of the gibbon types were found in association with fossil flora and fauna assemblages which showed that these creatures had once lived in open grasslands and between forest galleries, along the rivers that flowed into an ancient Miocene lake. In the Lower Pliocene deposits of East Africa, Dr. Leakey found fragments of a creature he named *Kenyapithecus wickeri* and which he believes should be regarded as an ancestral member

of the Hominidae. Although—possibly due to climatic causes—no fossil remains of primates are known in Africa from the Middle and Late Pliocene or earliest Villafranchian, there is no doubt that the primates continued to multiply and evolve* there, and it is now accepted that the more fossil remains of the Hominidae are discovered, the more complex will the morphological picture of man's evolution become.

17.45.5-1. MIND EVOLUTION

The four stages which we shall use for our explanation of the evolution of the Hyperzoic Era, are stages in the development of mind. They are not the same as stages of morphological development—where so much controversy is rife on the taxonomy of man and his ancestors. Nevertheless, the development of mind cannot be separated from the development of man's physical body. Hence we shall make use of discoveries which reveal the existence of different kinds of hominid at different times over the last two million years. Since we shall be arguing that the development of man involved a subtle intervention by the demiurgic intelligences—and even embodiment in hominid existences—we have to take conscious (E 4) and Creative (E 3) energy into account.

* 'In some suitable area or areas, their ability to stand erect became so rewarding that strong adaptation for such a gait took place, probably rapidly. That is, the opposable toe was lost so that the muscles of the leg could work on a stiff arched foot, and effectively push the running animal forward. The gluteous muscle of the buttock was repositioned somewhat by changes in the pelvis, adding power to the leg at the hip joint. Holding the body erect was eased by a curving back of the lower spine and a broadening and strengthening of its vertebrae. The beginnings of such trends in the pelvis, spine and trunk, however, were old, and had been a help in the original tendency

to stand or walk erect . . . these transformed animals, fully erect, were widespread in the Old World by the end of the Tertiary.' Mankind in the Making, William Howells, 1960, p. 336.

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Iking beyond life, these act independently of genetically conditioned life. The various species—or sub-species—of man will be used, therefore, only to indicate the stages. In certain places, we will even go so far as to identify provisionally a stage with a particular species for a certain period. We recognize, however, that there is as yet no coherent picture of anything like an 'evolutionary sequence' for man. This is to be expected since in the Hyperzoic Era, progress lies in the development of minds, the organization of consciousness, the construction of selves, and the preparation of man for union with Individuality. In all this, taxonomy serves only as a distant trace. We shall have to rely very much on our understanding of the structure of the human totality in order to construct a sequence of development which we can link with what evidence we have.

Throughout the evolution of life there have always appeared specific visible manifestations of the great creative steps—which in some way or other, persist into the Present. A creative step can never be limited to the emergence of some specific form of life: it concerns the totality and its progress towards the future destiny of life in the establishment of Personal Individualities on the earth. Nevertheless, specific forms have appeared as if to mark the transition. In the case of man, and the evolution of man, we repeatedly see a transition in the progress of hominization reflected in the appearance of a new strain of hominid. The new strain emerges later than the step made invisibly in the psychic realm. This we would expect, the creative energy producing results at all levels, but the 'higher' responding more 'quickly' than the 'lower'. These two facets of the emergence of new strains and the development of mind should be kept constantly before us.

17.45.5.2. DATING THE TRANSITION TO MAN

Before we attempt to assess the character of the specifically hominine transition, separating man from ape, we must look into the matter of dating. Until comparatively recently, it was commonly supposed that man appeared after the beginning of the first glaciation of Gunz, and that this gave him an antiquity of about 600,000 years. Both these suppositions have been upset by the new chronology of the Hyperzoic Era discussed in the last section and by the dating of undoubted hominid fossils, notably those discovered recently by Dr. Louis Leakey at Olduvai Gorge in Tanganyika. These could be dated within definite limits by the potassium-argon method, thanks to the presence both below and above them of volcanic ash. The K/A method can be applied only to igneous rock and gives the time since the rocks were heated to the

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temperature at which argon is driven out. It will not work with sedimentary rocks and is therefore usually restricted to very ancient strata. The presence of volcanic ash at Olduvai must be regarded as an unusual stroke of fortune. The upper bed gave an age of 1,550,000 and the lower of 1,850,000 years before the present.* Evernden and Curtis estimated the age of the first Olduvai hominid to be found, as 1,750,000 years, which makes him nearly a quarter of a million years older than the beginning of the glaciation of Gunz about 1,500,000 years ago; and he does not belong to the very first stage of hominization. The point of this evidence is that the Ice Age cannot be invoked as a causal agent. The deterioration of climates in the later Pliocene was certainly too gradual to exert a 'survival pressure' that would account for the change of habits implied by hominization.

17.45.5.3. MAN AND PRE-MAN

The first fossil remains of a genuine early hominid to be discovered was a skull found in South Africa by Dart in 1924, which he recognized as that of a 'man-ape' and named 'Australopithecus'. It was not for a further twenty years, however, that, in consequence of numerous finds by Dart and Broom in the Transvaal, the australopithecines were finally established as creatures to be regarded as ancestral men rather than as apes. Later finds, especially in South Africa, have added greatly to our knowledge; but it must always be remembered that such fossil remains are scarce and fragmentary and that much is still obscure and under

discussion.

The australopithecines were fully erect and lived in open grassland country. Their brains were small, but they used sticks and stones as weapons and implements and some of them appear to have fashioned primitive stone tools. Their diet was varied and seems to have included meat. Several types of *Australopithecus* are known. One, *A. africanus*, stood from 3 ft. 4 ins. to 4 ft. high and had a smooth brow but rather a monkey-like face. A second group, known as *Paranthropus*, was larger and had a crest or ridge along the top of the head and enormous jaws. Members of these groups had a cranial capacity of from 450 to 550 c.c. The skull of one, found at Olduvai, larger and more like man in some respects, was called by Leakey 'Zinjanthropus boisei.' Remains of a juvenile hominid and an adult female were found on the same site in

* 'The reliability of K/A dating at Olduvai has been questioned. Thus the underlying basalt has been dated at 1.8 m.y. but as it has normal geomagnetic polarity, it is most unlikely to be less than 2.5 m.y. in view of the considerable evidence that the geomagnetic field has reversed polarity between 1 m.y. and 2.5 m.y.' McDougall and Tarling, *Frameworks for Dating Fossil Man*, Oakley, 1964, p. 292, note.

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1960, which included enough of one skull to enable estimates of its cranial capacity to be made; these estimates ranged from 642.7 to 723.6 c.c., and all were greater than any known australopithecine and less than any known type of man. These were the remains dated at 1,700,000 years before the present. Bones and teeth apparently belonging to the same species were later found in five other places. This species, which was considerably more 'human' than other australopithecines, was named '*Homo habilis*' or man of skill.* No facial remains have yet been found, but *H. habilis* had a receding chin, was probably about 4 ft. tall, and walked like man although not with man's distinctive striding gait. Fragmentary remains of a hominid of early Middle Pleistocene date, found in South Africa, are so advanced that they have been thought to represent a type of *Homo erectus*. This type has been named '*Telanthropus capensis*', but it is now suggested that it may prove to be a form

of *H. habilis*. Remains of the latter found by Leakey in East Africa vary in date from Villafranchian to early Middle Pleistocene.

Now, the interesting fact emerges that although some of these kinds of primitive man are so much more advanced than others, they must have been contemporaneous. Two of the sites where *Homo habilis* was found are geologically earlier than that which yielded the *Zinjanthropus boisei* skull and one was of the same period—the late Villafranchian or Early Pleistocene. All known remains of *Australopithecus africanus* are also of this time. So all three must have existed at the same period and have evolved during the Pliocene. But *Paranthropus* and *Telanthropus* in South Africa, a *Zinjanthropus* jaw found at Lake Natron in 1964, and *H. habilis* found in three places at Olduvai in 1963, all date from the earliest part of the Middle Pleistocene, that is, from the Gunz-Mindel interglacial. Thus *Australopithecus* and *Homo habilis* must have lived in Africa for at least 320,000 years and possibly very much longer. Man, in his early forms, certainly lived through the transition from the Cainozoic to the Hyperzoic Era. But it seems probable that he existed only in Africa during that transition, for very primitive stone tools like those discovered at Olduvai and in South Africa are found on open sites in several other places both north and south of the Sahara in association with Villafranchian fauna, whereas neither tools nor hominid remains have yet been found on Villafranchian sites in Europe or Asia.

Human remains from the early Middle Pleistocene have been found elsewhere, especially in Java and China. Unfortunately, great confusion prevails in their classification, due partly to their fragmentary character

* Leakey, *Nature*, Vol. 202, p. 5. But see the controversy over the status of *H. habilis*, *Nature*, Vol. 209, p. 953f.

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and partly to a tendency in discoverers of new sites to interpret them as evidence of a distinct species or even genus. We could not hope to deal with all the evidences of early men, especially in the light of recent discoveries. No total picture is yet possible. According to present convention there are only two valid genera of the Hominidae: *Australopithecus* and *Homo** According to this view, all the types of very primitive or 'pre-human' men—such as *Australopithecus africanus*, *Paranthropus*—and even *Homo habilis*—are classed as *Australopithecus*, and the various Pithecanthropines are regarded as a single species, *Homo erectus*. For the purpose of our further investigations, we shall postulate four main groups in the development of human organization, using as our framework the usual broad classification of man into: *Australopithecus*, *Homo erectus*, *Homo sapiens* and *Homo sapiens sapiens*. Though these

by no means represent a morphological chain, one evolving out of the other in temporal sequence, they do seem to indicate definite phases in the development of man. With the present state of evidence, we can only broadly indicate their antiquity and the specimens which belong to them. We have, in fact, a cluster of morphological types for each stage, rather than a set of species. Indeed, modern taxonomy is tending more and more to take into account the variety and complexity of the forms of life by dealing in clusters, individuals, denes, populations, groups, etc. In the Hyperzoic Era, we would expect to find, relative to what went before, a rapid succession of a whole variety of morphological groups. Our four groups will be briefly surveyed:

17.45.5.4. GROUP I. AUSTRALOPITHECUS

In all probability, australopithecines were the 'field of action' for the arising of true men, and we have seen that this genus lived through the transition from the Cainozoic to the Hyperzoic Era. The numerous remains discovered indicate that the group was large and this is confirmed by the number of species and sub-species reported. Their brain capacity was less than half that of modern man. They were fully erect and used sticks and stones as weapons and instruments, even if they did not actually fashion these. But, although Leakey mentions that *Zinjanthropus boisei* had a type of palate associated with articulate speech,**they could not have possessed human speech. We will provisionally ascribe the date of 3,500,000 years before the present to the origination of this precursor of early man. No remains of the *A. africanus* type are known later than the Lower Pleistocene, but the larger,

* Campbell, 1963, Oakley, 1964.

**The Evolution of Man, Vol. II, edited by Sol Tax, University of Chicago, 1960.

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Paranthropus type was certainly still living in the early part of the Middle Pleistocene.

17.45.5.5. GROUP II. HOMO ERECTUS

As we have said, *Homo habilis* and *Meganthropus* of Java probably mark the actual transition to true man. It seems fairly certain that the former originated the earliest culture, known as the Oldowan, which is characterized by pebbles roughly worked to make cutting and chopping tools. These primitive types of *Homo erectus* are known from the Villafranchan and survived into the Middle Pleistocene, for a time overlapping the next grade of man—who may have killed them off. Tools of the Oldowan culture have been found in South and East Africa, Abyssinia, Morocco and Algeria, and there is little doubt that their makers spread over the African grasslands and savannah in a comparatively short time. In the earlier Middle Pleistocene a few

pebbles at Olduvai began to be worked all round to form the first hand-axes of the Chellean culture: there is little doubt that this culture evolved directly out of the Oldowan.

Peking Man possessed quite useful tools. He had choppers and chopping tools, employing some of the flakes left over from fashioning them as other instruments and sometimes reworking these to form scrapers which were probably used to remove flesh from bones and for wood-working. He hunted and killed large animals, and the first definite evidence of firemaking comes from the Choukoutien cave, where fires were used not only for warmth but also for cooking and for hardening wooden spears. Some progress was made in tool-making here, but it was extremely small in proportion to the thousands of years during which the cave was occupied.

The early Middle Pleistocene was a time of dispersals. Probably the first of these was into South-East Asia, but tools and fragmentary human fossils are also found in Northern India, the Near East and Europe.

Only one important European fossil is known from this period however: this is the Mauer mandible, or 'Heidelberg Jaw', that dates from the Gunz-Mindel interglacial. It resembles neither *Pithecanthropus* of Asia nor contemporary African jaws, and looks rather modern in some respects, but without more of the skull it is impossible to tell whether its owner was *Homo erectus* or *Homo sapiens*.

This complex group constitutes evidence of the first true men—able to communicate by speech, make and use instruments and live in colonies for shelter and protection from their enemies. In various

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transitional groups *Homo erectus* lived through the period of the Mindel glaciation and the immensely long interglacial of Mindel-Riss. It is almost certain that he had techniques of constructing shelter and, by some means, learnt how to prepare and use animal pelts to protect himself from the damp and cold. It appears that around 1,000,000 years ago the main transition was completed and *Homo erectus* dominated the field of action—true man.

17.45.5.6. GROUP III. *HOMO SAPIENS*

In the Upper Pleistocene, the period of the Riss-Wurm Interglacial and the first part of the Wurm glaciation provides abundant evidence of the first men known to be capable of cultural traditions, and of

religious beliefs of some sort evinced by ritual burial of the dead. We shall call them *Homo sapiens*; the best-known type of which is *neanderthalensis*. They had forerunners.

In Europe, traces of *Homo sapiens* have been found dating from the Mindel-Riss interglacial. At that time, southern and western Europe were hot regions that man could have reached from South-Western Asia, or from Africa, by way of the Near Eastern land bridge. Similar specimens have been found dating from the very warm Riss-Wiirm interglacial. But the later part of this interglacial shows a change. Skulls appear with features which foreshadows the true Neanderthals. At the same time, other discoveries show the existence of a slight people with low skulls and heavy brows, but with round heads, like those of many Central Europeans.

The true Neanderthals were as a rule short and large boned, with long, low skulls, sloping foreheads, heavy undivided brow ridges and large, pointed faces with big projecting noses and small or receding chins. Their brain capacity was as large or larger than that of modern man. They dwelt in caves at times, and their culture was the Mousterian or Levallois-Mousterian, a complex of earlier tool-making techniques which they learned to render more efficient. This people flourished from the beginning of the Early Wurm glaciation into the first part of the warm Gottweig interstadial, which was succeeded by the Main Wurm glacial period. As might have been expected, they preferred the warmer areas, and their traces are found chiefly in western and southern Europe, the Crimea, the coasts of Lebanon and Palestine, parts of Iraq and Iran, Soviet Central Asia, Afghanistan, and—from a late period—North Africa.

The Neanderthals of western Europe appear to have been an

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isolated population, possibly with a thin line of communication from Germany across Czechoslovakia and Hungary to the Black Sea.

In Italy, the Mousterian culture has been traced back to the period of Riss and may have evolved then. Despite regional variability, all the known western Neanderthals are much alike, and it is they who represent the famous 'Neanderthal Man', although they were far less apelike and brutal looking than their popular image. Probably in part through isolation and in part through adaptation to cold, their earlier characteristics became accentuated. Their bodies grew more squat and powerful, with deep chests, short necks and broad hands and feet; their noses and brow ridges became still larger, and their heads longer and more globular at the back. They were not short, however—the males averaging about 5 ft. 4 ins. or 5 ft. 6 ins.; they were strongly right-handed, and their cranial capacities were about 1,525-1,640 c.c. in males and 1,300-1,425 c.c. in females. But they seem to have become

over-specialized or crystallized and by about 30,000 b.p. they were extinct.

This exaggerated type of Neanderthaler was not exclusively confined to Europe for it has been found in Uzbekistan and Northern Iraq. But most of the Neanderthal population remained less specialized, and during the period of the Early Wurm glaciation and the beginning of the ensuing interglacial, included Neanderthalers of a less extreme form and others whose appearance was scarcely Neanderthaloid at all but more like modern men of the 'Caucasoid' type, such as were found at Muqharetes-Skhul on Mt. Carmel, Palestine.

Returning to the Far East and Africa, we find that *Homo sapiens* had arrived there also. As has been remarked already, low skulls, small chins and heavy brow ridges are fairly general in primitive types of man and may still be seen today in some parts of the world. When these are found in fossil skulls with fairly large cranial capacities, however, they are usually termed Neanderthaloid; but this does not mean that their owners were necessarily connected racially with the true Neanderthalers. After the Eemian interglacial, more and more traces accumulate of a whole variety of human beings far nearer to modern man than the European late Neanderthalers. We shall group all this variety under *Homo sapiens* and set its beginning towards the end of the interglacial which came about 120,000 years ago according to Ericson and Wollin. This group will include all the hominines who made a step beyond the *H. erectus* phase, with the exception of the late extreme Neanderthalers, nor it is generally agreed that this sub-species is one that eventually deviated from the progression towards modern man.



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17.45.5.7. GROUP IV. *HOMO SAPIENS SAPIENS*

The origin of creative man, or *Homo sapiens sapiens* in current terminology, is still unknown. One theory is that he arose as a single independent line; another that he was descended from all the men of the earlier Pleistocene, evolving independently in widely separated parts of the world; and there are many variations of these theories. Again, some authorities think, not without grounds, that the less specialized Neanderthalers or Neanderthaloids developed into *Homo sapiens sapiens* somewhere in western Asia or northern India, others, pointing to the Kanjera fossils, believe that he first appeared in Africa. In any case, it is certain the Group III increased in complexity up to the middle of the Wurm glaciation, and that around that time a whole variety of hominies

co-existed. Then, suddenly, from about 35,000 to 40,000 years ago, men physically like ourselves appeared and spread rapidly throughout Asia, Africa and Europe. The rest were extinguished.

17.45.6. The Origins of Man

The generally accepted view of students of human origins is that the emergence of men took place by a happy accident. All books on the subject start with this premise: we shall cite from one or two to bring the point home. In their study of Pleistocene cultures, Ericson and Wollin, whose brilliant pioneering work on dating the Ice Ages has won our admiration, write:* 'It must have begun as a chance mutation that favoured a tendency to rise on the hind legs and thereby to free the fore-limbs. In most animals, such a mutation would have come to an evolutionary dead end . . . But the prehuman primate had already passed through a stage of tree-climbing during which selection had strongly favoured the ability to grasp. Thus by pure chance the mutant gene which favoured the freeing of the forepaws, or hands, of a certain primate fell on fertile ground. It was a portentous event and has had repercussions throughout the world of living things.'

The doctrine of evolution by blind chance, that we rejected as incompetent to account for any of the great forward leaps in the ascent of life, encounters a new difficulty in explaining the genesis of human kind. Man is a being who not only entertains purposes but acts in order to realize them. If such activity is totally absent in preceding nature, how are we to account for its appearance at such a late stage?

Teilhard de Chardin seeks to reconcile the two by postulating a 'critical stage of complexification' at which biological purposiveness

* loc. cit., p. 229.

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makes its appearance. In a lecture on 'The Human Rebound of Evolution', he said:* 'It then appears that if the neo-Darwinians are right (as they possibly and indeed probably are) in claiming that in the pre-human zones of life, there is nothing but the play of chance selection to be detected in the advance of the organized world, from the time of man, on the contrary it is the neo-Lamarckians who have the better of the argument, since at this level the force of internal arrangement begins to be clearly manifest in the process of evolution. Which amounts to saying that biological purposiveness (as with so many other physical parameters of the universe) is not everywhere apparent in the living world, but that it only shows itself above a certain level.' This passage, which is characteristic of de Chardin's thinking, implies acceptance of blind chance, not only up to but including the appearance of man, as the main if not the only agent of progress.

It would be very hard to avoid some such conclusion as this if we had not seen purpose and plan in all the earlier stages; and if, in addition, we had not seen the emergence, the organization and the refinement of sensitivity. We must now put our scheme to the supreme test: the elucidation of the step from animal to man.

There is no dispute as regards the morphological sequence. Even if the details are still obscure and some stages may have to be modified and others inserted we shall agree that the human organism was developed by normal evolutionary stages from some ancestral primate. We can represent the phylogenetic sequence somewhat as follows:

Up to the stage of the *Australopithecus*, a genus already destined for hominization, the development of the primates is not unlike that of other orders such as the Ungulates which, in the Cainozoic, produced many genera such as *Equus*, the horse, that developed in seven stages by unaccountable jumps from the little three-toed *Eohippus* of the Eocene. With the Primates, as with other Mammalian orders, there was a progressive differentiation of sensitivity and a high degree of refinement by the Pliocene. The line of unmistakable hominization probably began to develop independently of the great anthropoid apes as far back as the Miocene—some twenty million years ago, or even earlier.** This bifurcation cannot readily be accounted for by the usual mechanism of speciation: favourable chance mutation and natural selection operating through harsh environmental conditions or population pressure. We have already given our reasons for doubting that anything can be found in the geological or climatological record to suggest that there was any

* P. T. de Chardin, *The Future of Man*, Eng. trs., p. 200.

** *Nature*, Vol. 205, p. 139.

environmental influence that would 'select' ancestral anthropoids with hominid characteristics for preferential development.

We must stop here to decide the question: in what did the step or steps from ape-like creatures to man consist? There must have been several steps; the first was probably the freeing of the hands* by a predominantly erect posture. Next, would come the use of tools and weapons. Third, would be communication by language. This last must be considered the decisively human step, for without it man would not be man. Skills as great as those required for making tools are possessed naturally by other mammals, such as chimpanzees and beavers; or can easily be learned, as by porpoises and dolphins.

Are we to suppose that a chance mutation induced an early *Australopithecus* to express itself by means of an artificially constructed set of

noises? The point here is that recognition of speech does not come by sensitivity alone, but requires consciousness also. Over a period of three years, the present writer had the opportunity of closely studying an aphasic youth whose power of speech had not developed owing to a brain injury. His sensitivity was fully normal. He could recognize and distinguish objects and sounds. He could use his hands not only to feed himself but to open boxes and arrange objects to his liking. But three years' patient effort could elicit only one recognizable sound: the monosyllable *ta* which had to serve for every kind of request. It was also very clear that the consciousness had been in some way isolated from the sensitivity.

Without such a personal experience, it is hard to appreciate the extent to which human language differs from the 'grunts and groans of the forest'. Considered in abstraction from direct experience, language seems to need no explanation; it can be supposed to come 'naturally' to creatures accustomed to use their hands to make weapons and to hunt in groups. This is perhaps why the discovery of the use of flints and fire is cited as evidence of progress and little is said about language, except that its acquisition has been accompanied by changes in the shape of the skull. These changes are commonly supposed to have followed rather than caused the acquisition of speech.

Let us now formulate a simple hypothesis: Man learned to speak because he had a mind.

This implies the rule: 'no mind, no speech!' This rule is not arbitrary. With human beings, the mind may fail to develop from some congenital deficiency, or it may be put out of action by disease or drugs: in all

* Cf. The work of W. Koehler on The Mentality of Apes, Berlin, 1922. Probably all the Hominoidea could use their hands for purposes other than climbing,

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cases speech goes with it. The sound of words may remain, but the necessary element of communication is lost. Let it be recalled that we have given a specific definition of 'mind': it is the combination of sensitivity (E 5) and consciousness (E 4) which makes our subjective experience possible.* Together with the necessary automatisms, this is the combination that must be present if there is to be speech.

It may be objected that all animals are able to communicate and that human speech is only a development of the grunts and groans of the forest. This disregards the special character of human speech that consists in storing impressions and reproducing them by a structured combination of sounds. There is no evidence that any animal communicates in this way or can be taught to do so. It may again be objected

that we have no evidence that early man was capable of verbal communication as we understand it. To this we would reply: 'no speech, no mind; no mind, no man.' Mind is the mark of man and speech is the mark of mind. The anatomy of *Homo erectus* is consistent with the belief that he was capable of true verbal communication. The great step from *Australopithecus* with a brain capacity of 600 c.c. or less to *Homo erectus* with one of 900 to 1,000 or more would scarcely have been made without a mind to use and enjoy the added power that a large brain has to offer.

It cannot be said that this argument is decisive. If we had been satisfied that all the previous stages in the evolution of life gave no evidence of the coming of mind, we might well be prepared to agree with Teilhard de Chardin that mind appeared after man himself—and slowly at that. But we have seen how, stage by stage, there has been three-fold evidence that mind was on the way. The evidence of conscious guidance by Demiurgic Intelligence strongly suggested that the intention was to bring consciousness into life. At the same time within life itself, we have seen sensitivity emerging, organizing and being refined in preparation for some future event. Thirdly, we have seen the development of a variety of automatisms all of which have later proved to be significant for the formation of the human being.

The three paths of Consciousness (E 4) Sensitivity (E 5) and Automatism (E 6) converge towards Mind, that is, towards man. No one disputes that man, as we know him today, differs in a radical manner from any other animal or that the difference consists precisely in the fact that man has a mind. Those who would strenuously oppose the idea of Involution guided by any form of High Mind or Intelligence, would assent to the doctrine that if evolution has been a matter of blind chance up to the advent of modern man, it can and must now become intentional

* Cf. Vol. III, Chapter 39, Section 15.39.5.4.

and conscious. This doctrine would be meaningless if minds as we know them had been present in the animals of the Cainozoic whether Primates or not. Whatever way we look at it, we must all agree that a very great and decisive step has been made at some time. It is surely reasonable to suppose that this step was made when man first became man.

It is, of course, possible to retain the hypothesis that consciousness is the ingredient of mind that distinguishes man from the animals. We could suppose that conscious energy is attracted by sensitive energy as it attains a certain degree of organization and that, in this way, mind evolves as a consequence of the evolution of body. The fatal objection to this supposition is that we find in animals and birds plenty of examples of highly organized and exquisitely refined sensitivity: but never a trace of true mind. Another objection is that we can verify in our own

experience that sensitivity will not attract consciousness. We cannot 'make' ourselves conscious, nor can we 'keep' ourselves conscious, by any action made with sensitivity alone. These facts of observation are confirmed a priori by the nature of consciousness. It is not a vital but a cosmic energy and it can be concentrated only by the higher energy of creativity (E 3). The gradual emergence of mind from a non-mental starting-point is sometimes said to have occurred through the use of tools.* Those who hold this view place the beginnings of mental imagery very early. This really will not do. The mind of man is a totally different instrument from the sensorium of an ape. This has been proved again and again by workers in animal psychology. Mental images are quite different from sense perceptions. The human child forms mental images from an early age, but animals never do.

17.45.6.1. THE COMING OF MAN

We must hold fast to the recognition that man was destined for manhood millions of years before he became man. Let us quote again from Teilhard de Chardin: 'The fact was noted long ago: what has enabled man zoologically to emerge and triumph upon earth, is that he has avoided the anatomical mechanization of his body. In all other animals we find a tendency, irresistible and clearly apparent, for the

* For example, by Ericson and Wollin, loc. cit., p. 229. 'Until fairly recently, it has been rather generally held that man evolved almost to his present structural state and then discovered tools and the new ways of life to which they are the keys ... as we see the matter now, it seems obvious that the mechanical perfection and fine nervous control of the hand could not have evolved without long and powerful selective pressure, something which only the use of tools could provide.' Again, *ibid.*, p. 230. 'His chance combination of genes had given rise to a brain that could follow through from accidentally broken stone, to stone broken by design . . . perpetuate the genetic strain of a hominid who could form a mental image, etc.'

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living creature to convert its own limbs into tools, its teeth and even its face. We see paws turned into pincers, paws equipped with hooves for running, burrowing paws and muzzles, winged paws, beaks, tusks and so on—innumerable adaptations giving birth to as many phyla, and each ending in a blind-alley of specialization. On this dangerous slope leading to organic imprisonment, man alone has pulled up in time. Having arrived at the tetrapod stage, he contrived to stay there without further reducing the versatility of his limbs.* This passage is characteristic of the brilliant but confused thinking of Father Pierre de Chardin. 'Man' is said to have done various things long before he existed. 'He pulled up in time.' Yes, indeed—millions of years before he appeared on the earth in human form. The vice of hypostatization thus constantly creeps into accounts of the evolutionary process. Not a single author is exempt from it. If they would impose on themselves

the discipline of referring at all times explicitly to the only agent that they will admit—blind chance—the absurdity of many statements would be apparent. If one wishes to repudiate teleology, one must not use teleological forms of speech. It is probable that if forced to give an explicit answer to the question whether he sees no agent whatever except blind chance in the processes of nature, almost every biologist would hedge and refer to 'tendencies', or even to a 'tendency', for processes to go in such a way as to produce more complex—that is 'higher'—forms. All this is still confused and dangerous thinking, that comes from an unconscious fear that the foundations of the scientific activity will be undermined if any kind of supernatural agency is admitted. This fear is unjustified. There is a legitimate scientific faith which requires us to accept the world as we find it with complete confidence that however disconcerting a discovery may be at first, it will eventually take its place in a consistent and satisfying world-picture. If we discover that the traces of the past cannot be discussed—let alone understood—satisfactorily without reference to a purpose and a guiding intelligence, then it is not unscientific freely to admit it. Indeed, it is right and proper to go further and accept what we see exemplified over and over again as the basis of a generalization or even a hypothesis. For convenience of discussion we have expressed this generalization in terms of the Demiurgic Intelligences. Looked at objectively, this hypothesis does no more than put into explicit and limited terms the vague notions of 'tendency' and 'directiveness' that are implicit in current thinking about Evolution. It can be said to express the Neo-Lamarckian

* The Future of Man, p. 169. 'The Formation of the Noosphere'. The reference in the first sentence is to Edouard Le Roy *Les Origines humaines et le Probleme de l'Intelligence*.

element that is never wholly absent even in the reasoning of professed Darwinians.

Let us then press boldly ahead to see how the hypothesis of Plan, Pattern and Demiurgic Intelligences applies to the origin of man. Surely, it is obvious that everything fits beautifully into place. The advent of mind was foreseen from the start—this is what Evolution was all about. The advent of mind required a specially developed sensitivity. This was prepared stage by stage until, with the Order of Mammals, sensitivity fine enough for the formation of mind was available.

We now stand at a moment of time—say ten or fifteen million years ago—when the choice of the vehicle of mind had to be made. Teilhard de Chardin is perfectly correct in saying that this called for an arrest of anatomical specialization. He is wrong only in being unwilling to admit that this must mean that there was Intelligence before Mind. The

choice having been made, it was necessary to protect the future human organism from the tendency to specialization. We assume that the Demiurgic Intelligences were wholly concentrated upon the phylogenesis of man. There is a remarkable standstill throughout the rest of the Biosphere. No new families of animals developed during the Pliocene, no old families died out. We have to make an imaginative leap to the vast savannahs and grasslands of Africa* which several families of the Hominoidea had by now exchanged for the forest and woodlands of their ancestors, and see the refinement and transformation of sensitivity in one obscure family—the Hominidae, who walked erect. The hominid's experience was still pre-mental because there were no mental images that could connect the present moment with other moments and yet the progress made was very great. After nearly four thousand millions years, the Demiurgic Intelligences had at length succeeded in producing a living organism into which they could begin to enter. The highly organized sensitivity of the hominid could receive direction from a higher consciousness.

The first step made was almost certainly towards the use of tools. This was no lucky accident but an inspiration from the Demiurgic Intelligence working within the sensitivity. With that step, the transition to the australopithecine phase was made. Let us suppose that it happened three to four million years ago. We have now reached the 'missing link' that played so great a part in Darwin's 'Descent of Man'. According to our picture of the event, the first tool-using hominid appeared long before the earliest human artifacts yet discovered. This is wholly in

* Evidence appears increasingly to point to this, although it is still suggested in some quarters that the transition occurred in Asia.

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keeping with the supposition that the preparation of mind was, at first, confined to relatively small numbers of carefully selected varieties—perhaps a definite sub-species of the Hominoidea. Why do we postulate so great an antiquity to the first tool-using hominid? Because we agree that the use of tools preceded the advent of mind. By using tools the sensitivity is developed and organized in a special way. It is prepared for the formation of mental images. Tool-using requires recognition of natural objects and their transformations: but it does not require the conscious recognition necessary for the development of new and better instruments.

We have now returned to our threshold-man. We accept the view now widely held that this was a sub-species of the genus *Australopithecus* although this is in no way necessary for the argument. There must, in any case, have been a stage at which conscious intelligence stood on the threshold waiting for a suitable vehicle to be prepared. We also accept

the view that the first men appeared between one and a quarter and two million years ago, though this also is not a matter of primary significance. The really important point is to decide what the step from animal to man essentially requires.

17.45.7. The Nature of Mind

Mind is primarily a field of experience and action. All that we call deliberation and intention is accomplished in the mind. Mind is a field of experience of the present moment, memory and the anticipation of the future. It is the seat of the Self-hood of man, if not the very stuff of Self. We are entirely committed to the materiality of mind. Mind is made of the same basic stuff, hyle, as everything else that exists: only it is in very fine states of energy. The mind-stuff is no doubt everywhere and in everything; but it only becomes a mind when it is composed and organized in a particular way.

The view is commonly held that there has been an evolution of mind parallel to the evolution of body, but little or no attention has been paid to the organization that this requires. T. de Chardin in his *Phenomenon of Man* develops the theme persuasively, but far too vaguely. His Noosphere is not mind, but a consequence of mind. 'In mass, as though by a stroke of genius on the part of life', he says, 'heredity, hitherto primarily chromosomic becomes primarily Noospheric—transmitted, that is to say, by the surrounding environment.'* Apart from the objectionable and so often repeated hypostatization of 'Life', this kind of statement misses the whole point. What we need to know is what Mind

* Loc. cit., p. 163.



or Nous is, and how it came to be organized to give in man a form and experience so different from that of other animals.

The place of mind is at one of the two great discontinuities of the Natural Order—the other being the transition from inert matter to living forms. Historically, the appearance of mind is an event equal in significance to the appearance of life. This is generally agreed, but its importance is obscured by the tendency to regard evolution as a continuous process in which each new development emerges out of those that came before.

The elements of mind were certainly present before the appearance of the mental structure of man. Sensitivity developed throughout the Cainozoic Era and produced a vast pool of differentiated and refined

sensitive energy (E 5) with qualities suitable for forming human minds. Consciousness (E 4) was also present—not localized in living beings, but rather as a field of universal energy, concentrated in the Demiurgic Intelligences, but otherwise without organization.

Mind is not simply a degree of complexity within a continuous process of complexification as de Chardin and other evolutionary theorists suppose. It is a structure of a special kind that differs from others. It has properties that are not observable elsewhere. This does not mean that mind is a 'special creation' outside of the evolutionary process, but rather that it is a major point of discontinuity reached and, in its turn, transcended by the discrete steps or jumps which can be found in all developmental processes. The arising of mind required a very special step, namely, coalescence into organized structures of the energies of life and the cosmic energies within the transition region E 4-E 5. Until this connection was made there were no personal minds and there could be neither Self-hood nor Individuality within the Biosphere.

In the pre-mental stages, many of the attributes of mind were clearly present in combinations of the sensitive and automatic energies.

Less specific attention has been devoted in the foregoing pages to the automatism within life than this important property merits. Every animal uses automatic energy (E 6) to coordinate its functional activity. The automatic energy must in the process acquire a certain degree of structuring—though not of the same kind as the experiential impregnation of sensitivity. The immense field of animal instinct which we have scarcely glanced at, is most easily made comprehensible by supposing that the automatic energy can produce patterns of activity that are transmitted by heredity and yet not reducible to physico-chemical mechanisms. We can conclude from such a hypothesis that habits of life repeated over a very large number of generations will 'organize'

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the automatic energy of a given animal genus. This may well be the simplest expression of the neo-Lamarckian thesis. Be that as it may, we should not find it difficult to agree that, in one form or another, the behaviour patterns of the hominid *Australopithecus* had been well organized by prolonged practice in the use of tools and probably also of non-verbal communication. The development of the hands alone would bring about a high degree of organization of automatism. The refinement of sensitivity in addition would pass beyond the limitations of fixed instinctive behaviour to reach the power to acquire skills by practice. This again would bring *Australopithecus* to the threshold of mind.

There remains the third and most significant element: consciousness (E 4). In our scheme of energies, consciousness belongs to the Tetrad of Cosmic Energies. It is not one of the vital energies and it is not necessary for life. We cannot demonstrate that animals are without consciousness, but we can very easily prove to ourselves that a great part of our own lives—including nearly all our vital activity—proceeds without the participation of consciousness.* The clear recognition that consciousness is something over and above the pattern of life is the key to understanding the problem before us. After all, the study of the mind is a problem of psychology; or rather it is the whole problem of psychology. Psychology begins and ends with mind. Therefore, we must necessarily turn to psychology in order to study the genesis of mind. Thus it happens that we are better equipped to understand how man's mind arose than how his body evolved. But for this, we must really know mind. Mind can be understood by mind. We cannot recognize mind through bodily behaviour. And it is impossible to tell whether a man is conscious at a given moment, though it is not difficult to say whether or not his sensitivity is concentrated or dispersed.

These observations apply to all kinds of men, at all ages and of every degree of culture or lack of culture. The distinction between sensitivity and consciousness is an objective property of existence, and it is totally independent of time and place. It must, therefore, have obtained when man first became man as completely as it does in our experience today. Once this cardinal point is established, we are bound to conclude that the mind of man could not have come into existence by the processes of life alone. This should not surprise anyone, since it is universally agreed that man is a new kind of phenomenon. The difficulty has lain hitherto in reconciling the undoubted fact that the human organism

* Cf. Vol. III, Chapter 39, Section 15.39.5.2. In the ordinary state of man consciousness is 'collapsed' into sensitivity.



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has evolved out of an animal organism with the conviction that man is different in kind, and not merely in degree, from any animal we know. We can now see that the difference is not in the organism, but in the mind, of man; and that it consists in the presence of conscious energy (E 4) associated with the sensitivity (E 5) that man shares with the other animals.

It remains to consider how consciousness entered.

If it did not come from the Autonomic World, that is, by the development of life itself, it must have come from the Hypernomic World. The means for this were already available—the Demiurgic Intelligences. We shall picture an injection of consciousness into the premental sensitivity of selected Australopithecines. This can be pictured as a kind of 'possession' by the Demiurgic Intelligence, whereby a pre-human could begin to think in a human manner. Once the contact was made, men with true minds could begin to breed and transmit the mental structure by heredity.

We must now attempt to describe the genesis of personal minds. The Demiurgic Intelligences had seen that the Predestined Moment for the arising of mind was approaching. A vast pool of suitably refined and differentiated sensitive energy had been produced during the Golden Age of the Mammals. The australopithecine finally selected to be the vehicle for the advent of mind had developed the requisite automatisms of head and eye. They were endowed with a quantum of sensitive energy more free of the automatism of behaviour-patterns than ever before. Under the influence of the Demiurgic Intelligences, operating through consciousness, they acquired skills, thereby producing a rudimentary organization of the sensitivity in preparation for the direct impact of the conscious energy. Sexual selection was guided by the demiurges who also channelled their innate curiosity into exploring the use of tools.

At this stage we must mention the Universal Individuality. No lesser will can be the master of Creative Energy (E 3) which is only two stages removed from the Prime Mover, or Transcendental Energy (E 1), that sustains all existence. The Universal Individuality does not transform, but rather maintains, the Cosmic Harmony* through the instrumentality of the Demiurgic Powers.** At this point, two mutually

* Cf. Vol. II, Chapter 35, pp. 316-320, where Cosmic Harmony is defined as that essence-quality in which culminates the static self-completion of the Creation.

** Ibid., p. 319. 'The Demiurges are the guardians of Universal Law, and, in the fulfilment of their responsibilities, the demands of the whole must inevitably take precedence over the needs of the parts.'

conflicting requirements arise: on the one hand, thinking beings able to act within the natural order are needed to assume responsibility for the evolution of life; and, on the other, intelligent beings are needed who

are capable of attaining Individuality and thereby transmitting the Plan of Creation from the hyparchic future to the present moment. These two needs are quite distinct. Mind can develop without soul—though not completely—and soul can develop without mind—though not effectively. In our study of the Spiritualization of Fact and the Realization of Value, we distinguish two series of essences, one static and the other dynamic* The one culminates in the Cosmic Harmony which can be conceived as the perfection of Mind and the other in the Ultimate Realization which is the perfection of Soul.

Mind has thus a two-fold cosmic significance. It is the self-ordering principle within existence by reason of its place between sensitivity and consciousness. This combination makes possible a two-fold awareness of what is and what might be and hence of responsible action. Mind is also linked with creativity (E 3) and automatism (E 6). Creativity makes soul-formation possible and hence union with the Individuality, which can exercise its will in creative action. Automatism makes the power of presence possible, without which mind can only dream.

The ordering activity of mind enters at an earlier stage of evolution and we find it present for a very long period of time before man began to acquire soul-powers. This raises the question of the place of the Personal Individuality in the absence of soul. The situation is not like that of the human child as we know it today, for we have the soul-stuff in us from conception, ** It is also different from that of the idiot or defective mindless human adult. The minds of early men were the minds of 'thinking animals' incapable of transforming into souls. The state of the Personal Individuality could only have been within the hyparchic future; and this is an important conclusion for it suggests that the Individuality remained united with the Universal Individuality and yet could exert a creative influence upon the mind. This may be the origin of the traditional belief in the pre-existence of souls in Paradise, which would need to be modified only by substituting the non-existential Individuality for the unformed Soul. This condition must have continued for long ages until the mind reached the degree of maturity needed for soul-making.

* Vol. II, Chapter 35, p. 318. The distinction appears in the life-cycle of man by way of the dilemma of self-hood and soul-hood. Cf. Vol. III, Chapter 39, Section 15.39.6. on the human Spirit.

** Cf. Vol. III, Chapter 40, Section 15.40.3.

Before these developments could begin, human children had to be born with minds which were conscious but not yet creative. For this there had to be a fusion of the conscious and sensitive energies accomplished by the agency of the Demiurgic powers.

There was no bodily change in this transitional phase at first. Only over thousands of generations did *Homo erectus* begin to emerge as a distinctively human group. There were the same inherited aptitudes for the use of tools, the same curiosity and the same restless activity—but these were now the instruments of a human mind. The work, at this stage, had made a great step forward, but it was not complete. Considerable organic changes were needed before the essentially human power of verbal communication could be developed. It was also necessary to convert the pool of sensitivity associated with the primal man into the Mind-Stuff Pool that we have postulated as the source of all human minds and the potential source of all human souls. Both these must have been very slow processes.

We must not forget that the human beings we are now studying had no accumulated experience of a long human past. The Mind-Stuff Pool was still almost wholly composed of animal sensitivity combined with uncontaminated conscious energy and automatic energy with very limited aptitudes. Minds formed from such material would have a very limited present moment. They would not have been able to look back far into the past or foresee much in the future. There were no human selves.

The situation was indeed a strange one, for the minds were, in their main constituent—sensitivity—almost wholly animal experience and the bodies were almost wholly animal bodies. There could be no separation of consciousness and sensitivity and therefore the experience of these primitive men must have been an animal experience transformed by wonder and the ecstasy of knowing that they were alive. This assertion may seem to border on romantic fantasy; and yet it follows of necessity from what we know of the conscious energy. When there is no conflict in the self-hood, consciousness produces a state of enhanced well-being. This euphoric condition is obtained, as we well know, when there is a dissociation of sensitivity by the action of drugs or alcohol. We also well know the ecstasy of communion with nature, when the Self empties itself of self-hood and the consciousness comes into direct contact with Life. Such experiences are not sensitive but conscious. When sensitivity is not loaded up with the content of self-hood the joy of life is easily awakened.

Here were men with almost empty child-like minds and yet capable

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of conscious experience. Probably half-a-million years passed before the Mind-Stuff Pool became charged with human experience and before

the external life of mankind began to become complicated. During that long period, there can have been no suffering but that of the animal body. It is not surprising that the experience of this period deeply impregnated the Mind-Stuff Pool when it was most receptive and has left with all the peoples of the world vague memories and longings that look back to a Golden Age when life was good.

This is not to say that there was no strife between men or that the early races lived in Paradisaical state all the time. The heritage of sensitivity bequeathed by millions of years of mammalian experience had its predatory and its libidinous elements.

The characteristics of wolf and tiger, of rat and rabbit are not suitable for the mind of man and yet the sensitivity from which man's mind was formed must have been impregnated with these as with all other animal patterns. This cannot be described as 'original sin' for no responsibility attaches to men who draw their sensitivity from the common pool. Nevertheless, the effect must have been to bring about a sharp differentiation between men (of the *Homo erectus* group) and their cousins the untransformed australopithecines. Men must have learned to fight and to destroy, tasting blood and changing both their diet and their habits in a manner that would not have been possible for apes. We shall also see later that the experience of consciousness may well have resulted in uncontrollable and dangerous excitements.

Are we to suppose that having initiated the transformation, the Demi-urgic Intelligences withdrew from the scene? This is most unlikely. Their presence was needed to avert the many disasters that must have threatened the new race, drunk with the wine of consciousness and lacking in experience to adjust themselves to their new powers. It seems most probable that consciousness could have been transferred to man only by slow degrees in proportion to the development of the mind.

A strange, but significant, question arises at this point. We referred in the last chapter to a pool of sensitivity common to the mammals and birds and said that this was being prepared for the needs of mind. In the present chapter, we have roundly declared that this sensitivity was used to create the mind of man. But we have also referred back to the Mind-Stuff Pool. Are these all one and the same thing? Is the mind of man still linked to the sensitivity of the animal world? Is the human Mind-Stuff Pool a part of a greater pool which contains all the sensitive energy of the Biosphere? We must also remember that the Mind-Stuff Pool is destined to become the Soul-Stuff Pool by infusion of the

It will not escape the perspicacious reader that this amounts almost to asking whether we believe in transmigration—as, according to tradition, it was taught by Pythagoras and the Babylonian magi—or whether we believe that the human mind-pool is totally isolated from the sensitive energy-pool of the animal world. Obviously, this question cannot be answered on evidential grounds, but it does seem probable that once sensitivity has been blended with consciousness it will not return to the same state as before. If we suppose that the reservoirs of energy are in a state of potentiality they will be in the dimension of eternity. It is most probable that these states are on different levels. So that we should have a situation somewhat as represented by the following diagram:

On this view, the animal nature of man is associated with level D and draws its sensitivity from this level; but the mind of man—that is the ground of his Self-hood—is associated with level E and draws and returns its substance from the specifically human pool. We have added a sixth level marked 'Free Conscious Energy' to suggest that Demiurgic Intelligences work on this level and inject consciousness into level E as it is required and useful.

We can picture the level E as initially empty and gradually acquiring content with the death of human beings having minds composed of the three energies. In the diagram, the Creative Energy (E 3) is not represented. This we may suppose to be associated with the Demiurgic Nature and to enter, not from Eternity, but from the Hyparchic Future. So long as the Will remains uncontaminated by conscious acceptance of the lower states of existence, it must return to its source—that is the

* As it was described in Vol. III, Chapter 40, Section 15 .40.3.

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Universal Individuality in the state of the Hyparchic Future. Thus the Will, in the initial stages, always 'preceded' man, leading him on to the fulfilment of his destiny.

At this stage, man was without access to the creative energy. He had no individual will—that was yet to come. Obviously, the transformation we discussed in Chapter 40 was also out of the question. Man had developing powers, new levels of experience, but no 'I'. The work now concentrated on the development of these powers of the newly created human mind—preparation for the joining of will with existence in complete human beings.

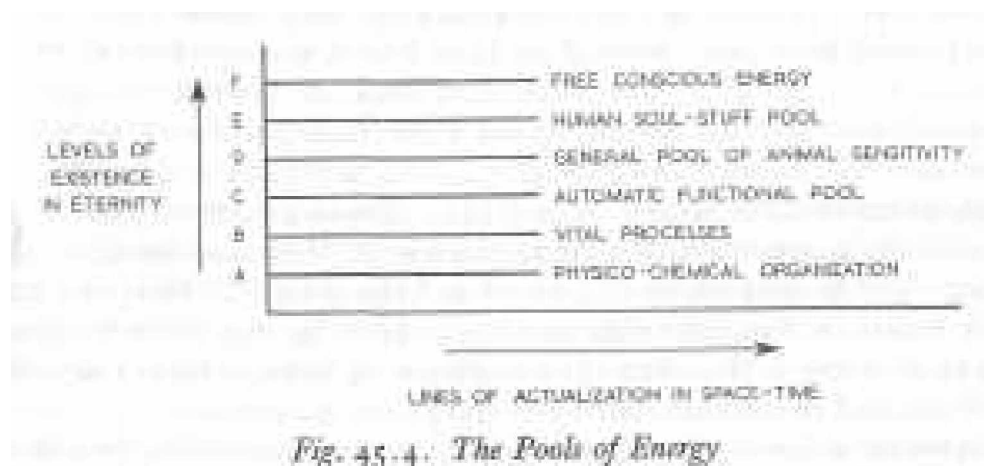
Now we can understand better why a very long period of time was needed before the next stage in man's journey could begin. It was necessary that the Mind-Stuff Pool should be established without the interference of the separate human selves, before man could begin to develop his personality and from this set out upon the quest for a per-

sonal soul. But, as we shall see later, it appears that progress was slower than it need have been.

Throughout this period, the Demiurgic Intelligences were obliged to work entirely without the conscious cooperation of the men whose destinies they were guiding. This is a wholly possible situation in view of the condition of the primitive mind. We are dealing here with true primitives, not the degenerate survivals of former cultures that are commonly called primitive. We cannot emphasize too strongly that early man was from birth to death in the state of a young child. Indeed, he was in a far more 'childlike' state than a newborn babe of our times, for we carry from our conception the burden of a million years of human experience. Man's true Age of Innocence has gone for ever and will never return upon this planet.

We can scarcely fail to recognize that all is proceeding according to a plan, the main lines of which we are beginning to discern. Life did not come on the earth by accident, nor by the working of some mysterious 'vital urge' or 'tendency to complexification'. It came in order to make a contribution to the Universal Purpose. We can see further that the contribution required the assumption by the Biosphere of responsibility for its own realization. A necessary stage was the arising of conscious beings capable of free action based on understanding. Such beings could not develop accidentally at each step, and therefore, the process had to be guided. At each step, there has been an unmistakable advance towards eventual responsibility.

We do not suggest that the entire process was predetermined: on the contrary, it has taken shape as it has developed. The three kinds of



Future: the Foreordained, the Predestined and the Predetermined have made their appropriate—and necessary—contributions to the process.*

* Cf. G. Gurdjieff, *All and Everything*, pp. 762-5- These passages are couched in Gurdjieff's difficult idiom and cannot be understood in quotation. They are, nevertheless, remarkable as containing the definite statement of a 'Divine Plan'. The transition from beings capable of locomotion (i.e., animals) to beings 'with the inherent possibility of acquiring Individual Reason' was deliberately fostered by 'Our Common Father Endlessness' with the 'Divine Idea of making use of it' (i.e., Individual Reason) 'for Himself, in the administration of the enlarging World.' The blending of sensitivity and consciousness, as the means of bringing about the transformation, is described in striking terms on pp. 764—5.

Chapter Forty-six THE AWAKENING OF MIND

17.46.1. The Four Ages of Mind

In this chapter, we shall cover a million and a half years of human history and cannot hope to give an adequate account of the greatest epic of them all: the vicissitudes of the human mind in its long march towards maturity. The subject matter is in such a state of flux at this time (November 1965) that not even a fool would venture to rush in and make definitive pronouncements. Experts disagree upon almost all the facts and their interpretation. Fortunately, we are not engaged in a critical analysis of the conflicting views on dating or taxonomy, but in an attempt to trace the History of Mind.

We shall distinguish four Ages of Mind, from the time of its conception and birth to our present moment. These may conveniently be related to the divisions of the Pleistocene proposed by Woldstedt and generally accepted by students of the vertebrate fauna of the Ice Ages. We begin with mind newly arisen at the coming of the first Ice Age.

17.46.1.1. THE INFANCY OF MIND

This may be divided into two parts. The first part corresponds to the lower Pleistocene, or the Gunz glaciation, and the Upper Villafranchian—which represents the long period of its gradual onset. Although no ice accumulated on continental land masses before the Gunz glaciation, the climate grew intensely cold in certain parts of the world, while in Others there was very heavy rainfall. We know that during the Lower pleistocene new mountains arose, great volcanic eruptions occurred, and earthquakes caused vast cracks such as the Rift Valley, the Jordan Valley and the Dead Sea. It was thus a time of change and catastrophe, and life on earth was subjected to one of the severe tests that have come periodically.

It was. the period when members of our Group I lived—Australo-j'liliecus—including *Homo habilis*. They were already present when it began and they survived it. It was *Homo habilis* and perhaps other members of this Group, who, by fashioning the first 'pebble tools' of the

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an intelligence different in quality from that of any other earthly creature.

The second part of the Infancy of Mind corresponds broadly to the Middle Pleistocene. This began with the warm interglacial of Gunz-Mindel, and was followed by the longest and most severe glaciation of Mindel, which attained two peaks and lasted for about 150,000 years. Vast sheets of ice formed over much of Europe and parts of Africa, Canada and America, with smaller ice caps in more southerly mountains. This was succeeded by the immensely long Mindel-Riss or Holstein Interglacial, which included periods of exceptionally mild weather not unlike that of the Miocene.

The first interglacial was the period of transitional types between Groups I and II: of advanced *Homo habilis* and *Telanthropus* in Africa; *Pithecanthropus* IV in Java; and, in Europe, of the owner of the mysterious Mauer mandible and his unknown relatives. Their tools were still very primitive; but, as we have seen, a few began to be worked all round to form the first handaxes of the Chellean or Abbevillian culture. This culture evolved in Africa; but, by the opening of the Mindel glaciation, it had spread widely and had even been carried to Europe. It should be said that these very early tools were fashioned in a more or less haphazard way; their makers could not repeat standard shapes or forms designed for definite purposes.*

The Mindel Glaciation and the Mindel-Riss Interglacial comprised the period of dominance of Group II or *Homo erectus*. 'Chellean Man' appeared early in this period and improved his techniques later, adding a new flaking technique known as Acheulian. In Europe, a different flake culture known as the Clactonian appeared. Towards the end of the glaciation or at the beginning of the next interglacial the pithecanthropines—'Java Man' and 'Peking Man'—came upon the scene, followed many thousands of years later by the transitional early Neanderthaloid of Europe *Homo steinheimensis*. Although he existed for so long, Peking Man does not seem to have developed tool-making beyond the haphazard stage. The peoples of the Chelles-Acheul culture, however, developed a well-defined tradition in the fully evolved hand-axe, and presumably some specialization of function is represented by the simultaneous use of hand-axes and flake-tools; moreover, the evidence suggests that they often took pride and pleasure in fashioning their tools as beautifully as possible. They probably improved wood-working skills; and certainly

they became daring and efficient hunters. But in view of the immense length of the period, the most striking feature of the cultural remains of

- Jaquetta Hawkes, *Prehistory*, Vol. I of the *History of Mankind*, p. 143.

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Homo erectus is the lack of evidence of inventiveness or enterprise. This is, of course, an important observation for our reconstruction of the *History of Mind*.

17.46.1.2. THE CHILDHOOD OF MIND

The Upper Pleistocene began with the glaciation of Riss, continuing on through the Riss-Wurm or Eemian Interglacial and the glaciations of Wurm, to the final withdrawal of the glaciers. It was characterized by extremes of cold and heat, damp and drought, by high and low sea levels, and even by great crustal movements such as produced the Rocky Mountains and the Andes. During this tumultuous time, the animal kingdom was severely shaken, and many of the older species died out and were replaced by new. Faced with every kind of threat and hardship, man began to grow up.

The Childhood of Mind corresponded to much of this period, but it may be said to have ended at some time during the Gottweig Interstadial—between the first two main glaciations of Wurm. This was the period of Group III men—of *Homo sapiens*. It was a time of development in which, perhaps most noteworthy for the *History of Mind*, man began to concern himself with questions of life, death and the Beyond.

17.46.1.3. THE ADOLESCENCE OF MIND

This corresponds to the later part of the Upper Pleistocene, from the Gottweig Interstadial to the withdrawal of the glaciers, that is, from about 45,000 to 11,000 years ago. It was the first period of Group IV, of *Homo sapiens sapiens* or modern man: the most dreaded hunter on earth; the highly skilled craftsman; the painter and sculptor.

17.46.1.4. THE MATURING OF MIND

The fourth age of Mind corresponds to the period called 'Recent' by geologists and 'Holocene' by palaeontologists. So far, it has lasted 11,000 years, and we may still be at its beginning. Compared with the hundreds of thousands of years in which the earlier ages are measured, this is deceptively short. But we must not forget the Law of Accelerated progress that warns us not to look too much at the clock—not even the atomic clock—when we are seeking to understand the workings of Mind. It may be that Mind has covered more ground in the last ten thousand years than in much longer periods of the past.

The fourth age leads up to the Modern World, and the face of the earth has changed little since it began. This history of later times is a recognizable, coherent whole, inasmuch as men settled on the land and

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became cattle breeders and farmers, built cities and began to leave intentional traces of their doings for the benefit of posterity. In the work of man from the Neolithic period onwards, we can recognize people like ourselves, with more or less the same interests and values, and quite the same abilities and weaknesses. This is not to say that there has been no progress. On the contrary, it has been a period of astonishing advances in many fields and equally astonishing stagnation in others. The point is that it forms an integral whole with our modern world and should be studied as such. We shall therefore separate it from the first three periods and treat it in another chapter.

17.46.2. The Infancy of Mind

Applying these notions to the Genesis of Mind, we must look ahead as well as backwards. We see man today with a potential for Individualization and we agree that this potential must have entered somewhere along the path of hominization. We can scarcely doubt that when mind was being formed, the purpose of it all must have already been present to some Intelligence and we have, therefore, to ask just what this implies. It means, firstly, that the Intelligence must have initiated and directed the process of Noogenesis up to the time when mind could begin to direct itself. And it means, secondly, that an Act of Will must have been accomplished whereby the potential for Individualization was implanted in the nascent mind.

We ascribe the first part of the process to the Demiurgic Intelligence working on the level of creativity (E 3) and the second part to the Universal Individuality operating in the sphere of the Unitive Energy (E 2) which we identify with Universal Love.

If we believe that the Universe is intelligently ordered and that life on earth has been guided by high, though limited Intelligences—those of the Demiurgic Powers—we must use our own intelligence to re-construct the event of mind's first appearance. Assuming a certain degree of foreknowledge—perhaps definite as regards the material world—we would expect the Demiurgic Intelligences to foresee the coming Ice Ages. They would be aware that severe and tumultuous conditions would be both a threat and an opportunity to the new kind of being that was to come into the world. Would we expect them, under the circumstances, to wait for the Ice Ages before endowing the austra-

lopithecine chosen race with mind? In their place, we would await clear indications that the Time of Trouble was on its way and then—perhaps a thousand, perhaps ten thousand generations in advance—make the decisive step and take every precaution to ensure that mind-bearing

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hominids were well-established before severe conditions arose which might destroy entire populations.

For modern man, a process that requires hundreds of thousands of years for its accomplishment seems an undertaking that no finite intelligence could guide and see through from start to finish. But we have been accustomed to regard man as the highest order of finite intelligence that participates in the history of the earth. The ancient doctrine of Angelic Powers has gone into abeyance even among theologians who give lip service to it without considering its implications, and it is totally disregarded by scientists and philosophers to whom it savours of 'magic' and 'superstition'. It is strange that we, who have had our minds opened to the immensity of the visible universe should have closed them to the immensity of the invisible. Scientists and philosophers who seek to base all explanations upon laws derived from sense-perception, are faced with the irreducible reality of consciousness. It cannot be denied that consciousness is related to time in ways that are different from the behaviour of material objects or even living organisms lacking consciousness.* There should be no theoretical difficulty in admitting the possibility that there are conscious Intelligences whose Present Moment so far transcends our own that they can embrace, within their awareness, an operation that requires half-a-million years to accomplish. Nor should we find any theoretical objection to such Intelligences having the power to act also within the smaller present moment of individual organisms.

We shall follow through our argument and examine the consequences of the theory of the conscious genesis of mind. We have already proposed a scheme whereby the Demiurgic Intelligences brought mind—through the gift of consciousness—to a selected group of australopithecines (possibly *Homo habilis*), and the Universal Individuality endowed each mind so prepared with a latent Individuality. We left the story at the point where we saw that it would be necessary to form a special reservoir of the new 'blended substance' from which minds are made.] This was bound to take a very long time, and several thousand generations would not be excessive.

We have also to remember that Mind is a two-edged weapon able to work destructively no less than constructively. As the new-born human child, is wholly dependent upon its nurse or mother, so the new-born

human* mind must have been wholly dependent upon its Demiurgic sponsors. This assertion is revolutionary, for it implies that mind, so far

* Cf. Chapter 42, Section 16.42.5.3. ** Of- The diagram of Fig. 45.4, p. 204.

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from having survival value, was so dangerous to its first possessors that they could not be left to their own devices.

In the last chapter, we surmised the euphoria of the early men, but did not emphasize the dangers of their psychological condition. Imagine a child's mind in an adult body—we see such a situation in many spastics. We can see for ourselves how consciousness associated with a disorganized sensitivity is disastrous for its possessor and those around him. It is certain that a creature such as *Australopithecus* born with consciousness (E 4) in addition to a sensitivity (E 5) organized only to the point of being able to use tools and weapons, would be liable to uncontrollable states of fear and rage that would expose him to the danger of racial extinction.

Skill had to be related to a social behaviour pattern. The activity of the mind required diversified sensitivity and this in turn called for changes of diet from vegetable to germinal sources. The nascent mind had to be trained from without and it also had to be guided from within. All these transformations correspond to the transition from an animal essence to a human essence.*

The transition is primarily one of significance and potentiality and therefore best represented by the pentad. The mind of man cannot be understood if we consider it only from the standpoint of its construction and activity. It is, pre-eminently, an instrument of integration that connects past, present and future, the human and the non-human and, most significantly of all, different levels of existence. Man, by the possession of mind remembers, recognizes and anticipates, he knows himself and his world and within this world he responds to influences of

different kinds. The organized complexity of the human mind has slowly developed through the ages; but its essential features were present even before it first arose. We can represent the situation as in Fig. 46.1.

These five modes of significance are related to the five energise ranging from vitality to creativity that directly characterize the life of man on the earth.

Vital Significance. Energy E 7 Vitality. Food and its transformation. The connection between man and the germinal forces of nature. The 'Life Force' in the mind of man.

Practical Significance. Energy E 6 Automatism. Man the Maker. The acquisition of skills and behaviour patterns. Man's bodily powers developed and guided by the Demiurgic Intelligences embodied in human form.

Personal Significance. Energy E 5 Sensitivity. Man as a potential person. The pre-personal state developing through sexual selection and imitation towards Self-hood.

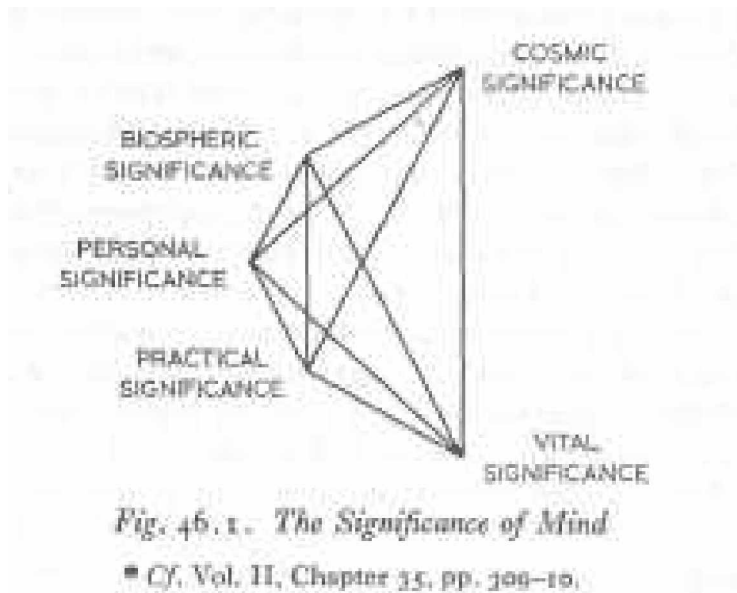
Biospheric Significance. Energy E 4 Consciousness. Man destined to rule all life on the earth. The action of the Demiurgic Intelligences within the mind. This is a telepathic contact not to be confused with the acquisition of skills and behaviour patterns.

Cosmic Significance. Energy E 3 Creativity. Man as potential soul. Contact with the Universal Individuality. The destiny of man as pre-ordained.

This scheme of significance and potentialities can be recognized as a re-statement of man's characteristics as an essence class.* Starting from the bottom, we find the essence linkage of food and eater. Man does not become man until he frees himself from the restricted diet of his anthro-poid ancestors. The change of diet disturbs the animal sensitivity, but also makes it capable of responding to conscious influences. Curiosity, self-assertiveness, sexual diversification and selection, coupled with loss of highly specialized sense-perceptions and their replacement by a more complex reflex structure are all precursors of the human Self-hood. The transition from animal sensitivity to human mind, seems to have been fostered by the inclusion of animal marrow in the diet, as is indicated by the frequent occurrence, in early settlements, of bones broken to enable the marrow to be extracted.

Man became a hunter in order to increase the supply of the kind of

* Cf. Chapter 35, Section 12.35.7.



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food he needed—food, be it noted, that his non-human predecessors did not need so that they continued to be fruit eaters. Man also at a very early age learned to eat fish, a very strange diet for Primates none of whom for a hundred millions years had learned the value of a fish diet.

Our early men are in front of a two-fold problem: they must have more food and it must have a far greater variety than their ancestors had been accustomed to eating. Anthropologists are well aware that progressive societies invariably have a mixed diet and that societies eating only one kind of food remain stationary. The deep connection between psychology and diet is a recent discovery of modern science: how is it that these early men behaved as if they knew all about it?

We return to our Demiurgic hypothesis with, perhaps, an increased awareness of the immensity of the task involved in bringing the human mind to birth. It had taken five hundred million years from the first invertebrate animals to make a human body. It took several hundred thousand years to make a human mind.

The early men had little or no skill. They probably had very little self-control compared with animals whose behaviour is chiefly regulated by instinctive patterns. Limitless patience would be needed to wean them away from animal behaviour run wild with the strong wine of human consciousness, to teach them skills that would enable them to increase their food supply and vary their diet and also induce them to submit themselves to the genetic control necessary to prevent the human stock from being diluted with non-human races among whom they lived.

We can only make guesses: but the following account seems to agree both with the traces of the past and with what we know of the energies and their operation in man.

There were several centres of experimentation. So far three have been discovered: in Africa, Indonesia and China. In all cases, the starting point was a hominid group either australopithecine or of very similar characteristics. These groups had already learned to use simple instruments such as the pebble-tools thoroughly investigated in South and East Africa and quite widely known from surface finds elsewhere. These tools consist of stones with one end chipped to give a cutting edge. Useful in themselves, they are still more useful in the development of the human hand. We assume that the entire development is watched by the Demiurgic Intelligences who use sexual selection to breed, in the genetic pattern that will enhance the upright stance and the efficiency of the hand and eye.

The progress of *Homo erectus* towards the fuller possession of a human mind was more psychological than anatomical and that is why

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it cannot be discerned from the study of fossils alone. Once a number of groups had been truly hominized by the acquisition of mind, the worst part of the task then began. No other animal had reached such a degree of adaptability nor discovered the limitless potentialities of the fore-paws when used as hands. Once this sensitivity organized in mind began to be conscious of itself it could no longer be brought under the direct control of the Demiurgic Power. This is the price paid for consciousness and it has since proved for mankind to be a stiff one. Although we are looking back more than a million years, we can verify the assertion from our own observations. It is well known from the study of hypnotism and mediumistic phenomena that another mind can take possession of the sensitivity only when the consciousness is in abeyance or dissociated from it.

Man had become a mind capable of being taught, and communication was necessary. For many reasons, some of which will become apparent in the course of this chapter, we shall postulate a further application of the technique already proposed: that of Demiurgic Possession. Associated with the human stock and outwardly indistinguishable from them were the unchanged hominids. The Demiurgic Will, armed with creative energy (E 3) and consciousness (E 4), would enter the sensitivity of new-born babies and pretend to be men. They would recognize one another as men recognize one another today, by the light of their consciousness. This probably began at once; but it would not be discernible from the anatomical characters.

Three distinct processes went in parallel. The first, and from our point of view the most important, left no material traces. It was the development of the mind and the creation of a pool of mind-stuff.* This, we say, took half-a-million years. The second process was the training of skills and behaviour patterns. Traces of this are left in tools and associated remains showing how animals were hunted and that fire was used. The third was anatomical and was probably achieved by breeding within the limits of genetic variability of the existing stock.

These three processes must have developed concurrently and it is hard to see how this would have been possible if they had not been intelligently directed. Anatomical changes can occur by mutation or breeding. When the former are regulated only by survival value, a single step needs hundreds of thousands of years for its completion. The rapid changes with which we are here concerned could only have been achieved by selective breeding. Sexual selection is not natural within a

- We do not yet refer to it as 'soul-stuff' because there is still a step to be made Before man could acquire a soul.

d.u. iv—9*

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species and we can see for ourselves that it does not occur in man even with all the knowledge that has accrued to him in twenty thousand years. In ancient customs still preserved in all parts of the world, there are traces of a time when human mating was regulated on some forgotten principle of selection. It is plausible to suppose that these customs originated under the direction of demiurgic intelligences. The acquisition of skills requires ostensive demonstration and this is possible only by human contacts. The development of mind, on the other hand, could come only by an action within the animal sensitivity and this would have called for the power of telepathic projection. When all these considerations are taken together we find it hard to account for the transformation towards *Homo sapiens* otherwise than by the hypothesis of Demiurgic possession as a bridge towards communication by speech. Speech had to come together with mind and not after it.

The key to the use of mind is speech. There is a surprising extent of agreement among palaeo-anthropologists that the peoples we have classed as Group II of *Homo erectus* were probably able to speak. This can help us to understand the arising of the use of fire, and the increasing variety of diet. According to our hypothesis all these arts and behaviour patterns were taught by the Demiurgic Guiles in human form. This must have been the case for the development of speech—the prime

instrument of teaching. Perhaps the genesis of mind was only the moment of conception of humanity. We should, rather, place the birth of mankind at the time when human speech was acquired. Speech is the mark of the operative mind.

The question we have to answer is whether man could have learned to speak unaided. Both inherited ability and learning are essential for speech. The meagre evidence available suggests that human children of *H. sapiens sapiens* stock who have been brought up by animals not only cannot speak but cannot even be taught coherent speech apart from words equivalent to gestures.* It is also certain that all human communities even the most primitive or the most debased have language and elaborate language at that. It has also been found that although all the living anthropoid apes have jaw, tongue, larynx and the necessary set of nerves and muscles for producing articulate sounds, they cannot be taught to speak. This is true even of chimpanzees who can use many kinds of tools and even paint pictures!

* A few words can be learnt, depending on the age when taken from the animal foster-mother. Cf. Wolfchild and Human Child, A. Gesell, 1941. After more than ten years of care, 'Kamala' the wolf-child could say only forty-five words in not more than three-word sentences.

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It is certain that anatomically the human structure is particularly well adapted to produce a wide variety of sounds and to articulate clearly. This adaptation was certainly the result and not the cause of speech.* Now the brain of modern man contains a hundred thousand million cells connected in a communication network of inconceivable complexity. It is by no means certain that breeding—i.e., crossing of genes—could have produced the change from the 600 cc brain of the australopithecine to the 1,000 cc of Peking man without the aid of genetic mutations. These cannot yet be produced to order in man—though they can be induced in fruit flies—but it does not seem beyond the power of the Demiurgic Intelligence to induce favourable mutations with no more violation of the laws of Nature than what T. H. Morgan did in his laboratory with *Drosophila*. It is not the kind of anatomical modification that can be elicited by selective breeding: as, for example, experts can breed canaries that can sing louder, more clearly and with a greater variety of sounds than the wild canary.

The essential character of human speech that distinguishes it from the many varieties of animal and insect communication, is that it can make connections beyond the limits of the actual present moment. Here we come back to the unique character of the human mind. Whereas sensitivity can give only present awareness, consciousness connects the

present with the non-present. Does this not apply also to man's tool-making? Is not man fundamentally different from the chimpanzee who uses sticks or builds a structure to secure the banana that he sees before him here and now? Even language cannot be called decisively human, for all animals have means of communication by sound and gesture and these means often include groups of sounds of not inconsiderable complexity. The distinctive character of man lies in his ability to extend the present moment by mental images of past and future, of distant and even of non-existent objects. This ability requires a mental structure that does not arise from the anatomy of the brain, but from contact with a human environment. This can be expressed in the dictum: *omne humanum ex homino*: all that is human comes from man. Child development demonstrates at every moment the truth of this dictum. The characteristic human powers are not innate: all develop by contact with the human environment. In the absence of this environment, there are no speech, no use of tools, no mental

* 'The reason a chimpanzee cannot learn to talk is that the necessary cortical areas are either not present or not sufficiently differentiated. Those areas of the cortex associated with persistent motivation, memory, anticipation, and imagination are greatly expanded in the human brain', Washburn and Howell: *Human Evolution and Culture, The Evolution of Man*, Chicago, 1960.

images of past and future. The very nature of mind is such that it could not have been generated without conscious guidance. We see a projection of this guidance every time a child learns to speak and to perform other characteristically human functions. The guidance is not consciously recognized by the child and usually not consciously exercised by the adult. Its instrument is imitation. All animals imitate, the *Anthropoidea* (including monkeys as well as anthropoid apes), do so most of all. But imitation without mind will not produce the human powers evidenced in tool-making and in speech. Hence, we reach once again the conclusion that mind entered into man rather than that mind grew in man as a result of using tools and learning to speak.

The best, because the simplest, explanation is that Demiurgic Intelligences entered into some of the children of *Homo erectus* and began to make sounds that could be recognized as having meaning and to fabricate implements and demonstrate their use. In this way, the significance of looking beyond the present moment would eventually dawn upon some of the 'natural' people in contact with them. Slowly and patiently, the rudimentary procedures of instruction would be established until 'natural' parents began to show their own children how to act with foresight in simple matters. The process must have taken a very long time, because to begin with there were no true human perceptions, and no concepts such as we have. For example, the first men

must have had almost no notions of past and future. These are far more sophisticated notions than are involved in speech directed to immediate practical ends. We can suppose that the notions of 'tomorrow' and 'not-tomorrow' were acquired. But it is doubtful if there was any idea of 'yesterday', so there could be no traditions, no handing on of knowledge as we understand it.

We are faced with enormously long periods of time when counted in human generations. For men without time-scales and without knowledge of counting, one year is the maximum unit. Time goes in uncounted cycles and no generation can look beyond its beginning and its end. Accidental discoveries—like genetic anomalies—would tend to be lost within a generation. It is most improbable that, under these conditions, there could be any transmission of new concepts.

This point must be emphasized, because we so easily forget that we are trying to understand minds totally different from our own. Often reference is made to the Tasmanian and other aboriginals who were discovered still in a stone-age culture and it is supposed that we can learn from them what man was like fifty thousand generations ago. But all men of our time, whether of aboriginal or advanced culture,

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carry both in their transmitted heredity and in their 'soul-stuff', the consequences of a million years of human experience. Even so, we learn from anthropologists that the most 'primitive' aboriginals have no idea of times beyond a year and are unable to transmit anything new that they learn to their children.

We can be pretty confident then that *Homo erectus* could only transmit the skills that he acquired from childhood and for which he had a strong mental predisposition. This accounts for the extreme conservatism of the early human cultures. Conversely, the comparatively stationary state of the tool-making and tool-using art for thousands of generations, is evidence that the human mind had not yet acquired creativity—nor even the power of conceptual thought.

The assumption that *H. erectus* was capable of conceptual thought is totally incompatible with the unquestioned and universally agreed observation that for hundreds of thousands of years the cultural achievements of these men that have left any traces amounted to a few minor improvements in shaping flints. Of course they may have achieved advances in working wood and leather and in social organization of which no traces remain: but, judging by what happened later, it is certainly safe to conclude—as every expert does—that there was remarkably little progress in thousands of generations.

Now this simply would not have been possible if men had really been capable of 'conceptual thought'. If there is one thing we can be sure of

it is that conceptual thought aided by human speech leads to progress. The unequal distribution of abilities which is inevitable on genetic grounds alone, makes it certain that, if not in every generation, at least in every ten generations, a man of exceptional ability will appear. Such men would be bound to make improvements in the everyday activities of life: and these improvements, in a society capable of verbal communication, would be adopted and spread. Again, if conservatism prevailed ten times and a new invention was rejected, the eleventh time the new idea would fall on fertile ground. We have, at the very least, forty thousand generations from the earliest true men to the men of the later Palaeolithic cultures who began to make real progress.

At the outset, man had, we may say, a 'self-less mind'. This does not mean that he was a faultless 'Adam before the Fall'. On the contrary, he was an animal, with animal passions and differing from other animals solely by the possession of some measure of consciousness. He would fight, kill, destroy, love and fear: but nearly all his actions would be indistinguishable from the instinctive behaviour of animals. Nearly all, but not quite all: for by slow degrees mind was gaining structure and

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parents could teach their children what they themselves had learned. But how had they learned it? Not by a creative, synthetic leap of a mind endowed with human reason. All that was still hidden in the hyparchic future—a destiny to be realized in descendants inconceivably remote. Whatever was learned had to be taught to them. The teachers were not only wiser than the pupils: they were wiser than we modern men would have been in their place. We cannot resist the temptation to hurry.* We could not contemplate a task that would take a thousand years, let alone a hundred thousand.

A considerable effort of mental adjustment is needed in order to form any adequate concept of the working of Demiurgic Intelligences over periods of time a hundred times longer than the entire historical period. Only with difficulty can we grasp the notion of a directed process so slow that there is no perceptible change in ten thousand years and yet so rapid that it can intervene in the conception of individual human beings.** We should be entitled to refuse to make the effort if the concept were not indispensable.

As with a modern infant, everything has to be taught, and speech is the gateway to the learning of childhood. The Childhood of Mind will see men able to accumulate and transmit experiences through language and symbolisms. Before we move on, however, we should

pause and consider the great enigma of this immensely long period—which was abnormally stagnant.

17.46.3. The Hiatus in Development

We shall go forward on the hypothesis that the Demiurgic Intelligences maintained their care of the infant human race throughout the Lower Pleistocene and into the first Interglacial. During the height of the glaciations enormous quantities of water are frozen into the glaciers and the level of the ocean falls. River valleys are left high and dry and new valleys are opened. The climatic changes force migration upon all animals that can move. With their small, weak bodies not much larger than modern pigmies—these earliest men lived through all the vicissitudes of that period of catastrophe and held their own against its desper-

* Witness the disastrous results of trying to transmit 'culture' to tribes who for thousands of years have been fixed in a way of life. Thus the Russians are destroying the Tungus and other races of Arctic Siberia; the Australians are destroying their aborigines: even the American Indians, far higher in the scale of development, are being destroyed by haste.

** In our description of Providential History we pointed out that by using an influx of creative energy, the Demiurgic Intelligences could statistically alter the general trend of events. Cf. Chapter 43. It is the creative energy, of course, which is instrumental in the arising of any human totality also. Cf. Chapter 40.

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ate predators. Probably very few survived; but it seems unlikely that any would have done so without intelligent guidance.

In the Middle Pleistocene they were succeeded, as we have said, by men of an anatomy more like our own. Throughout the whole of the period of the Mindel-Riss interglacial—some 640,000 years—there is hardly a sign of any advance in tool-making. Neither have we found any other traces of human culture. This enormously long and relatively stationary period has always puzzled students of pre-history. Most anthropologists hold that if certain anatomical requirements are satisfied, development of true human culture should follow automatically.* These requirements consist of erect posture, stereoscopic vision, fully opposable thumb, and a brain capacity exceeding 1,000 cc. Since nearly all authorities agree that such attributes were present in *Homo erectus*, his lack of progress becomes a crucial question.

For all his clever hands; his upright posture, his keen stereoscopic vision, and his magnificent head, *Homo erectus*, in all his varieties continued to live upon the same level as that upon which he began his career. The great cranial capacity of *H. erectus*—three times that of the

highest apes—suggests the possession of mental powers, potential if not yet actual, beyond what was needed for the simple life of tribes of food-gatherers and hunters. The capacity of a wolf-pack for concerted action is achieved with a cranial capacity a tenth of that of *H. erectus*. Beaver colonies in their use of timber and the flow of water are engineers of no slight technical ability and yet not even the giant beavers of the Villafranchian period could boast a brain one tenth that of a man. Birds have keener sight and no less capacity for emotional sensitivity than man and yet the bird's brain is a simple structure compared with the humblest primate—let alone man. The power of communication possessed by insects and their capacity for social organization including the most efficient division of labour do not depend upon the possession of a large brain, nor upon an upright posture and a pair of hands.

Wherever we turn in search of some clearly superior power associated with the brain of man, we find that one or other of the animal phyla can show us functional powers not inferior to those we associate with

- Cf. McCurdy, *Human Origins*, p. 431. 'Given their physical complex, a culture that we call human would follow as surely as does the day the night.' R. Carrington, *loc. cit.*, pp. 58—9, quotes six main characteristics of man: (1) a limb structure suitable in an erect stance and the manipulation of objects; (2) an exceptionally well-balanced brain; (3) highly specialized social habits; (4) the power of speech; (5) the ability to make and use tools; and (6) the faculty of conceptual thought. Since, in his belief, all six were possessed by *Homo erectus* (*loc. cit.*, chapters 7 and 8) we are left to wonder why the latter made so little of them.

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H. erectus. Such considerations serve to heighten the strange impression produced by the long stagnation of man under conditions that might have been expected to favour the development and use of his mental powers in the characteristic human manifestations of memory, learning from experience and applying experience in the arts of invention and construction.

The first answer that suggests itself is that hominization was not complete. A 'mutation' was required to bring about some anatomical change that would produce true man. But at least some of the men of this period were fully 'human', as evinced by the skulls from Swanscombe and Steinheim whose cranial capacities were quite as great as that of modern man. There is also the evidence of the artifacts themselves. We have said that these showed little progress, but they do show wonderful skill and satisfaction in good workmanship. One has only to examine the collections of tools in the Musée de l'Homme in

Paris or the Natural History Museum in London to be convinced that they were the product of a human mind with consciousness as well as sensitivity. Yet the traces left to us can be no more than an infinitesimal part of the work of these people, most of which must have been in perishable materials. Animals were certainly trapped by ingenious devices. And stone balls, found on many sites, may have been attached to wooden handles to form dubs, or to short thongs to be thrown. At least twelve sets of balls in groups of three have been found by Leakey, who suggested that they may be 'bolas' like those used by some American Indians. Bolas* consisted of three balls, held in bags made of hide, tied together with twisted thongs of different lengths, which were hurled at the legs of running animals and entangled them so as to bring the quarry down. A much lighter form of this device is used by certain Eskimos for hunting birds.

Both in his anatomy and in his works, *Homo erectus* proclaims himself a true man. Why then, we ask again, did he achieve so little in hundreds of thousands of years? Also, if we accept the Law of Accelerated Progress, the third stage of development from *Homo erectus* to *Homo sapiens* lasted far too long in proportion to the earlier and later stages.

Let us here anticipate conclusions to be reached later and set down the stages which man has covered in his progress up to the present time. Starting with *Australopithecus*, we can distinguish the following main steps.

1st step. Some hominoid stock selected for organization of sensitivity corresponding to characteristics of man. Development of

* L. S. B. Leakey Exploring 1,750,000 years into Man's Past. Nat. Geog. Mag., Washington, 1961. Sonia Cole The Prehistory of East Africa, 1963, pp. 155-6.

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biped habit and increasing use of fore-paws for rudimentary skills. Leads to *Australopithecus* 3-4 million years b.p.

2nd step. *Australopithecus* endowed with consciousness. Appearance of first true men 1.25 to 1.75 million years b.p. leads to *Homo erectus*.

3rd step. *Homo erectus* produces many sub-species and varieties. Constructs tools and has a basic speech. Development of *sapiens* with full cranial capacity 150,000-180,000 years b.p.

4th step. The appearance of *Homo sapiens sapiens* with individual creativity. 37,000-42,000 years B.P.

5th step. *Homo sapiens sapiens* develops social consciousness, agriculture, settlements, and a complex language structure. 11,000 years b.p.

6th step. 'Modern Man' comes forward during the time of the great Revelations. 2,000 years b.p.

This gives us six points on a scale from early ape-like primates to modern man with obviously accelerated progress. When we plot 'units of progress' against the logarithm of time, as was done in Fig. 45.1. we obtain the curve of Fig. 46.2.

The dotted line between stages 2 and 3 indicates the hiatus in development. Had progress followed the same curve as for the total progress of life (Fig. 45.1.) we should have reached our present stage of development in the height of the last glaciation. This is shown by the chain-dotted line which reaches the sixth unit of progress 28,000 years before the present.

We do not claim evidential value for the curve of Fig. 46.2. Its use is rather in helping to visualize a fact that is accepted and indeed emphasized by all authorities though very differently interpreted. On the assumption that the mind of man made no difference to his progress, it is reasonable to invoke mutation and natural selection and to allow a very long period for the emergence of a new species.

Let us follow up this point. The ancestor of our elephants, *Eliphas meriodinalis* divided into two groups *E. antiquus* that was adapted to forest life and *E. primigenius* that lived on the steppes and was ancestor to the mammoth. After the Biosphere had passed through the exacting test of the first glaciation of Gunz, the two groups, which previously had been subject to wide variations, had evolved into two sub-species. After two more glaciations the distinction was clear and definite: elephants and mammoths were as different as any two species of the same genus can be. This transformation took about a million years: why, it may be asked, should not the same have happened to man?

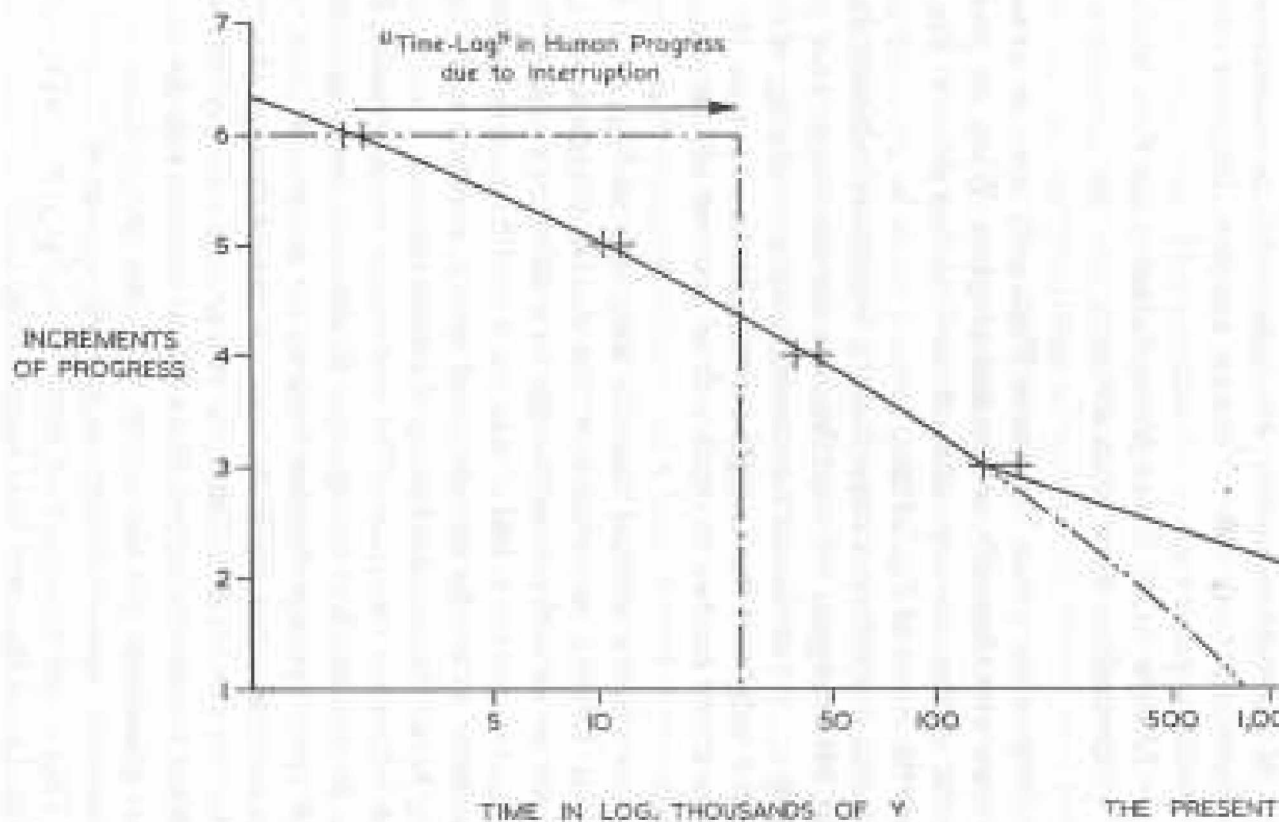


Fig. 46-2. *The Interruption of Human Progress*

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There are several conclusive reasons why the development of man cannot be compared to that of the elephants, horses and other mammals who have been his contemporaries.

1. There has been no separation of forest-living and steppe-living species of Homo. On the contrary, early men in the northern and southern hemispheres were remarkably alike.
2. There is no indication of any selective action before, during or after either the first or second glaciation.
3. As we have shown earlier in Chapter 45, there were men of highly developed anatomy (*H. sapiens* in the opinion of many experts) before the intermediate Neanderthal man first appeared.

4. It is inconceivable that natural selection would act upon man in the same way as for horses and elephants. He must have been able from the start to adapt to very slowly changing environmental conditions so that sexual selection would always outweigh survival selection.

5. The mind of man has always been a disturbing element in his response to environmental pressures and opportunities. We see this under all conditions of existence from the Arctic to the Equator and from Bushmen to dwellers in modern cities. Our concern, at this stage, is with man as he was during the period that we have called the Infancy of the Mind and our problem is to discover how a mind that was furnished with eyes and hands and speech could not make more of its opportunities even without mutating into a new species.

This last point is the crux of the matter. The craftsmen who could make the Chelles-Acheulian hand-axe or the Clactonian scraper could have done many other things as well. The problem is not anatomical and therefore not to be solved by invoking genetic transformations. It is wholly psychological and can be solved only if we can place ourselves in the mental situation.

The infancy of the human mind was prolonged beyond what was required for its normal development. We can suggest some possible explanations:

1. The Demiurgic Intelligences foresaw the future course of the Ice Ages and held back man's development so that it would mature during favourable climatic conditions. This explanation is not very plausible, as the Gottweig Interstadial that lasted 10,000 years would have given man at least as long to develop as he has had since the end of Wurm.
2. The Mind-Stuff Pool took so long to form that the transition from *H. erectus* to *H. sapiens* had to be delayed. This is unlikely as presumably the process would conform to the needs of the species.
3. The humanized sensitive energy produced by early man was

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required for some other purpose and human development had to suffer in consequence. This strange thesis was propounded by G. Gurdjieff in his doctrine of the Organ Kundabuffer.*

4. There was a malevolent intervention by an Intelligence hostile to the plan and purpose of man's evolution. Here we have an expression of the theme of Milton's *Paradise Lost*. It is an old theme, for it is to be found in some of the earliest religious literature: the Zoroastrian

account of Ahriman the evil power who seeks to destroy the creation of the Good God Ahura.

5. The period of stagnation is a figment of the imagination. Man developed normally: but we cannot gauge the time required to bring the new species *Homo sapiens* into a position of dominance.

It must be said at once that we have neither traces nor traditions that will help us to decide between alternative explanations; nor shall we attempt to do so in psychological terms. At a later stage we shall have to consider the problem of evil and its subjective manifestation as sin. We may then find it necessary to return to the period we are now about to leave—the period we have called the Infancy of Mind and also the Age of Innocence. Let us not forget that we started the present section with the psychological deduction that when consciousness first blended with human sensitivity it must have produced a condition of euphoria that would require careful supervision by the Demiurgic Intelligences.

If this supervision was there at the outset, there is no reason to suppose that it was withdrawn during the much prolonged period of the Infancy of Mind. We may hope, as more traces of this period come to light, to discover indications of the way, or ways, in which *H. erectus* adapted himself to the great climatic changes he had to endure. This in turn may enable us to test the hypothesis of Intelligent Guidance.

17.46.4. The Childhood of Mind

We have already said that this phase took place during the Upper Pleistocene and began with the Riss glaciation. What interests us primarily is that man begins to move again at last. New techniques appear. Evidences of an incipient human society come to light.

We have described the anatomical features of *Homo sapiens* and must remember particularly his large brain and great physical strength. His culture is generally known as Mousterian, from the site at Le Moustier

* The theme is developed in great detail in G. Gurdjieff, *All and Everything*, 1950. It is usually taken by his pupils such as A. Orage and M. Nichol as a psychological allegory, but he himself insisted that it was an historical fact that man's development was deliberately retarded by a 'higher power'.

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in the Dordogne where it was first identified. For a very long time, the limestone caves of this part of central France were the main source of our knowledge of prehistoric man. Some were occupied as shelters over tens of thousands of years, and the successive layers of occupation are marked off by barren ones so that experts are able to identify the cultures.

Important as they are, it must be remembered that the fact that these caves were the first to be excavated has given undue prominence to the Western Neanderthals as compared with the less specialized peoples of Group III who lived in other parts of the world.

It is unnecessary for our purpose to discuss all the types of Group III, however. We shall keep to the Neanderthal species, whose bodily remains are widely known in Eurasia and parts of North Africa and whose culture was the Mousterian. This culture is sometimes known as 'Middle Palaeolithic' to distinguish it both from the earlier cultures and from the 'Upper Palaeolithic' by which it was succeeded. The Mousterian may have been derived from the Clactonian or Tayacian flake industry,* which extended from France to Palestine, but it included both flake-tools and hand-axes. Smaller and more specialized tools and weapons were made, and new methods of flaking and edge chipping produced more efficient knives and points. The practice of attaching stone implements to wooden shafts may have commenced. Hunting will have grown more efficient and organized and skin tents used for shelter during the summers and in the warmer regions. An interesting point is that dental and other evidence shows that the Western Neanderthals of the Early Wurm period chewed skins to soften them,** in the same way that the Eskimo use their teeth in preparing skins for clothing: so that warm clothes and possibly some sort of leather foot covering enabled them to survive the bitter cold. Yet none of these achievements put them notably ahead of *Homo erectus*.

More important is evidence of some sort of social hierarchy, division of labour and consideration for the old. Although the exceedingly worn-

* Broadly speaking, flake industries—with their knives, scrapers and points—were better adapted to cold climates where the skinning, cutting up of meat and preparation of hides formed so important a part of life; whereas hand-axe cultures were better adapted to forested country and warm climates—since the hand-axe was used for chopping trees, wood-working and digging up roots. Thus regional differences between

the type of tools employed may often have been due to environmental factors rather than to differences of cultural tradition. In the same way, different techniques of flaking

are suitable for different kinds of flint or other stone, and the average size of implement

may merely reflect the average size of nodule or pebble to be found in a given locality.

Hence, many of the numerous 'cultures' so carefully distinguished in the past may in fact represent no more than different methods of tool-making used by groups of the same cultural tradition in accordance with varying climate and raw material.

** Coon, *The Origin of Races*, pp. 541-2.

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down state of the teeth of all but very young people shows that strong teeth were highly important to Neanderthals, one man found buried could not have chewed at all due to a severe arthritic condition; while a second had only two teeth and was both arthritic and very old, so that he could not have hunted for many years. These men must have been cared for and their food softened and brought to them. Moreover, despite their apparent uselessness, both were sufficiently important to be buried; for all who died in caves during winter cannot have been buried or quantities of skeletons would have been found, whereas only seven are known in western Europe.

This brings us to man's great advance, for there are highly significant indications that he now possessed a far wider horizon in time and space than the races of *Homo erectus*. *Homo sapiens* was the first known to bury his dead, and he did so in a manner suggesting belief in some kind of survival or resurrection, for the dead were supplied with tools of stone and sometimes with other goods.* They were usually laid in an attitude of sleep, and at times with red ochre, generally supposed to represent the properties of blood. He almost certainly had a bear cult. The first example of a Neanderthal Bear Cult sanctuary to be found was in the cave of Drachenloch, in the Swiss Alps, 8,000 feet above sea level, where the skulls of cave bears and a number of femurs were found arranged in a recognizable pattern facing the entry. The ledge or kist behind which they were placed is apparently an artificial construction, and, if so, it is by far the oldest known example of a building operation undertaken by man. It is remarkable that it was evidently built in honour of a quasi-religious cult and not for shelter or other utilitarian purpose. Several more sanctuaries have since been discovered, indicating that the Bear Cult was widespread.

Similar cults exist today among the Ainu of Japan, and various Siberian aboriginals, notably in the lower valley of the Lena—a region as desolate as ever the Ice Age could have given man to live in. Thanks to the Swedish explorer Ivan Lissner,** we have detailed accounts of the way the bears are both honoured and slaughtered. The sense of kinship with the bear and respect for his superior wisdom is a point that

* In 1938 a cave in Uzbekistan was found to contain five successive habitation layers with hearths and Mousterian implements. Underneath the top layer was the shallow grave of a boy, whose remains were carefully encircled by five pairs of ibex horns; a situation which suggests some ritual to concentrate sensitive energy, of the kind practised in the same area until recent times.

** Ivan Lissner, *Man, God and Magic*, London, 1961. The author reaches the conclusion that the cult goes back to the Ice Ages and is evidence of an unbroken

tradition
some 40,000 years old.

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would scarcely have occurred to anyone who possessed the prehistoric evidence alone.

One notable deficiency of *Homo sapiens* was his apparent lack of artistic feeling. This is particularly striking in view of his immediate successors. Once again we have the question: why did men with brains fully equal in size to our own, show so comparatively little initiative in tool development and no apparent creativity in art? How in the absence of an organized mind did they develop beliefs in religious—or if not religious, at least in magical—rituals?

We have our answer ready. All these pieces fit into a coherent integrated picture if we regard this period as the Childhood of the Human Mind and suppose that the Demiurgic Intelligences made a definite step towards transferring responsibility for man's destiny to man himself. This accounts for the beginning of a regard for the inner or hidden life of the mind. This step did not include the release of creativity. This accounts for all the negative facts—lack of initiative, absence of artistic feeling. Before man could move forward, his sense of the present moment had to be expanded and extended. He needed to take the past and future seriously. To us this seems simple enough. For *Homo erectus* as we have pictured him, it would have been impossible. It was necessary to develop memory. We can scarcely picture to ourselves what a revolutionary step this must have been. *H. erectus* did not remember the past, he merely learned how to deal with the present and the immediate future. Neanderthal man could certainly think of past and future and he would form traditions. This is proved by the Bear Cult.

As we see it, neither hunting magic nor the quasi-religious practices of Neanderthal man were ends in themselves, but means used by the Demiurgic Intelligences to develop the mind. If we ask ourselves how we, as Intelligent Beings, would have set about the task of developing the powers of memory, and with it, of abstract thinking, among men whose lives were entirely bounded by the animal needs and animal passions of the present moment, we shall quickly realize that this could not be achieved by imitation—the instrument by which the previous stage was accomplished. In order to develop mental powers as distinct from bodily skills—and be it understood that speech concerned with concrete communications is primarily a bodily skill—it is necessary to get the mind to work for itself.

We have reached yet another crucial test of our interpretation of history. The traces of the past can provide no more than confirmatory

or negative evidence: they cannot tell us what actually happened. This is because we are dealing with men and not with inanimate nature or

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even with animals without mind. The second can be interpreted by means of general laws, providing we have enough facts. The third can be understood in terms of physico-chemical laws, vital mechanisms and behaviour patterns. But man can be understood only as the possessor of mind. This is why psychology must be the principal instrument of interpretation. Anthropological studies that deal only with behaviour patterns can yield positive results providing no mental transformations are involved. Whenever we are confronted with the development of the mind, we must rely mainly upon mental evidence.

We must, therefore, turn our attention back to the mind of man as we know it, and see how it is constructed. Its instrumental material is sensitive energy (E 5) the highest energy associated with life. This energy, in its undifferentiated form, enters into all living organisms. In animals it begins to be organized—in the mammals it is differentiated and specialized to give the various subjective attributes that we observe in the mammalian genera. This produced a pool of sensitivity, but not mind until consciousness was added. Then came *Homo erectus* the first possessor of true mind; but we may be confident that he did not have true human memory with its power to form mental images of events outside the present moment and to recall and recombine such memories with the help of abstract symbols.

If we set ourselves to observe the work of mental image formation we can see that there is an inner objectification brought about by a separation of consciousness and sensitivity. We then see pictures or hear sounds within the mind in the same way as if they were produced by an objective stimulus arising through the eyes or ears. Similarly, memories of the past present themselves as objects, distinct from ourselves as subject.

This is possible in several ways. We can produce mental images by the exercise of our creative will. This is the highest form and is not common even among modern men and women. Again, it can come by an emotional stimulus which divides our attention between what we feel and what we think. Yet again, there are mental images produced by bodily states, proprioceptive impressions and fantasies similar to dreaming.

The first mode was certainly beyond the power of Neanderthal man, the third is not exclusively human: for example, animals certainly dream.

It follows that what *H. sapiens* had to acquire and did acquire, was the separation of the image building faculty—or power to organize sensitive energy—from the feelings.

We may conclude that in this way a task was undertaken and achieved

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by the Demiurgic Intelligences during the period we have called The Childhood of Mind. The reason for this appellation will now be apparent. Between the ages of six and thirteen, the average human child develops in just the same way. The parallelism of ontogeny and phylogeny—of the development of the individual being and the development of the race—is genuine enough, especially as applied to the mind.

It will also be apparent that the new step forward would make a very heavy demand upon the brain of man. It was called upon to acquire during each separate lifetime a store of mental imagery and memories that would gradually change the character of the Mind-Stuff Pool and produce what Carl G. Jung has called the Collective Unconscious of mankind. It may well be that the Demiurgic Intelligences either engineered a genetic mutation or took advantage of mutations occurring naturally to breed a race of large-brained men. It seems improbable that the great increase of cranial capacity observed at this stage could have been achieved by cross-breeding alone.

Before we leave the childhood of mind, we must try to picture the way the Demiurgic Intelligences operated. They could not communicate with men except through the channel of mind and body. We have already decided that in the previous stage, when teaching was by Example and Imitation, the Demiurges had, first of all, to enter the newly created minds and teach them how to work. The same procedure at the second stage, where we now are, would not succeed unless means were found of impressing new ideas upon the already humanized minds. This was the origin of Magic.

All authorities agree that magic was the earliest cultural agent in human life: but no one can explain how magic started. It is simply ridiculous to suggest that the thought of claiming magical powers popped into the mind of some gifted Neanderthal youngster. One must make a determined effort to visualize the situation. Hunters are notoriously superstitious: why not Neanderthal hunters? Why should they not have had, spontaneously, notions of sympathetic magic and only later have looked among themselves for a suitable operator to perform the rites. Again, this is obvious nonsense. It is totally impossible to picture the origin of magic except through some deliberate action of a man who knew what he was doing and why. This does not mean that we are forced to believe in magic—it may all be infantile superstition—but the point

is that no Neanderthal man, or any other man, could have stumbled on the idea unaided.* Those who think otherwise merely project their own

* Cf. R. Carrington, *A Million Years of Man*, p. 106, 'Neanderthal man was a hunter and a savage, but like ourselves he was already quite capable of reflecting on

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mentality on to that of men who had no antecedent experience remotely resembling our own. The evidence, which seems conclusive, that magic appeared before modern man, is as clear a proof as we can hope to find that some higher intelligence intervened. The continuity of history that we have observed all through our studies, requires that this intervention should not have been made arbitrarily at one point only. It must have accompanied man throughout his slow march to the attainment of Individuality. So far, then, from appearing as an inexplicable aberration, Magic is seen to be a necessary means for action by the Demiurgic Intelligence.

The technique is almost obvious. Demiurgic Intelligences took possession of selected youths; and, by demonstrating magical powers—such as predicting the weather and the movements of the herds on which the tribes depended for their food—were able to gain an ascendancy over the tribe. We have to this day, distant memories of this social structure in the Shamans of Siberia. There is good reason to believe that all stages of past history are reflected into the present.* The shaman and his followers believe that, by certain ritual practices, he can open himself to possession by a Great Spirit whose mouthpiece he becomes for so long as the state of possession persists. Most probably, shamanism has for centuries, if not millennia, become no more than the empty shell of a once authentic mode of action of the Demiurgic Power: though it is also likely that it has been grossly misunderstood by anthropologists.

The first magicians were authentic wonder-workers. They were men like the other men among whom they lived; but they were conscious of their Demiurgic Nature. Here we must recall that the nature of man is three-fold: the higher nature being on the level of the Demiurgic Essence. When the Demiurgic Intelligences entered men—whose minds

his own nature and his situation in the world. He must certainly have been deeply conscious of his loneliness and apparent insignificance in a hostile or, at best, indifferent

environment, where wit and cunning were his only weapons against the savage forces that sought to destroy him. To placate the wild beasts on which he preyed, and to help him overcome the panic which must often have assailed him when he contemplated his own precarious position, it is not surprising that he sought refuge in the supernatural.' This passage makes no sense at all as an explanation of how it all started

It is simply not permissible to say that Neanderthal man was 'already quite capable of reflecting' when the problem is to explain how the reflective faculty arose. It is not permissible to use terms like 'deeply conscious' or 'supernatural' without explaining how man could ever have formed the concept of the natural order, let alone the supernatural. We do not wish to belittle the admirable achievement of Mr. Carrington in giving an account of man's arising and development in a single volume. His approach to the subject of the human mind is not better or worse than that of other authorities: all equally miss the central point of explaining the genesis of mind.

* As in the marvellous instance of the blue-green alga who reconstruct for us to this day the state of affairs before birth, sex and death came to the earth.

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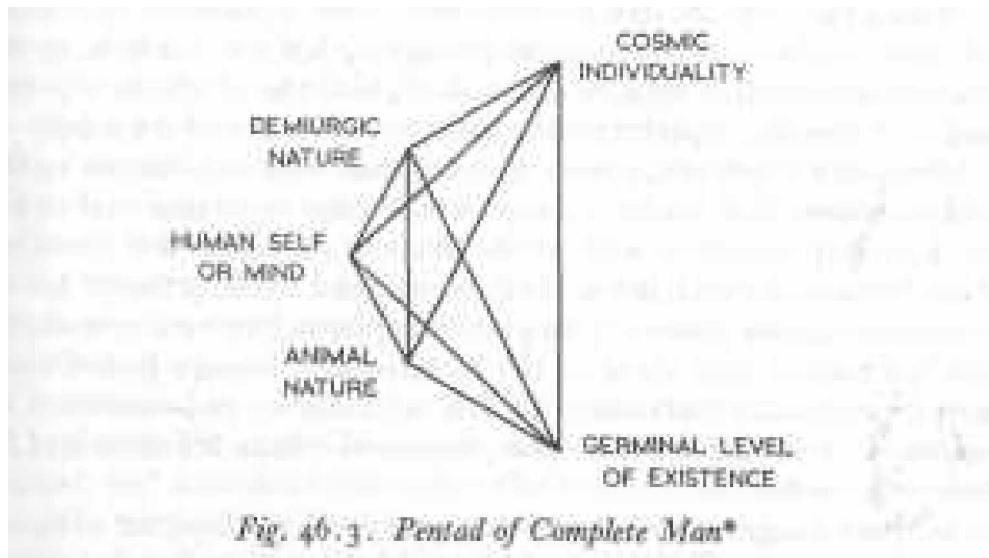
had not until then acquired self-hood—the result would be to form a Complete Man. In the midst of men with child-minds, the Demiurgic Magicians would possess perceptions, knowledge and understanding that would give them a complete ascendancy over their community. Communities lacking such leaders would be at a serious disadvantage and the belief would grow and spread that the magicians were beings of a higher order.

The ritual practices of which only the barest suggestion is left to us in the 'Bear Cult', would be accepted as necessary conditions for deserving to enjoy the benefits of magical protection. In this way, the minds of the ordinary men would be inclined towards new subjective experiences. Memory would become a treasured power. Very probably there were runes or incantations to be learned and transmitted from generation to generation.

By such procedures, the differentiation of the psychic qualities of sensation, feeling and thought would be developed in the mind. The sensitive energy would, little by little, become impregnated with the traces of the new modes of experience. From simple 'mind-stuff' there would be a gradual transition to 'self-stuff'. Notwithstanding all these developments, the creative power that characterizes *Homo sapiens* was still lacking. This is why there were no startling advances in the Mousterian industries nor any artistic creativity.

The scheme we have outlined helps us also to understand the wide distribution of Neanderthal man. Under the leadership of their Magi-

* The diagram is based on that of Vol. II, Fig. 35 .10, but modified in accordance with the improved presentation of Chapter 39.



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cians, groups would readily undertake migrations even if they had to pass through regions where food was scarce or travel dangerous. By the time the first severe phase of the glaciation of Wurm had ended, there were Neanderthal settlements in North Africa, Asia and Europe. During the mild interstadial that ended less than 35,000 years before the present, the new powers acquired by Neanderthal men had time to flower and make a further step possible.

Once again, the unexpected happened. This remarkable sub-species of Homo, sapient but not creative, courageous but not enterprising, that had surmounted the rigours of the first glaciation of Wurm was soon and with startling rapidity to disappear from the face of the earth.

There is no apparent reason why the men who had learned to feel and to remember could not also have learned to create and to take their destiny into their own hands. We can only hazard a guess that their emotional development had outstripped their capacity for the creation of mental images. This guess is supported by various traditions not less ancient than those of the Siberian and Finnish Bear-Cult. It may be that, notwithstanding his lack of initiative and creativity, H. sapiens became a threat to the true purpose of human existence and had to be removed.

We have completed our hasty survey of the second period of human development—the Childhood of Mind. Man has acquired the distinct powers of sensation, feeling and thought. He has, with their help, gained the ability to remember and recall past events and to look forward into the future. He has thus added a new dimension to his experience—a dimension that no living creature on the earth had yet entered—the

dimension of past and future time. With this new experience, there is no doubt that hope and fear gained new significance: but these were the consequences, not the causes, of the step forward which had been made.

17.46.5. The Adolescence of Mind

The next transition brings man into complete possession of the human situation, though not yet of the earth. If we agree that Neanderthaloid and Neanderthal men were already sapiens in the possession of a triple mind, we must say that a new sub-species appeared. We have agreed to call this *Homo sapiens sapiens*. The title correctly designates the classification: (1) *Homo* or mind possession; (2) *Homo sapiens* or memory possession; (3) *Homo sapiens sapiens* or man with both memory and creativity. The transition was made once and for all and the new sub-species has not changed observably since its appearance. The new men

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were anatomically indistinguishable from man as we know him today; even the different races—Caucasoid, Mongoloid, Australoid and Capoid*—are represented among the skeletons of the period of the last glaciations. We have seen that our Group III included many unspecialized Neanderthals—in the Near and Middle East—and Neanderthaloids—in the Far East and in Africa—and it would seem very possible that the races of *Homo sapiens sapiens* developed separately within these groups. In any case the true Neanderthals were broadly Caucasoid in type, and the regions they occupied seem to have been Caucasoid territories during most of the Middle and Upper Pleistocene; moreover the white, Caucasoid race of *Homo sapiens sapiens* appears to have evolved somewhere in those regions. In Europe, the Middle Palaeolithic ended sharply between 35,000 and 40,000 years ago and the new age of the Upper Palaeolithic began equally abruptly.** There was a new culture and the first great acceleration of progress, and the peoples who achieved this advance were physically identical with modern Europeans of the Caucasoid type.***

The material aspect of the new culture was distinguished by knife-like blades of flint or obsidian made with an elastic punch of fresh bone or antler, and since these blades could be trimmed into many specialized tools and weapons, its invention had enormous consequences. One of the most important of these tools was a small chisel known as a burin or graver, for it enabled advances to be made in working wood and bone, which in turn led to the appearance of new tools in those crafts. It is not known for certain where this revolutionary 'blade-and-burin culture' originated, but the evidence points to South-West or West Asia and to the Riss-Wu:m period.

Our knowledge of the Upper Palaeolithic is still restricted mainly to Europe, and especially to the limestone country of South-western France

and Northern Spain where man's first great works of art were created. The new men, with their 'blade-and-burin' tradition, entered Europe about 35,000 years ago, bringing the Chatelperronian**** culture which

* Carleton S. Coon, loc. cit., pp. 3, 4.

** The suddenness of the transition impressed both pre-historians and anthropologists long before the advent of radio-carbon dating. Cf. W. E. le Gros Clark, *History of the Primates!* 'At the end of the Mousterian phase of Palaeolithic culture, the Neanderthal inhabitants of Europe were abruptly replaced by people of completely European type.¹ Also R. R. Schmidt, *The Dawn of the Human Mind*. 'The sudden appearance of this erect lofty-browed genius Sapiens.

*** Carleton S. Coon, loc. cit., pp. 577 and 582-5.

**** We shall use the nomenclature of 'Chatelperronian', 'Aurignacian' and 'Gravettian' which have replaced that of 'Lower, Middle and Upper Aurignacian' employed by the Abbe Breuil. The Chatelperronian and Gravettian are both called Perigordian by some people, since they are believed to be basically the same culture.

may be traced over much of the Upper Palaeolithic area. It was characterized by curved blade points and foreshadowed in Palestine.* They seem to have been slight, with long narrow heads and small foreheads, perhaps ancestral to the Mediterranean type. One of their skeletons was found in a rock-shelter at Combe Capelle, near Les Eyzies, Dordogne, and dated at approximately 35,000 b.p. They dispossessed the Neanderthals, whose valleys they hunted and whose caves they occupied, although some prehistorians believe that the two species co-existed for a time and may even have interbred.

Some three thousand years later, another people brought the true Aurignacian culture, which can be traced back to the Middle East and may have originated on the Iranian plateau.** These men, who spread widely in Europe, were first discovered a hundred years ago by Lartet in a rock-shelter at Cro-Magnon (also near Les Eyzies), which contained the skull and bones of an old man and parts of five other skeletons, together with skilfully worked flints. The Cro-Magnons*** were rather tall people, slender but very muscular, with narrow but high-vaulted heads giving a large brain capacity, short, broad faces and high-bridged noses. Clever and artistic as well as great hunters, they fashioned beautiful implements, and first introduced true bone working into Europe, with delicately fashioned objects such as bone spearheads and little pins and awls. They made paint impressions and stencils of their hands in some of the limestone caves, and line drawings on clay covered walls by running sticks or fingers over them. Most of the cruder paintings

and engravings of animals (and it is now thought some of the later paintings with modelling and perspective) were their work, which represented the earlier phases of a single great traditional art among the hunting peoples of western Europe, the seeds of which may have been sown by the Chatelperronians.

A third culture—the Gravettian—was adapted to the cold of the Main Wurm glaciation. The Gravettians physically resembled the West

* By the Amudian, during the Riss—Würm Interglacial. At Jabrud, in Syria, a blade-and-burin industry dating from about the same period has been found. A similar and approximately contemporaneous industry, believed to have come from South-west Asia, has been discovered in the Haua Fteah cave in Cyrenaica. (S. Cole, loc. cit., pp. 256—7.)

** Oakley, loc. cit., p. 157. Professor Carleton S. Coon discovered typical Aurignacian scrapers in a cave in Afghanistan at a level dated at more than 34,000 B.P.

*** The present writer made his first contact with this culture in a visit to Les Eyzies in 1947. The impact made by a personal impression is totally different from all that can be learned from books. Everyone who has the opportunity should visit and study the head of the 'Old Man of Cro-Magnon' in the Musée de l'Homme in Paris. A peculiar dignity and power invests this skull of a man who lived some thirty thousand years ago.

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European Chatelperronians. This culture is best represented at Predmost in Czechoslovakia, but appears to have originated in South Russia. Gravettian mammoth hunters flourished in the steppes lying between the Carpathians and the Alps and the northern ice sheets, and their traditions were carried as far east as Siberia and as far west as Derbyshire. These people built the first-known huts (one of which was surrounded by a circular wall of limestone and clay) and constructed dwellings sunk well into the ground, with timber-riveted walls and log roofs piled with soil.* They modelled in clay and curved bone and ivory figurines, many of which were of fat or pregnant women, clearly of magico-religious significance and often referred to as 'Venuses'. Probably about 20,000 b.p., a wave or waves of these more easterly people abruptly superseded the Aurignaceans in western Europe. Later again, a culture known as Solutrean appeared in France, which specialized in a technique of 'pressure flaking' and produced flint tools which show the best workmanship of the entire Stone Age. Finally, in the last glacial period, the finest flowering of the Upper Palaeolithic began with the Magdalenians.**

In those days, the open grasslands and tundra of South-west Europe abounded in herds of reindeer, bison, mammoth, wild horses and cattle and other game. The Magdalenian hunters were now to be greatly assisted by the invention of long distance weapons: first, by the spear-thrower and, later, by the bow and arrow. Fish, too, were plentiful; and harpoons with wooden shafts and detachable barbed heads of bone were used as well as the straight bone gorgets that preceded the fish hook. Fur hoods and robes were worn, and, since the Magdalenians possessed eyed needles, less bulky kinds of leather clothing must have been neater than in the past. A love of personal adornment is shown by the ivory and bone pendants, the necklaces, bracelets and leg bands made of shells, animal teeth and beads found with many skeletons, some of which also had elaborate headdresses of shells. They had the oldest known lamps—shallow stone saucers similar to the larger ones of the Esquimo—in which animal fats and possibly seal blubber were

* Jacquetta Hawkes, *loc. cit.*, pp. 134-7.

** It is often suggested that these people were ancestral Eskimo, a suggestion based partly on aspects of their culture and partly on the skull of a short Magdalenian found at Chancelade. While there may be some truth in this theory, it would appear probable that the similarities mainly represent cultural and physical adaptations to intense cold, the second enhanced by heavy chewing of food and of hides. A number of Magdalenian burials listed by Oakley are described as of 'Cro-Magnon type'. But all these peoples were basically of Caucasoid stock and the same Upper Palaeolithic culture, almost certainly with some intercultural exchange and interbreeding. Then, as now, the Caucasoids showed wide individual variation.

used for fuel, with moss for wicks. Apart from minor variations, such as different postures and richer grave goods, Upper Palaeolithic burials resembled those of the Neanderthals and also included the ritual use of red ochre.

All this was remarkable enough, but the outburst of creativity in the visual arts was amazing. Weapons, ornaments and other objects were engraved or beautifully carved in high relief—usually with animal figures—and numerous pieces of bone, ivory, antler and stone have been found embellished in the same way. There must also have been models in clay and paintings long vanished, and certainly a wealth of exquisitely carved wooden objects. At a few sites, carvings have been found on the walls of inhabited caves or rock-shelters—notably the magnificent horses of Cap Blanc—but by far the greater part of the surviving parietal art is deep in the recesses and underground caverns of the French and Spanish caves. Here, the best of the lifelike sculptures and paintings of animals—so vital in movement and expression—rival anything of the kind that has since been achieved.* The facts brought to light by prehistoric research

are so strange and remarkable that only a visit to the sites can bring conviction of their authenticity. Within at most twenty thousand years, man accomplished incomparably more than in the preceding eight hundred thousand.

Let us return to the problem that concerns us here: what do these remarkable achievements teach us about the history of the human mind? Obviously, the first question to be answered is: how and where did it all begin? It has been said that the origin of *Homo sapiens sapiens* remains obscure, but that he had forerunners in several parts of the world and that when he appeared decisively he seems already to have been divided into the chief racial types of modern man. Furthermore, we have suggested that these developed within the various unspecialized Neanderthaler and Neanderthaloid groups. The Caucasoid race of *Homo sapiens sapiens* appears to have originated in the Near or Middle East, as did the blade-and-burin culture.** Yet the important Upper Palaeolithic advances appear to have centred and flowered in Europe.

* Cf. A. Coates, loc. cit. 'It may indeed be questioned whether any subsequent people have been more artistic than the Magdalenians, or whether the highest examples of Magdalenian art have ever been surpassed in their kind.'

Also, Jacquetta Hawkes, loc. cit., p. 186. 'This earliest painting and sculpture illuminates the truth that essentially there is no progress in art ... But that true imaginative expression (as distinct from decoration) should have appeared so soon, that truly is astonishing.'

** Carleton S. Coon, loc. cit., p. 482. 'In Europe we have a succession of remains from the start of the Middle Pleistocene which are apparently Caucasoid. But it is hardly likely that Europe was the centre of Caucasoid evolution because the succession

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Until recently, prehistorians pictured hordes of the new race sweeping into Europe from Asia and Africa, driving out and slaughtering the slow-witted Neanderthalers, and they wondered how and where these hordes could have developed. But it is now known that North Africa was not widely inhabited by Caucasoids until near the end of the Pleistocene, and that, even by that time, the entire human race was probably no more numerous than the population of London today. The new Caucasoid 'invaders' from western Asia can only have been small groups: perhaps merely a few families organized under some form of central leadership. Hunting peoples cover great distances and it is not really surprising that they should have travelled so far. Neither is it surprising that they should have supplanted the Neanderthalers who were less advanced and not so well equipped, who probably possessed

little social organization beyond the family unit, and whose population—always sparse—will have declined or weakened during the long rigours of the early Wurm glaciations. The area of France and Spain known as the Franco-Cantabrian must have been very healthy and pleasant during the temperate Gottweig Interstadial and the game plentiful, while the limestone country afforded excellent winter shelter. Thus it became a headquarters and continued to be such throughout the Upper Palaeolithic era, possibly hallowed as the land of the pioneer forefathers. All this, however, does not explain why these peoples so greatly surpassed their relatives in the homelands of western Asia.

Our interpretation of the problem requires that we return, as the reader will have suspected, to the role of the Demiurgic Intelligences—by now well established as magicians. Can we find any positive evidence that they may have taken a hand? Yes, indeed, and unexpectedly convincing.

that we find is disorderly. The changes in tool industries are in some cases too abrupt to have been the product of local technological evolution; yet the tools all emerge from a single set of traditions. By the same token, successive changes in skulls and long bones, when we have them, reflect incongruities in what seems to be a single evolutionary line. And p. 488, 'It is possible that the Neanderthals of period 3 (Early Wurm) evolved uniquely out of the population of period 2 (Riss), but the Upper Palaeolithic people of period 4 (Middle and Late Wurm) could not have evolved in Europe out of local Neanderthals.'

Jacquetta Hawkes, loc. cit., p. 82. 'Nevertheless, in spite of the richness and complexity of the European Upper Palaeolithic, it appears almost certain that the blade tradition did not originate there. The picture given by the great series of classic cultures

of the French caves is rather that they were brought in when they were more or less fully developed, even though later new groups evolved locally. Europe can show no transitional cultures suggesting the evolution of either the latest Acheulian or the Lavalloisio-Mousterian tradition towards the earliest known blade culture, the Chatelperronian. Further, as has been said, it was brought in by modern man and superseded the Western Neanderthal Mousterian with a sharp break.'

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There is no doubt at all that Palaeolithic art had magico-religious functions. Life was entirely dependent upon success in hunting and the spears and darts depicted on so many animal figures show that a form of sympathetic magic was used to bring about a kill, while numerous examples of pregnant cows and mares indicate a second form designed to increase the game herds. The extraordinary fidelity and beauty of the animal studies—unknown in later types of cave art—show that the artists were inspired by reverence and communion with nature and with the beasts among and upon whom they lived. As we have seen, evidences of a bear cult show that Neanderthal man practised some form of hunting magic, and this was certainly deepened and elaborated by the Upper Palaeolithic peoples. But something new is shown by the Gravettian 'Venuses'. In these, the artists' approach is entirely different: there is no naturalistic detail or movement, the faces are featureless and the poses static. They do not represent real women, but express the idea of procreation or fertility. So different are they from Magdalenian art as a whole that they would appear to be quite unconnected with it were it not for a few carvings—notably that of three female figures next to those of animals, executed by Magdalenian artists at Angles-sur-l'Anglin. There seems no doubt that hunting magic was supplemented by fertility magic. Thousands of years before the beginning of agriculture, the magic of the Upper Palaeolithic peoples included fertility rites.*

The obvious explanation is that man had become aware of the importance of mating and that sexual selection had become a major factor in his social life. It is hard to see how and why this should have happened unless the magicians had decided that it was necessary. Now the magicians, on our view, were Demiurgic Intelligences in disguise. We are not departing from the theme that runs all through the history of life in general, and man in particular, if we adopt the hypothesis that magicians living among the Neanderthal and Neanderthaloid groups and possessing the knowledge and ability required to control the mating of selected men and women, could produce and permanently establish new races with well-defined anatomical and physiological character-

* Cf. A. Coates, loc. cit. 'Perhaps the greatest puzzle is provided by the female figurines which are the most characteristic feature of the Gravettian culture both in Russian and in central and western Europe, as well as forming part of the Siberian culture of Malta . . . Certainly they were fertility charms of some sort, like the cowrie shells of the 'Aurignacians': many of them seem intended to represent a woman in an advanced stage of pregnancy ... It is hardly conceivable indeed that even the most primitive kind of agriculture was practised by palaeolithic females right up under the edge of the ice-sheet.'

istics.* The skeletal remains,** however, do not tell the whole story, for the evidence of external achievements points unmistakably to a psychological no less than to an anatomical transformation. We cannot account for such achievements in terms of time alone, for without consciousness of eternity and understanding of the hyparchic future, they could not

even begin. The particular significance of the transformation lies in the fact that it established in man the foundation of the Self-hood, and so prepared him to take the first step towards filling his true role in the Cosmos as a responsible being. ***

Let us see just what our hypothesis amounts to. There were men of the Neanderthal and other sub-species of *Homo sapiens* spread all over the inhabited world. It is certain that in the genetic constitution of the genus *Homo* there is a range of variability that would permit all the known races of men to be obtained by breeding from a common stock.****

This would, however, serve only to elicit anatomical and to some extent functional differentiation. It would not achieve the greater purpose; which was to endow men with independent creativity.

We have reached one of the crucial moments of our enquiry, equal in importance to that of the birth of mind. It can be compared with puberty in the individual, when the creative power of sex is brought from virtuality to actuality. This change is distinct from simple growth and development for it connects the human self to a source of energy that transcends the life of the organism and connects it to the cosmic process of transformation of energies. Nevertheless, puberty is also accompanied by anatomical modifications and in this also the analogy holds. *Homo sapiens sapiens* is different anatomically from man of the previous stages; but he is even more different in his creative powers.

* The hard core of fact in Darwin's *Origin of Species* lies precisely in evidence of the effect of breeding in the emergence of new races. In his *Descent of Man*, Darwin devoted fourteen out of twenty-one chapters to the effect of sexual selection and took, as a sub-title of his work, *The Descent of Man, and Selection in Relation to Sex*. This is an interesting commentary upon our present thesis.

**Cf. A. M. Carr-Saunders, *The Population Problem*, Oxford, 1922. 'At one bound we seem, when looking at the fossil remains from this epoch in Europe, to have passed into the modern period as far as human bodily form is concerned.'

*** Cf. A. S. Toynbee, *A Study of History*, London, 1935, Vol. 3, 'This transfiguration of the human type in the middle of the Palaeolithic Age is possibly the most epoch-making event that has ever yet occurred in the course of human history up to date; for at that moment Sub-Man succeeded in turning himself into Man, while Man, in all the time that has elapsed since Sub-Man's achievement made him human, has never yet succeeded in attaining the superhuman level which is the goal of our human endeavours.'

**** Cf. T. K. Penniman, *A Hundred Years of Anthropology*, quotes Dobzhansky: 'A case is made for regarding the whole hominid line as a genetic matrix or common

pool
out of which modern races have obtained.'

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Here we are obliged to make a speculative leap in the dark and postulate coalescence of Demiurgic and Human natures. To endow man with creativity and to enable him to acquire Self-hood, he had of necessity to be transformed on three levels: bodily, psychologically and spiritually. The first could be achieved by breeding and the second by magic; but the third could come only by a blending or coalescence of natures.

It would seem that this could be achieved through the sexual union of Demiurges in human form and women of the *Homo sapiens* races. This suggestion is strangely reminiscent of the very ancient tradition recorded in Genesis: (Chapter 6 vv. 1-4) 'And it came to pass, when men began to multiply on the face of the earth and daughters were born unto them, that the sons of God saw the daughters of men that they were fair and they took them wives of all which they chose. And the Lord said, My spirit shall not always strive with man, for that he also is flesh: yet his days shall be a hundred and twenty years. There were giants in the earth in those days; and also after that, when the sons of God came in unto the daughters of man and they bare children to them, the same became mighty men which were of old, men of renown.' This remarkable passage has a ring of authenticity and it agrees perfectly with the suggestion that creativity entered the human mind-stuff by a direct blending of Demiurgic and Human natures.

Let us assume then that the magicians, already Demiurgic in themselves, were mated with ordinary human beings to produce a new race of men—this time essentially different from all that had gone before: for they would be, for the first time, true men with a higher nature able to respond to the Individual Will that had so long remained latent. The Demiurgic Intervention would, on this hypothesis, have stupendous results, for it would mean that men could now attain Personal Individuality and acquire a soul.

Let us suppose that men of the new nature, *H. sapiens sapiens*, were developed independently in several centres. As they would have initiative and creative powers quite different from the conservative Neanderthals they might well be viewed with suspicion and need the protection of the magicians to save them from extermination. Even this would not always avail. So probably only a few of the experiments would succeed and in each case a different variety of the new sub-species would

be produced. All would be *H. sapiens sapiens*, but each variant would have its own characteristics.

Once established the new sub-species would not depend upon natural selection, for interbreeding and their superior abilities would enable

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them to multiply rapidly. Within a hundred generations—say 2,500 years—they would be able to challenge the men of the old race. This would account for the abrupt disappearance of *Homo sapiens* in different parts of the world at the same time.

From the moment that man acquired his higher nature, he became a Self with the possibilities and also the dangers of Self-hood. He could no longer be directed from within his own mind except by the consent of his will. This meant a fundamental change in the relationship between the magicians and the ordinary men and women. Up to this time, men were directed by an action that could reach their minds directly. From now on, the action had to come through their perceptions.

Direction in the human mind is by the consciousness.* We must remember, also, that throughout the evolution of life, the Demiurgic Powers had exercised control through vehicles made of conscious energy. As we pointed out, the ecstatic experiences of the early chosen australopithecines could well have been a source of destructive or even 'insane' tendencies. The development of the powers of memory arose through the inner direction of the mind by the Demiurgic Powers, and an outer instruction through rudimentary speech; and, with the Neanderthaloids, through the practice of ritual magic. In that stage, simple imitation was superseded by the practice of recurrent experiences in which thought and feeling were segregated. With such a separation, myth became a possibility, and social life could be based on images. That this was established is evident from the burials and the Bear Cult. Throughout all this gestation of the human mind—some million years or so—the consciousness acted simply as the means of developing the rudimentary powers of the mind, directed by the Demiurgic powers. Man did not have creative energy (E 3), whereas the Demiurges did. It is the presence of creative energy which enables the individual to employ his consciousness in purposive action.

With the gift of the creative energy, man is in control of his own mind, and can only be influenced by his perceptions, or by the arising of mental images or thought-forms in his mind through the action of the creative energy. These influences have to enter the mind through the gateway of conscious experience. Previously, the direction of the Demiurgic powers had been from behind the veil of consciousness. Now, they

had to speak to man in terms that he could grasp with his own mind.
This is why we have called this stage the Adolescence of Mind.

* Cf. Tetrad of energies, Vol. III, Chapter 39-, Sections 15 .39.5 .2 and 15.39-5 -4-

* Cf. Chapter 42, p. 45. It is in this way that we can be connected to the hyparchic future, and also be 'spoken to' by higher energies.

Adolescence is the period wherein a human self becomes responsible for his or her own life. We are now entering the phase of history when man began to be responsible. Nevertheless, he was still in a phase of development and of profound ignorance of himself and of the purpose of his existence.

17.46.6. Four Regions of Transformation

In the next chapter, we will be studying the emergence of modern man. Before we can deal with the great events of the past 12,000 years, we need to complete our picture of the coming of the first creative men. We decided that the transition to *Homo sapiens sapiens* and the establishment of the new races took place in the midst of the *sapiens* population they were to supplant. In concentrating on how the step from consciousness to creativity was made in the human mind, we did not seek to determine where this was actually achieved. The localization of the action is, however, inherent in the change that was taking place. It was, for the first time, a personal action, between men and women within a restricted community. The first stage was concerned with breeding by sexual selection. This need not have taken more than two hundred generations, that is 3,000-4,000 years.

We have traces of *Homo sapiens sapiens* in Europe, Africa and South-West Asia. Though at present we have none for the Far East before 25,000 b.p. we suppose that there also was a localization of the transformation. For 5,000-10,000 years, the work of establishing creative men went forward throughout the Old World of Europe, Asia and Africa. In the course of this duration, definite regions were established inhabited by creative men. To help the reader in following the complicated story, we shall begin with a statement of the conclusions we hope to establish. The transition was made principally in four distinct regions: East Africa, Western Europe, South-West Asia and the Far East. Within each of these regions, the work of transforming man required the development of his new powers. We shall refer to concentrations of transformation within these regions as centres.

Dating is not possible to any close approximation, but there is some indication that the great cycles defined in Chapter 45 now begin to

correspond to the events. The Cycle of 25,000 years which began about 37,000 years ago and ended 12,000 years before the present can be regarded as the Implanting of Creativity in Man. After the first three sub-cycles, or Epochs, the task of establishing *H. sapiens sapiens* had been completed, and there were several Epochs during which human creativity was able to become operative.

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We are entering an era of accelerated progress. Hitherto, we have had no clear evidence of the way in which the accelerated time-scale of progress is related to the uniform time-scale of cosmic rhythms. Very probably, the rhythm of life followed the Great Cycles during the ages of the birth and childhood of the human mind, but we have no data to go on. From the time that creativity entered the human mind, man's works began to be differentiated so markedly that the sequences can be discerned.

We shall observe that, although the cycles remain constant in their periodicity, the events move more and more rapidly. Thus the cycles may be related to clock-time and the processes of the material world; whereas the activity of the human mind follows the law of accelerated progress except at times of failure when there can be stationary or even regressive states. This two-fold character of history becomes more and more apparent as we begin to penetrate into the workings of the mind. Unless it is taken into consideration, our attempts at interpretation will be confused, if not vitiated.

There were, for example, undoubtedly different lines of development of human creativity. Some moved faster than others: but all were subject to the general periodicity of the cycles of human life. This resulted in an ebb and flow of mutual contacts. At one stage, the various centres were far apart, both geographically and in their activity. At another stage, they came together.

17.46.6.1. EUROPE

The Chatelperronian (Perigordian I, II) and the 'true' or 'Middle' Aurignacian, which together extended from about 34,000 b.p. to 20,000 b.p., were the prelude to the specialized development of Europe. The period from about 18,000 to about 12,000 b.p. saw the rise and flourishing of the Magdalenian culture in South Western Europe with unmistakable evidences of an unprecedented artistic creativity and technical ingenuity. In other regions, creativity took different forms. Throughout the span of this great period in human history, there were stirrings of creative activity from China to North Africa, from Russia to Somaliland. The traces that we have can only reflect the general cultural progress. Around the magicians, were formed training groups

in which men were initiated into practices designed to develop the new creative powers. Only in the Dordogne region in France have we so far found evidence remaining of such an organization. However, the Magdalenian, together with the other cultures of Europe was also a part of a total community or great region of transformation. We saw

that the Gravettian (Perigordian III to VI) cultures of central and eastern Europe attained a high standard of skills, and were distinguished by the female statuettes or 'Venuses' indicating a cult of fertility. Since these figures are most plentiful in South Russia and only found sporadically in the west, it would seem that the Gravettian people or their culture spread from that direction.* The important conclusion to be drawn is that the whole region of Europe was an integrated whole whose unity came not by shared techniques so much as from the influence of a number of creative centres. The cultural traces in South Western Europe—especially those of the famous sites of the Dordogne—indicate a concentration of interest which suggests that it was recognized as an important centre for the peoples of Europe—and even, perhaps, for those from further regions. We can imagine that this was a centre of pilgrimage where the spiritual leaders of the new creative groups were gathered.

17.46.6.2. SOUTH-WEST ASIA

In South-West Asia, developments are not so clear at present since comparatively little excavation has been undertaken in these regions. No cultural centre comparable to that of the Dordogne has been discovered, and visual art would seem to have been limited to a few carved or modelled objects. However, various Upper Palaeolithic cultures developed out of the ancient blade-and-burin tradition. Groups from the Levant founded colonies on the North African coast and elsewhere. Indeed, it might be said that these Asiatic Caucasoid peoples laid the foundations of the white Mediterranean culture which later became so important.

17.46.6.3. AFRICA

It is difficult to unravel events in Africa. South of the Sahara, two chief cultures evolved during the period of drought which broadly corresponded to the Gottweig Interstadial: the Fauresmith, a development of the ancient hand-axe tradition, on the open grasslands and plateau of the east and south; and the Sangoan, which originated in Uganda with techniques largely devised for cutting trees and scrub

* The Kostenkian culture of south Russia probably dates from about 33,000 B.P. No less than 43 'Venuses' were found at Kostenki-on-Don, and there were 6 at

Gargarino, 4 at Ardecvoi (Desmond Collins, *Prehistoric Art*, Discovery, May, 1965). These eastern cultures produced other small works of art, while individual instances of rock pictures occur in the area of Melitopol, Sea of Azov.

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and for wood-working. These lasted until about 40,000 b.p. and are associated with the Rhodesoids—African equivalents of the Neanderthals. A little earlier than this, at the beginning of the Gamblian Pluvial which approximately corresponded with the Middle and Late Wurm glaciations, men started to move into previously uninhabitable areas of the centre and south.

A culture known as the Lupemban then developed out of the Sangoan in the Congo Basin, and spread among peoples ranging the equatorial forests and the low-lying river basins and lakesides. To what extent the Lupembans were Proto-Negroid cannot be said, but it is thought that the Negroids evolved on the fringes of the Congo Basin, rather later than other races.

Meanwhile, the Fauresmith had evolved into a culture known as the Proto-Stillbay. About 25,000 b.p., a 'developed' Stillbay appeared, which was apparently influenced by the Lupemban and overlapped it in Uganda and the Rhodesias. In the Kenya Rift Valley and northern Tanganyika, the Stillbay was associated with a blade-and-burin culture of controversial origin which may date from as early as 32,000 b.p. and is known as the Kenya Aurignacian (or Lower Kenya Capsian).

The area around Lake Victoria and Lake Edward and including Abyssinia seems to have been a centre of transformation, independent of the events in North Africa, though possibly still connected with the Congo Basin. The Stillbay culture was also associated with an early blade-and-burin culture in Abyssinia. It has been suggested that the blade tradition was brought into East Africa by Asiatic hunters, by way of a land-bridge existing between Arabia and Somaliland during the early part of the Gambian Pluvial.

In North Africa, communication with South-west Asia began very early,* and a blade-and-burin culture known as the Dabba was founded in Cyrenaica about 38,000 b.p. probably by Levantine colonists. However, a Mousterian-type tradition, existing on the coasts of Morocco and Tunisia, was replaced about 30,000 b.p. by a native flake culture—the Aterian—which achieved a high standard. This resembled the

* There are indications of faunal exchange between the Levant and Cyrenaica during the Upper Pleistocene, and this would have been practicable at some periods such as the last advance of the Wurm glaciation, and it is probable that rafts and skin boats were used, in any case human communication certainly took place between the two

regions. Two true Mousterian levels in the Haua Fteah cave, Cyrenaica, have been dated to about 45,000 and 41,000 b.p. respectively (carbon—14), and a 'Pre-Aurignacian' blade-and-burin industry believed to come from South-west Asia has been found beneath them which is probably at least a hundred thousand years old. (Cf. S. Cole, loc. cit., p. 256—7.)

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Stillbay in some respects, but in its later stages included exquisitely worked implements and tonged and barbed points, and it was probably men of this stock who created the earliest rock art of Africa. They penetrated deeply into the Sahara, and into Libya as far as the Nile Valley. Aterian human remains are scanty, but their culture indicates a transformation to *H. sapiens sapiens*. About 15,000 b.p. Morocco and Tunisia were occupied by people with an Upper Palaeolithic culture—the Oranian or Mouillian. They resembled Cro-Magnons, and may have come either from the Near East or from Spain. The Oranians replaced the Aterian culture with their own, but it is believed that they interbred freely with the natives, producing a hybrid population.

17.46.6.4. THE FAR EAST

Little is known about the Far East; but, apart from one area, there is no evidence that it progressed much beyond the cultural stage of *Sinanthropus* and the crude chopper-chopping tools that he used in the Choukoutien cave. However, in North China and South Mongolia, there are traces of creative man. Here, especially in the area around the Yellow River (Huang-ho), numerous Palaeolithic sites have been found showing advances from the earliest tradition, through an eastern type of hand-axe culture (Tientsun) to an Upper Palaeolithic one known as the Ordos. The Ordos culture combined Choukoutien-type choppers made on pebbles, Mousterian-type scrapers and points, and simple but efficient blades and burins. It appears to have been widespread and its makers Chinese Neanderthaloids.

A culture of Eastern Siberia, known as the Baikal, shows exactly the same mixture of old and new techniques, but with a strong Gravettian influence. Its best-known site, Malta, was late—about 12,000 b.p.—and here that influence is shown by rich ornaments and many bone and ivory implements, including eyed needles and bodkins. There are also carved ivory figurines of women, but these, unlike the Gravettian Venuses, are slim and fully dressed in hooded trouser suits of fur. It seems certain that these people of Malta must have been *Homo sapiens sapiens*.

Finally, in the Upper Cave at Choukoutien, inhabited rather later—perhaps as late as 10,000 b.p.—stone implements were found with bone flakes and an eyed-bone needle, and burials with bead head-dresses, necklaces and pendants, and shells and mother-of-pearl imported from the coast for ornaments. The burials, and probably the pendants—worn as amulets—must indicate belief in survival. In addition, the unburied skeletons of an elderly man and two young women were also

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discovered there. These people, who had been murdered, were definitely *Homo sapiens sapiens* and probably Mongoloid.*

17.46.6.5. CREATIVE MAN

Here we must pause and examine our criteria of progress. We have agreed with the authorities that the early stages of man's evolution were marked by advances in the use and manufacture of tools. We also agree that traces of art and social customs are proper indications of the development of mind. But at this stage of creativity we cannot assume that industry, art or even burial customs are sufficient criteria of progress. For, with creative mind, man could practice worship, and could deliberately try to understand the world in which he found himself. The first enters our own present moment of history as the great myths and spiritual beliefs of the past. The second has come down to us through the languages that we speak and think with, which enable us to reflect upon the world and its meaning. We will return to this notion later.

Human society began to acquire a two-level structure: corresponding to what later were to become the Psychostatic and the Psychoteleios orders.** The middle order—the Psychokinetic—could not yet appear. The two-level society consisted of men directly connected with the Demiurgic Intelligences on the one hand, and men connected only indirectly, by way of speech and action on the other. In other words, there were men conscious of their Demiurgic nature and men unconscious of it. The former were regarded as magicians and wonder-workers and their task was to develop the creative powers of the ordinary people.

We find confirmation of this speculative theory in the outpouring of creative activity in the period from 25,000-15,000 b.p. which we call the 'High Stone Age'. When we survey the achievements of this phase of human history and remember that it coincided with the rigours of the last Ice Age, we cannot help being struck by the vast difference between two levels of life simultaneously present. On the one hand we find surpassing genius in the guidance of human progress and in the introduction of the new techniques. As against this, we are forced also to

take into account the primitive conditions of ordinary existence as shown in the cave-settlements of western Europe and the primitive dwellings

* The man seems to have been definitely Proto-Mongoloid. The two women have been described as Esquinoid and Melanesoid respectively; but Professor Coon believes

that all three skulls are Mongoloid, those of the women being deformed through crushing at death (Coon loc. cit., p. 474).

** Cf. Vol. III, Chapter 41.

in Asia. The common life of existential mankind, throughout this brilliant period, could not have differed greatly from that of the present-day Eskimos and the nomad tribes of Siberia. We find the masterpieces of cave-painting within a few miles of primitive settlements which can be identified as contemporaneous not only by the implements but by the animals, such as reindeer, whose skeletons are to be found in the settlements, and whose forms are depicted in the caves. These cave-dwellers lived on what we should now regard as a level of primitive savagery. The discrepancy in the levels of culture simultaneously present can only be accounted for if we ascribe the cave-paintings to the work of groups of creative men living in quite a different manner from the surrounding primitive tribes.*

The painted caves show evidence of many centuries of use, sometimes with several drawings superimposed upon the same surface. Here there can be no question of individual men of genius or magicians transmitting their art to one single successor. We are in the presence of the work of creative men organized to preserve the continuity of their traditions over long periods of time. The disposition of the caves shows clearly the precautions that were taken to deny access to the profane. They were centres of initiation and the drawings of animals were symbols used in the cults. For example, at Lascaux and Altamira hundreds of deer are depicted with antlers at various stages of development, many clearly showing signs of additions later than the original drawing.** These are to be interpreted as personal symbols, representing stages of development attained by members of the creative group, all owing allegiance to a common ideal. There is some evidence that the fertility cultus was shared by the common existential people and was the link between them and the creative groups. For example, most of the figurines that have been found in cave settlements represent pregnant women and animals, and were probably the instruments of magical contact.

A creative centre—such as that in the Dordogne; or the one in South Russia, where the majority of the Gravettian 'Venuses' are found, or

* Cf. R. R. Schmidt, loc. cit., 'The matured artist of the Magdalenian period was the first to attain to the concentration which for him made greater compositions possible. Such a gift could no longer be a common possession. These masterpieces of colour are the creations of artists of special gifts—of magicians, whose hand is shown by the great truthfulness of the pictures: they are the work of sorcerers.'

** The date of the earliest Lascaux paintings is assigned by the Abbe Breuil to some 30,000 B.P. The only radio-carbon dating, made from a specimen of charcoal found in the floor, gives $15,500 \pm 900$ years b.p. The occupancy of the caves may have been intermittent, but the continuity of culture—persisting for perhaps 20,000 years—makes the antiquity of Egypt seem but as yesterday.

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again, perhaps those in the Congo Basin or in Abyssinia—would consist of a small central group operating within a few intercommunicating areas. From such centres the whole life of a region was directed by those initiated into the secrets of magical operations, the ordinary people still living as hunters or food gatherers with little understanding of the change that had come over them. We are safe in assuming that the ascendancy of the magicians and their associates was complete. They formed separate groups within the society of the new races. Although creativity had entered into all who had received the contact with Demiurgic Intelligences in human form, it remained latent unless evoked by special training which only the magicians knew how to impart.* They were the Guides of mankind.

There would have been two main concerns. First, the mental stability of the general population had to be assured. The rigours of the period provided a steady environmental challenge to match the new kinds of aggression stirring in man. Second, the new creative powers had to be fostered. We suggested that this was restricted to training groups around the magicians. Such groups later served as intermediaries with the mass of the people. In the beginning, there would have been many experiments with methods of development.

Untrained creativity cannot produce good work. At best, it manifests in play: when ostensibly engaged in a positive activity we call untrained creativity dilettantism or amateurism. At worst, it excites the mind to visions of grandeur and dominance and leads it to seek personal satisfactions and power at the expense of the happiness and even the lives of others. Nor can we say that these dangers threaten only minds untrained and untutored. Powerful minds, infused with creative energy can in our day do untold harm to themselves and to others. It cannot have been very different 15,000 years ago.

Many different situations must have arisen. The presence of creativity must have resulted in a far greater diversification of behaviour patterns. Life that had hitherto been dominated by food, sex and self-preservation

was complicated by new impulses: intellectual curiosity and the need to understand himself and his world, the urge to express and to fulfill

* Here we are on safe ground psychologically, because our own experience show; how rarely the creative power in man develops spontaneously and how necessary, ever

in such cases, it is to train the instrumental terms of the tetrad—sensitivity and consciousness—if creativity is to give positive results. It must also be obvious that creativity

in an untrained mind is a most dangerous possession even more likely to destroy than to build up. The normal outlet for untrained creativity is in play. It is likely that music and dancing were practised by all these people—as they are by cave-dwelling Gypsies even today.

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himself, the desire for power and perhaps even for possessions, and the need to find new kinds of relationship reaching towards a social structure—these and other characteristic human impulses—must all have entered *Homo sapiens sapiens* with the advent of creativity.

Creativity must by its nature complicate life and there has been no lack of complexity in the history of the past 25,000 years. There must have been failures and there must also have been successes that went wrong. Though still far less complex than at any time within recorded history, the affairs of the earliest human societies must have created serious problems for their leaders. It was to the few who underwent the special training that the destiny of man first became apparent. By the thirteenth millennium b.p. the human mind had been sufficiently transformed for the next great step to occur.

Each major step has occurred within limited groups—yet accompanied by a synchronicity of advance amongst many regions. Our expression of global synchronicity is the Epoch. The will of man now had the power to act within the present moment. Corresponding with this came the presentation to his consciousness of the destiny of man to become responsible for the governance of the whole Earth. To present to the human mind—laden with the traces of a million years of semi-animal existence—the theme of human destiny, must have been an almost impossible task. Yet man was creative, and what he could not understand could yet enter his awareness by a direct communication with Intelligence. The Guides were responsible for the delicate regulation of man's awakening. In their hands, was a large part of the balance of success and failure. Man was not yet directly connected with the source of Love which could enable him to come of himself to an understanding of man as destined for union with his Source. Between him and the Cosmic Individuality came the link of the Universal Will, operating through the Demiurgic Intelligences. Some time during this

period, an act of will occurred that was to prove almost irrevocable and disastrous. This was the entry of Egoism into the human soul-stuff.

Chapter Forty-seven THE CREATIVE MIND

17.47.1. The Problem of Evil

No account of man, whether anthropological or historical, that fails to consider the problem of evil is worthy of serious consideration. Whatever may be his proposed beliefs or philosophical views, no man can escape the reality of the evil will. We have now reached a stage of our enquiry when the problem of the origin of evil can no longer be postponed. We cannot accept the facile view that reduces evil to mal-functioning of the human organism or the anti-social consequences of inherited animal characteristics.

To deny the reality of evil is to reject human responsibility. We cannot avoid the dilemma by the argument that, while the sense of responsibility may subjectively be real, it is objectively an illusion. The difficulties to which such doctrines lead are well known and in any case they do not concern us here. We are committed to the doctrine that man has a real freedom of choice and that when conscious of his actions and their consequences he can make an act of will that is evil both subjectively and objectively.* If we admit the reality of evil, then we must be concerned with the question of its origin: not in the metaphysical sense of seeking a rational account of evil in a world created by a Good God; but in the historical sense of showing when and how the transition was made from animal innocence—for everyone agrees that animals are

* Without its opposite, 'goodness' has no meaning. This is overlooked by those who try to set up a naturalistic ethic. Cf. R. Carrington, loc. cit., p. 302, places goodness at the head of his list of values and seeks to define it 'scientifically' by saying: 'Goodness may perhaps be defined as beauty in action—a process by which an awareness of something greater than the individual mind is translated into terms of creative movement.' The author of *A Million Years of Man* never refers to the problem of evil and in this he does not differ from the great majority of those who believe that 'evolution explains everything.' Even Father Pierre de Chardin can write: 'Evil, in all its forms— injustice, inequality, suffering, death itself—ceases theoretically to be outrageous from the moment when, Evolution becoming and Genesis, the immense travail of the world, displays itself as the irreversible reverse side—or better, the condition, or better still, the price—of an immense triumph.' (The Future of Man, Eng. trans, p. 90.) This passage is characteristically muddled thinking as is the whole of the article (dated 1946) from which it is extracted. It begs the question of responsibility—which indeed in our moments of cowardice all of us would like to beg.

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free from evil—to human depravity—for everyone agrees that at least some men are sometimes depraved.

We can scarcely subscribe to the theory that evil arose through a chance mutation of genes and worked its way into human nature because of its survival value. There is nothing logically impossible in such a view if we are prepared to agree that Will is a matter of genes and chromosomes; but it would raise very awkward questions indeed for evolutionary philosophers and, so far as we are aware, no one has seriously maintained it.

As we subscribe without reservation to the evolutionary principle that man, as we know him today, has developed stage by stage from a material sub-stratum, with the sole exception of his Will that comes from a Source outside time and place, we are faced with a two-fold problem. We cannot say that evil has accompanied man from the hypo-zoic world of the sexless blue-green algae which (or who) must surely be exonerated of any malice. But we can scarcely say either that the Universal Individuality endowed *Australopithecus* with an evil, or at least a mixed will. We shall not go back upon our description of the time of *Homo erectus* as the Age of Innocence when man did no worse than follow his animal passions and enjoy life when it was good.

We had our suspicions, however. The Age of Innocence lasted too long.* Did something go wrong? So far we have treated our Demiurgic Intelligences as impeccable though not infallible. Why so? In Vol. II, we reached the conclusion that the whole of Existence is fallible because it is limited by conditions that make the full realization of its potentialities impossible.** The Demiurgic Essences were found to be human in their lower nature: perhaps all *zu menschlich*! There is nothing in our entire scheme of the cosmic order that requires that the Demiurgic Intelligences should be exempt from error. Perhaps there were miscalculations. Once history begins to penetrate into the level of consciousness it ceases to be predetermined and therefore it ceases to be predictable. It may be that sufficient allowance was not made for the exuberance that consciousness must have imparted into the australopithecine sensitivity. It is possible that the retardation of human development was imposed by circumstances of a higher order even than the destiny of man.*** The delay, not evil in itself, may have produced an imbalance in the mind-stuff. Consciousness may have been too firmly embedded in, or inextricably mixed, with sensitivity to make it easy to elicit responsible actions from *H. sapiens sapiens* when creativity came.

* Vide supra, Section 17.46.3.

** Vol. II, Chapter 25 and Chapter 36.

*** This is the explanation suggested by Gurdjieff in All and Everything in the chapter entitled 'Why Men are not Men', p. 87.

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Such considerations could account for the attachment of man to sense experience and his tendency to see the material world as substantial and consciousness as a shadow; but they do not account for the evil will. If we accept the principle *omnis voluntas ex voluntate sola* 'Will comes from Will alone', we cannot expect to find an explanation for the origination of an evil will within man, except by postulating an evil will outside man. This simple argument which evidently occurred to the author or authors of the second chapter of Genesis, has become unfashionable, but it has not been proved fallacious.

Carl Jung has both helped and hindered our understanding by drawing attention to the supreme importance of ancient myths for the interpretation of human experience. He has helped by destroying the illusion that myths are no more than fanciful inventions having no connection with any real situation. We have been made to see that myths express very deep realities indeed—so deep that they hold good equally for civilized men and savages, for men of our day and men of the remote past. On the other hand, the Jungian interpretation has tended to lead us astray by suggesting that we need not take myths as having any historical significance. This is unfortunate, as we know that ancient folk-lore, many legends and even myths have been shown by archaeological research to have a solid historical foundation.

We have to decide now if we are to take seriously the myths that associate the presence in man of propensities towards evil with the intervention of a hostile but superior Intelligence. Such are: the myths of Lucifer the light bringer, of Ahriman the Opponent of Ahura and of Satan the Tempter of Adam. In every case, the source of evil is an Intelligence, limited and not Divine, but of a far higher order than, and possessing powers superior to, those of the human race. Evidently, we can fit our Demiurgic Intelligences into this picture and ascribe the 'Fall of Man' to the jealousy of the powers that were charged with endowing him with creativity.* Before we lightly dismiss this idea as fantasy, let us pause to ask ourselves how and when sin could have entered the life of man. There is only one possible moment: when the Will of man was made effectual by contact with the creative energy. Before this moment, man could not have been responsible and therefore he could not have been sinful. Nor can we suppose that sin came later, for this would require the existence of creative and yet sinless men, whose will was free from evil dispositions. Such men could only have fallen into sin by a cruel and unmerited intervention, that moreover

* Which can, of course, be identified with the 'Apple' of the temptation plucked from the Tree of Knowledge of Good and Evil (Genesis 3).

would have been totally gratuitous since such men would not have been in need of help for which such a price might have been exacted.* One of the objections—both moral and psychological—to the doctrine of Original Sin is that it cannot be seen to be in accordance with Divine Justice.

When the problem is studied historically, and not theologically or ethically, it falls into a far more reasonable perspective. The evolutionary account of human development implies stages. At each stage, there is some transfer of responsibility into the creatures destined for hominization; and, finally, into man himself. At some point the latent Will is set free. It could not be free from the start, for it required a Mind through which its powers were to be exercised. The will could be linked with mind only through the Creative Energy (E 3). But this energy was lacking in early *Homo sapiens*. It could not be plucked from the Tree of Life, for creativity is beyond life itself. In plain terms, creativity could not be acquired by genetic mutation.

So we come to the conclusion that Creativity had to be imparted to man by the Demiurgic Intelligences whose very nature is to be creative. Why should they give men the possibility of reaching their own level—or even surpassing it, because of man's link with the Cosmic Individuality—except as an act of obedience? But why, it may be objected, should there have been many or even one disobedient Demiurge?

The answer to this objection lies in understanding our definition of the Demiurgic nature. Referring back to the scheme of Essence Classes** we have:

* We refer here to the argument that sin is a necessary condition for self-perfecting; since only the overcoming of sin can create the merit required for the possession of Individuality.

** Adapted from Fig. 34.11, Vol. II, p. 313.

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The quintessence or central characteristic of the Demiurgic Nature is Creativity.* Now creativity implies spontaneity and spontaneity requires freedom. The Demiurgic Nature is not to be regarded as a passive instrument whereby the Divine Will is inexorably and impeccably put into execution; but rather as a Creative Intelligence with an immense freedom of action. This freedom is conditioned by Fore-ordainment, that is, by the total requirement of the Plan and Purpose

—in the present case the evolution of free responsible beings on the earth. But within these limits, we postulate an indefinite number of possible paths of realization. Working in the hyparchic future, the Demiurgic Intelligences** can interfere with the patterns of destiny but not with the Plan of Creation.***

So far we have used the word evil. Since we must admit that sin is also a reality, we are compelled to account for it. We are seeking to set up a complete system of explanation of all human experience and from such a scheme no consideration so highly relevant as that of man's sinfulness can be excluded. It may even be that, by facing resolutely the problem of evil and sin, and the way in which they entered the human mind, we shall find the most direct confirmation of the system we have been working out. Sin is an act of wilful disobedience to an obligation of which we are conscious.**** If we are to impute sin to man, either now or from the time that his will was set free, we must be satisfied that he was aware of obligation. This is a delicate, almost theological question. It seems clear enough, however, that the Will of man was, from the start, linked through the Universal Individuality with the Cosmic Individuality: that is with Christ. Once he acquired Intelligence, he could not be wholly unaware of his Ultimate Destiny to be reunited with his Source. This being so, he could not be wholly absolved from responsibility if he accepted the 'evil suggestion' that he could become an independent creator in his own right.

So much for the abstract ethical considerations. Our concrete picture

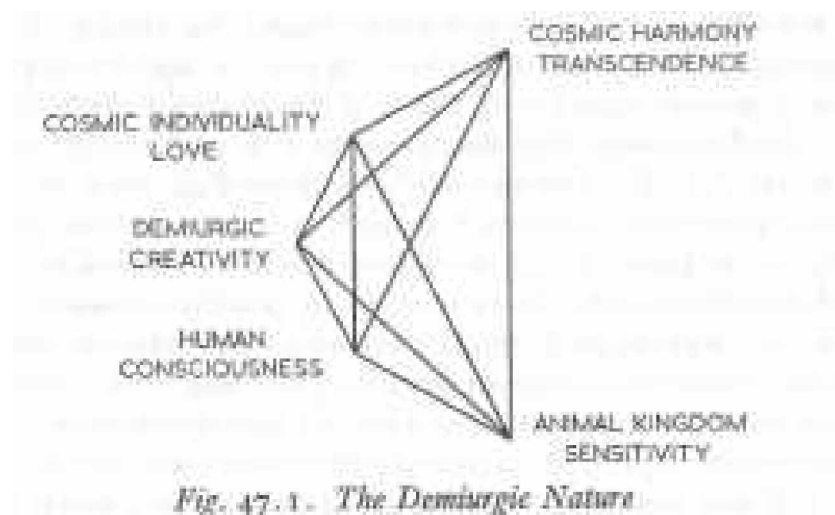
* This is, indeed, why this descriptive name was chosen, rather than Angel; for Angelos, a messenger, represents quite a different role. It will be recalled that the name was suggested by Plato's 'Great Artificer of the World', Timaeus, 41.

** Vide supra, p. 95, Chapter 43 for the description of Divine operations. It will be recalled that among the Demiurgic Attributes we assumed that a sense of humour and even of the absurd was needed to account for some of the freaks of nature:

Chapter
44, P-155-

*** As beautifully conveyed in the ancient and marvellous story of the temptation of Job.

**** But in this form, sin can be derived from Kant's principle of the Categorical Imperative without introducing the notion of Divine Ordinance. Man is conscious of obligations and he is also aware that to disregard or disobey them is a sinful act.



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of what happened does not run counter to it. Man by his natural bond of sexual intercourse with the Demiurgic Intelligences was given a share in their creative energy. With this his mind was set free to conquer Nature. At the same time, his Will remained connected by a supernatural* bond with the Cosmic Individuality. The mind of man is his own mind; within it, his will is intended to work creatively and consciously.

This mind, newly awakened to its own creative power, but weakened by its prolonged—over-prolonged—infancy and so excessively drawn towards the objects of sense, was confronted with the suggestion that its destiny was to become Master of the world. This suggestion was made by Demiurgic Intelligences acting in disobedience to the task they had undertaken. In his confusion, his weakness—but also in a false estimation of his own creativity—man chose the Path of Egoism. No one can deny the significance of egoism in human life. Those who deny that egoism is sinful and not merely socially undesirable, must test their beliefs against their own sense of obligation. In the long run, this is a personal question, indeed the most personal of all questions to which every human self must give its own answer.

We have set down our account of the occasion and manner in which evil entered the world of men and the manner in which men succumbed to evil and became subject to sin. The next question to be considered is that of the immediate consequences.

The combination of creativity and consciousness produces in the mind-stuff a structure that we know as the self-hood. In other words, with the advent of creativity men became something more than 'animals with minds': they became selves. The response of the self to the 'idea' of the destiny of human mind would either bring Egoism or Individuality into the mind. We cannot suppose that all who were tempted by the lure of independence betrayed their awareness of obligation: those who did not, would, on the death of the body, pass straight into the state we have called the Hyparchic Future.

As far as the remainder were concerned, all would be affected, because all minds draw from the same pool of mind-stuff. There could not therefore be some regions where the evil influence of the disobedient Demiurgic Intelligence failed to penetrate. Each new generation would be born with a predisposition to egoistic impulses. So mankind would

*'Supernatural' because not limited by existential conditions. The Will—as we have so often insisted — does not exist and its operations are only natural insofar as it depends upon nature for the exercise of its powers. But a direct communication of will can occur outside existence altogether.

eventually acquire the characteristics with which we are only too familiar today.

The conclusions we have reached are consistent with our notion of a Dramatic Universe. Hazard is inherent in the Drama of Existence. We are coming to know a world that is neither a clockwork mechanism wound up ab initio to work out a predeterminate programme; nor a blind, meaningless chaos that, by sheer chance, happens to have thrown up complex physico-chemical structures with capacity for thought and feeling. It is a world that is through and through dramatic, and therefore through and through interesting. There can have been few moments on this earth more dramatic and interesting than the offering of Pandora's gift of Creativity.

When hazard entered the human mind-stuff, it was transformed into soul-stuff. From that time on, men began to be selves and being selves could become souls. Since soul-making was certainly foreordained, we must suppose that hazard also was and is within the Plan. But, as we have seen, foreordainment and predestination are different modes of future reality. Man was not foreordained to Egoism: he was free to choose. His choice was very far from being wholly evil: but it was a sinful act and as such exposed him to the hazards of a two-fold contradictory nature the conflict of which could be resolved only by the attainment of Individuality.*

Let us not forget that we are seeking to establish an historical account of the human situation. The Universal Drama cannot be understood except in an historical context. The same is true for the Human Drama. We must consequently return to the historical situation

and endeavour to decipher the enigmatic record of the Epoch within which the last Glaciation ended, some 11,000 years ago.

17.47.2. Withdrawal and Language-Creation

The human situation had developed in such a way as to expose the whole undertaking to the risk of failure. We may surmise that the communities that had grown up under the direction of magicians disobedient to their task had gained the dominant position. Those who remained faithful to the task of maturing the human mind were obliged to withdraw.

During the Epoch 10,500 to 8,000 B.C., we enter the second Great Cycle of human creativity and a time when the truly progressive work

* Cf. Chapter 39, Section 15.39.6.

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amongst mankind had become separated from the main areas of human activity. The Intelligences concerned with human progress were working in terms of the hyparchic future, not in terms of technical advance. The result was a seeming conservatism or absence of progress. Man's creative energy was channelled towards preparing for the future of the human mind—when man would populate the whole world, found civilizations and come to religion.

Early technology, art and even husbandry and seafaring, could all have developed without much advance in conceptual thought. Technology and art represent a development of the sensory-motor and feeling powers, rather than the intellectual. We have argued that speech was the first crucial manifestation of mind. In this later phase, language, once again, assumes major importance. Here we shall be concerned with conceptual language, rather than with the rudimentary concrete language of early man. A conceptual language has a complex structure with embodied basic notions of process, space and time, categories of differentiation and so on. It is no accident that throughout the history of philosophy, attention has always been focused on the phenomena of language and its uses, with the aim of clarifying or redefining the components of its conceptual framework, and the ideas which can be produced from it. Though Galileo could well say that just by giving

a thing a name we do not understand it the better, at least we are able to think about it.

Early man, we said, can have possessed but few notions of past and future, of scale, or of different levels of activity. He could not have thought conceptually because he had no language which embodied intuitions of time, space or eternity. Language was linked to the operations of the present moment. When language became free of the immediate activity it could acquire 'superfluous' elements such as notions of time. We have repeatedly emphasized that intellectual reflection could not have emerged before the apparatus with which men could reflect had been developed. In our eyes, this demands an Intelligence working 'ahead' of man, in man's hyparchic future—rather as a parent today ideally works in terms of the expected future of his child. The construction of a conceptual language was directed by the Demiurgic Powers with the purpose of providing an apparatus wherewith man could learn how to reflect upon his origin and destiny. Man must understand the working of nature so that, in time, he may become responsible for the regulation of the Biosphere. This purpose is still in process of being worked out, but—as we all too easily witness—it has come to contradict the higher aim of reaching an understanding of God

and the Great Plan. In our own Epoch, man's understanding of nature has led him to distort and deny deeper conceptions of his destiny and of God which also must be carried forward and developed. This dilemma reflects the contradiction we met in Chapter 45 between the static and the dynamic lines of evolution. Man's understanding of nature leads towards the static end of Demiurgic Intelligence. Man's understanding of God has its end in the Cosmic Individuality, with man as conscious servant of the Great Purpose.

It is clear, therefore, that the creation of language wherewith man could come to reflect and to think about the Universe was one of the most important moments in the whole of our history. It is this which stands at the beginning of the history of social man.

Simultaneously with that particular and highly specialized development, the world saw the arising of the Great Notions of God and the Spiritual World. They were given to ordinary man at first as images evoked by direct experience rather than as ideas or mental concepts. Men came to live within the context of a vision of the invisible powers in all that they saw and did and this vision was an Image shared by all. In later times, these Sacred Images were to be refined and others constructed—yet the principle would remain the same. They were the ultimate inspiration in human life, and guided men in their everyday lives as well as in the organization of their societies. In front of these Great Images, man was left free to respond. This was to be the precursor of man's response to the Messengers of the Great Religions, when he would be addressed more or less directly.

The two factors of response and understanding were the means whereby man entered actively into his assumption of responsibility. We have to make sense of the limited traces of human culture in these terms. Our starting point is the thesis that the whole of our modern culture has stemmed from a few great centres. By the time of the first civilizations, the various cultural streams are already intermingled. We are now concerned with the critical period at the end of the Wurm glaciation. Amongst the responsive creative groups who withdraw from the general sphere of human activity in each of the four main independent regions were the pioneers and guardians of the future of the human mind.

The brilliant Magdalenian culture of South-West Europe lasted about 5,000 years and then rapidly declined. Cave painting and sculpture ceased while the aesthetic quality and decoration of objects deteriorated. About 10,000 B.C. the great ritual centres of the Dordogne were abandoned. Some groups of Magdalenian hunters followed the game

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northwards.* Other developed the Azilian microlithic culture, which was fully established by 8000 B.C. and lasted for several thousand years in the more open areas of South-West Europe. This, and other more widespread Mesolithic cultures descended from the same tradition, mark a clear discontinuity with the creativity centre of the Magdalenian peoples. It seems as if the outburst of creativity either dried up or changed into different channels.

In central and eastern Africa, we can detect an even greater change. After about 10,000 B.C., there are signs of a regression which continued until the Shaheinab Neolithic stage, about 3000 B.C. Even then there is evidence of little progress. Only the Ishangian culture which nourished around 8000 B.C. shows any sign of creative activity—significantly after the Epoch of Withdrawal. Our thesis is that the withdrawal took place in all four main regions of human population: the Far East, Africa and South-West Asia as well as in western Europe. The withdrawal was necessary in order to make the next step forward in isolation from the confusion which was sweeping over mankind. As we have said, the key to the nature and location of these new creative centres is given by the four major cultural streams of mankind. Associated with each of these was a set of beliefs and a peculiar language structure.

Two or three thousand years are none too long for the creation and establishment of a great root-language, or a new set of notions. The work depended on right environmental conditions which could offer the

necessary challenge to stimulate human initiative, and at the same time provide the perceptions to invest the new beliefs with a substantial form. We will attempt, as far as it is possible, to find a plausible location for each of these four main centres, even though we may be exposing ourselves to the risk of making big mistakes due to the difficulty of reconstructing these remote events.

For reasons that will appear later, we believe that 'loyal groups', as

* Many Gravettian peoples followed the reindeer herds as the ice-fields withdrew, and long retained an essentially Upper Palaeolithic type of culture—such as the Hamburgian of North Germany and Denmark. In pre- and early Boreal times, similar hunters occupied Schleswig-Holstein, while others roamed territories from the Oder to the Volga. In the warm period beginning about 7700 B.C., these northern peoples developed the Maglemosian and Kunda cultures from Denmark to Estonia, and occupied parts of eastern England and the east coast of Ireland. Though adaptable and creative in practical ways, such as the introduction of deep sea fishing and whaling, they seem to have been hardy and adventurous rather than artistic and imaginative. They decorated objects with geometrical patterns and formalized figures of men and animals, and carved animal figures in amber; but none of their art forms approach the splendour of the Magdalenian.

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we shall call those who obeyed the directions of the true Guides,* and their initiated followers, went from western Europe far north into the Arctic Circle and remained there for 2,500 years: that is the length of an Epoch according to our system of cycles. We shall follow their fortunes in a later section.

We have little material to guide us in reconstructing the history of the Centres in Africa, and the Near and Far East. We assume that loyal groups under the leadership of their guides withdrew into regions where they could pursue their aims undisturbed by the psychostatic societies of men led by egoistic though creative minds. The loyal African groups may have moved into the highlands of Ethiopia. The Far Eastern centre remains an enigma: but the spread of cultures and languages in the next Epoch demonstrates that it certainly had its own withdrawal and concentration. Finally, we have the South-West Asian centre of transformation which probably concentrated somewhere in the mountain regions of Anatolia and the Caucasus.

We leave out of account other centres such as the Andean centre of culture in South America. Though this was probably as significant and as creative as the other four, it did not interact with them in the same way as they did between themselves. We suggest that the Andean centre withdrew but did not return. We have, thus, common to all humanity a period of Withdrawal to Centres of Wisdom.

The Epoch of Withdrawal and Concentration lasted from 10,500 to 8000 B.C. After that time, the four cultures diffused over vast areas and intermingled with each other. It would have been impossible to re-construct the situation during the Epoch of Withdrawal without the existence of evidence in our present moment which allows us to discern four primary cultural traditions. These we are about to study.

17.47.3. The Great Mother

The traditions of the Near and Middle East bear witness to a time when the Great Mother was the fount of life and the originator of the arts, especially of agriculture. Cybele of the Phrygians, Innana of the Sumerians, the great Earth Mother of the Cretans known to the Greeks as Gea, Rhea of the Greeks and Ishtar of the Semites define approximately the same region as that of our middle eastern centre of transformation. This region contains traces of the very earliest permanent settlements and of the origins of agriculture. It has also been the birth-

* These, were psychoteleios men in the sense of Chapter 41, that is men who had achieved Personal Individuality and could therefore be guided by the Plan of the Hyparchic Future.

place of religion as we know it today.* To this day matriarchal institutions survive in remote regions.

How far back does the Great Mother cult carry us into antiquity? It is well attested five thousand years before the present by inscriptions and temples. It was already ancient when the Creation Hymn of the Sumerians was composed—perhaps 6,000 years ago. Conclusive evidence of its antiquity has recently come from the Anatolian plateau where the excavations at Catal Huyuk reveal the cult in full activity 8,750-9,250 years before the present.** The Phrygian myth suggests its origin. The Great Mother Cybele accepts human consorts, but in their union with her they die as men and are raised as demi-gods. Let us make a bold guess and refer this myth to the time when the Demiurgic Intelligence entered into the body of a woman—or perhaps many women—and by mating with selected men of the earlier Group III races gave birth to *Homo sapiens sapiens**** It may be that such an exceptionally brilliant manifestation of the Demiurgic power left so strong a mark upon the new-born race that it persisted in their traditions for thousands of years. There is nothing unusual in the enduring quality of tradition and myth. They appear to have been introduced into human life from the time that creativity entered. We may even see in these eternal elements in human experience, an action complementary to the temporal achievements.

It cannot be said that the cult of Goddesses is exclusively found in South-West Asia. Matriarchal systems dominated among the North American Indians, in Polynesia and in parts of Africa. Female goddesses are found in all ancient pantheons. There are, however, very significant differences. The American Indians do not regard themselves as descended from the Great Mother, but from the Great Spirit. In the Far East and Africa, the female goddesses are the consorts of the gods—rarely the Mother of Gods and Men.§

At the beginning, the Great Mother was not so much a goddess as

* This will be discussed at length in Chapter 48.

** Vide *infra*, pp. 266—7.

*** We refer of course to the small early groups of transformation. The myth may also refer to a later action whereby men of exceptional creativity were born who were necessary for the Great Work. In Chapter 46, we suggested that Demiurges in male human form mated with human women, but the converse may also have occurred, as suggested here.

**** The remarkable Bantu legends of the Mother Goddess Ma and her consort, the Tree of Life, show evidence of earlier elements of Creator God notions; but the primal creator has 'withdrawn' from the universe leaving it to Good and Evil forces. Since the Bantu probably originated around the Niger they may well have been influenced by Northern colonists belonging to the Great Mother tradition. The legends are, significantly, associated with an agricultural people. Cf. *Indaba my Children* by Vusamazulu C. Mutwa,

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a manifestation of the female principle of generation, and most authorities agree in seeing her as the continuation of fertility cults of the greatest antiquity.

Our justification for ascribing the origin of the Great Mother cult of the Near East to the Demiurgic birth of human creativity is similar to the argument already several times invoked. What exists must have originated somewhere. If it has great power to impress itself on the minds of men, it must have originated in a very notable event or come from a very powerful source. The usual accounts of the Great Mother as originating with agriculture and being no more than an expression of man's hopes for a successful harvest, probably put the cart before the horse. It is more reasonable to suppose that the people whose traditions were centred upon a miraculous birth would readily take to agriculture when they were shown what to do.

It is generally agreed that agriculture began in the Near and Middle East, and that the first important human settlements belong to this area

especially in Asia Minor. Unlike the other centres, that of the Great Mother cult maintained continuity of occupation and development from the time of the transformation until the start of the historical period. Some time after 8000 B.C. the first settlements showing signs of agriculture and stock-breeding appear in South-West Asia. Wheat and barley were indigenous to South-west Asia, and so were the ancestors of the moufflon sheep and the urial—believed to have formed the earliest domestic herds.

A succession of cultures had developed out of the old blade-and-burin industries,* leading to Mesolithic forms—the best known of which is the Natufian of Palestine. The Natufians lived partly in rock-shelters, fishing and hunting gazelle and other game. But since they possessed flint sickles, they must also have reaped corn. At first, this will have been the wild emmer wheat that grew on the hillsides; but soon they began to cultivate it, and at Jericho, in the Jordan valley, they developed a true farming economy.

Jericho is an oasis, watered by a perpetual spring. Here, Natufian hunters made a shrine, dated by carbon 14 at about 9,800 years before the present. Later, they built clay and wattle huts and founded a settlement described as Proto-Neolithic. The beginning of a full mixed farming economy at Jericho dates from at least 7000 B.C., and the little

* In Palestine, the Upper Palaeolithic Atlitian and Kebaran. In Iraq, several sites yielded a sequence ranging from Late Palaeolithic onwards, including Sharidar and Zani (Oakley, loc. cit., p. 262). Traces of Mesolithic cultures are known in the Lebanon, Syria, Iraq and Iran. They will doubtless be found in South Anatolia.

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settlement progressively developed into a true Neolithic town, with houses of sun-baked brick defended by a masonry wall and a round tower. Other large farming communities existed even earlier in Anatolia, notably at Catal Huyuk, and in the Tigris area at Jarmo.

It was in South Anatolia that techniques were first improved enough to produce sufficient surplus food to allow leisure and specialization.* It is difficult not to believe that there was a centre at or near to Catal Huyuk, and to imagine that the leaders may have been or have inspired women. Certainly some very remarkable people must have been born to the women here. The core of the site has not yet been excavated, and it may be found that its history goes back to late Palaeolithic times. Whoever they were, these people created the first Mediterranean civilization, soon to reach the Aegean. The same culture in

Late Neolithic stage was found at Hacilar, a small site 150 miles to the west. Abandoned by an early farming community, several centuries before, it was reoccupied about 5700 B.C.

It seems very probable that there were links between the cultures of Syria and farther east and the Hacilar culture, and between the latter and the Late Neolithic and early metal using (Chalcolithic) cultures of the Balkans and Greece. Neolithic villages existed throughout Thessaly and central Greece by 5000 B.C., and Khirokitia, in Cyprus, possessed a full Neolithic culture as early as 5500 B.C.

All the early farming communities practised some form of Mother Goddess cult, as shown by the innumerable female figurines which have been found in them. As in the Upper Palaeolithic, emblems of fertility included carved phalli as well as these. In primitive communities hunting and war, politics and commerce are predominantly masculine activities, whereas agriculture, spinning and weaving, and the making of pottery are predominantly feminine ones. For such reasons, no doubt, the feminine principle predominated among Neolithic peoples, and women were powerful. In some early Neolithic cultures at least, the Mother Goddess—later the Great Earth Mother—was supreme. This was certainly the case at Catal Huyuk and Neolithic Hacilar. Here, the Mother Goddess cult possessed power and depth. A quarter of the

* Excavations of the great site of Catal Huyuk were begun by James Mellaart in 1961 and still continue. The highest inhabited level there dates from about 6000 B.C., when the town was abandoned, and the part excavated up to now covers the seventh millennium B.C. Revelations have been astonishing. In 1964, Mellaart wrote: 'Catal Huyuk deserves the name of city; it was a community with an extensive economic development, specialized crafts, a rich religious life, a surprising attainment in art and an impressive social organization. Cf. 'A Neolithic City in Turkey,' by J. Mellaart, *Scientific American*, April, 1964.

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town reserved for sacred and purely residential buildings included richly decorated shrines containing burials. These shrines reveal a religion of life and death, the whole aim of which was the comprehension and influencing of these mysteries and the continuity of life in every aspect.

The Mother Goddess represented continuance of life through fecundity, many that of men and animals. But with the spread of agriculture, the idea of analogy between burial and growth of the seed and man's death, burial and rebirth arose, and she became the Great Earth Mother whose cult was largely funerary and endured for millennia in Late Neolithic Europe. Megalithic and gallery tombs were always dark and subterranean—often artificially made so—and very many of them had stylized carvings of her head or breasts.

While nothing so spectacular as Catal Huyuk is known in connection with the Mother Goddess farther East, she was nevertheless present in all the early Neolithic settlements and is found in graves and shrines—usually in conventionalized form. In later times, the Great Mother no longer appears alone. The death and resurrection of the seasons portrayed in the death of the 'king' or the sacrifice of the god show the influence of other traditions. In Sumeria and Babylonia the transition—if it can so be called—from Nin-tu, the wise and inexhaustible source of all life to Tiamat, the primal, undifferentiated being dismembered by the great gods, is an unmistakable sign of the increasing predominance of alien cultures. All the later beliefs show an amazing conceptual complexity, but this should not be read into the original notion. Already in the Epoch of Diffusion, which was to begin some 10,000 years before the present, the Great Mother is often rivalled by a son-lover 'who begot upon her his own rebirth'.*

Surveying the archaeological evidence we can detect the rapid acceleration of technical advance after 8000 B.C. Before that time we can read a typical story of the Epoch of Withdrawal. The communities conscious of the significance of creativity had withdrawn from active contact. Their return brought a new understanding of the Mother Principle to many groups living in South-west Asia. Perhaps, even then, the creativity of the region was deployed in discovering and applying new techniques rather than in a search for the meaning of existence. It is probable that there was little progress in language beyond words connected with

* Cf. Jaquetta Hawkes, *Prehistory*, p. 343, 'For if the female principle is taken seriously as the First Cause, the male principle must of necessity derive from it, and the god is, in this view, the child of the goddess.' Applying such an abstract analysis is obviously out of place for the Great Mother culture, but it illustrates how a variety of notions follow from the confluence of two pure traditions.

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the new crafts—for, as we shall see in the next section, the principle root languages of the modern world developed elsewhere and were brought into this region later. It is probable that there was a largely ostensive language in which sounds were linked to gestures and were equivalent to 'showing' what was meant.* Such languages could suffice for agricultural and technical communications and they could well allow the Great Mother cult to be taught and practised. They would be unsuitable for conveying abstract ideas and therefore were absorbed into the languages of the three other centres when these reached the Near East. Yet, as we shall see, the people of the Great Mother tradition had a peculiar destiny in providing the foundations of civilization. In the time of the desiccation of present areas of desert, man found an ideal home-

land in the comparative mildness of the South-West Asia region. So, too, in his mind, man understood the universal community of life through the Great Mother.

17.47.4. The Great Spirit

We can affirm with confidence that the new creative men in the Far East were taught to regard Creativity as the Great Spiritual Power. In its most sophisticated interpretation, the spiritual Power is Tao from which, according to the Tao Teh King, come the Yang and the Yin, or the male and female principles, which in their turn give rise to the Three and so to all the diversity of Nature.** As Chinese culture must be very ancient indeed, we may be sure that the notion of the Great Spirit originated long before the earliest records.*** In a debased form the same doctrine is to be found in the endless variety of animistic beliefs that have been held, and in many places are still held, in Oceania, Polynesia, South-East Asia, among the pre-Aryan Dravidian people of South India and in Central Asia. Mana the unseen spirit power, the secret of the magicians, the moving force in all non-living and living nature is an expression of man's awareness that he is subject to a spiritual power that cannot be overcome by his own will.

We have already noted that Shamanism must have originated with the Demiurgic magicians of the transformation. The Shaman is pos-

* Sir Richard Paget based his Gestural Origin of Language on this observation: but his views have not been accepted by philologists. They probably hold for what we might call 'pre-creative' languages.

** Tao Teh King, Chapter 2, v. 42.

*** The Shih Ching or Book of Odes goes back little farther than the confluence of the Yu, Hsia and Chou peoples in the Fen River valley and the east bank of the Hwang Ho.

This was probably no earlier than ca. 2000 B.C. Their easy unification signifies a common heritage dating from before any settlement near the Hwang-ho.

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sessed by the Spiritual Power that enables him to prophecy, to direct the lives of people and to work wonders.

It is safe to say that the total body of beliefs and practices of the Far East must have had a different origin from the Great Mother beliefs of the Near East. The effect upon the lives and customs of the people has been totally different. In the Near East, the emphasis was upon the practical life. In the Far East, it was in the direction of a mystical communion with nature.

As we have seen, the development of new techniques certainly lagged behind over most of this vast region. Are we to conclude from this that the transformation to *H. sapiens sapiens* had not taken place and that the animistic beliefs of the region were relics of the hunting magic of the Neanderthal period? The answer might be 'Yes' for southern areas of the Far East. This was the cradle of the Australoid racial group, whose descent from *Pithecanthropus IV* can be traced in Java to the Neanderthaloid 'Solo Man', and a skull of the latter type was also found in Borneo and dated at about 39,000 b.p. Between 12,000 and 10,000 b.p., industries in the South were still of the primitive chopper-chopping type, and the Australoid transition to *Homo sapiens sapiens* remains obscure.* But, as we have also seen, matters were very different in parts of North China and South Mongolia. Here, both culture and skeletal remains show that Proto-Mongoloids were *H. sapiens sapiens* by this time. Yet, here too, progress was relatively slow and the peoples continued to live as hunters and food-gatherers long after agriculture had developed elsewhere.

The significance of these observations is suggested by the continued practice of magic long after it had ceased in the West. Even to this day magicians operate successfully in the forests and jungles of the Far East and in the remote regions of Mongolia, Siberia and Tibet. The emphasis upon the Creative Energy as such, rather than upon its transforming influence in the human mind, would be bound to lead to beliefs in its universal presence and so to animism and shamanism.

Was this all that the Far Eastern centre of transformation could achieve? Here we have less to go on than in the three other cases. We believe that the positive contribution is in the establishment of traditions connected with 'ceremonial magic' that were the precursor of the ritual-

* They were driven out of Southern China later by Mongoloids from the north or absorbed by them. Today, they are represented by Australian aborigines, Melanesians, Papuans, Negritos of South Asia and Oceania, and some of the tribal folk of India. It has even been suggested that the Australian aborigines never fully achieved the transition, and certainly brain capacities of less than 1,000 cc are far from unknown among them. (Cf. Coon, loc. cit., pp. 410—11.)

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istic practices that, in their turn, prepared the way for the advent of sacramental religion.. Moreover, the belief in the Great Spirit does not look back to the past, as the Great Mother doctrine tends to do; but concentrates attention in the present. This is no doubt why the higher manifestations of spirituality in the Far East are chiefly directed to the liberation of consciousness in the eternal present of Nirvana*

We shall conclude that the creative Centre of the Far East developed techniques connected with consciousness and magic. They also certainly developed new linguistic forms. In the agglutinative and polysynthetic languages of Central and South-east Asia and Polynesia we have evidence of a common cultural centre of diffusion existing in the very remote part. These languages are psychologically suited to people who feel their bond of union in a common affinity with the Great Spirit. They are so ancient that in some cases, as with Chinese and Mongolian or Tartar, very few words or roots are common and the literary forms have diverged widely. Yet, in all cases, there is a non-individualized character 'that allows notions to be built up without the distinction of noun, verb and adjective to which we are accustomed.

Holding fast to our principle that everything that exists or has existed must have had a determinate origin: we shall assume that this advanced-language originated by design in a creative centre.

17.47.5. The Creator God

The African centre appears to have withdrawn more resolutely from the scene of general transformation than the other three. We know nothing of it or its activity until the next stage. Reconstructing the earlier stage from the later, we can recognize the influence of the environmental changes. Whereas in northern latitudes all else was dwarfed by the melting of the glaciers, in the equatorial regions the transition was from pluvial to dry climate. Anyone who has witnessed the end of the Monsoon in India or the change in Africa from unending tropical rain to burning sunshine can form an idea of the psychological effect of the ending of a long pluvial period in which the rainfall exceeded 200 inches a year. We would expect that the dwellers in the forests of the west would have been far less affected than those who dwelt more in open land. In

* Some of the purest expressions of the Great Spirit notion are to be found in the descriptions given by the Indians of North America. Thus, speaking of the spiritual men of the past, an Osage Indian said, 'They searched for a long time for the source of life, and at last they came to the thought that it issues from an invisible creative power to which they applied the name Wa-Kon-Da ' (quoted in Collier, *Indians of the Americas* from Le Flesche, *The Osage Tribe: Rite of the Wa-Xo-Be*).

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the east and the north of Africa, the sun predominates over all other phenomena.

Associating the change with the flowering of creativity in man himself, the Sun would certainly be hailed as the visible manifestation of the creative Power. Since this response had in it the germs of a true religious disposition to be acquired at a later stage, the Creative Groups would

adopt it as the foundation of their activity. For this, it was necessary to move to a region where the power of the Sun was most evident. The choice was, no doubt, also influenced by precognition of the future fertility of the Nile Valley and of the part that Egypt was to play later in the development of mind and society. It might appear that a region such as that of Libya was ideal. But at this time ancient Libya was very much in contact with Eastern Mediterranean populations, so that, because of its active cultural life, there would have been little possibility of a prolonged withdrawal and concentration. In the rugged environment of North-east Africa all the necessary conditions were satisfied. The location may well have been on the Ethiopian Massif where a group of people could have remained undisturbed, and almost invisible, for thousands of years. In the light of the evidence we have to date, this is at least a plausible hypothesis.

As with all other regions of the populated world, those who did not follow the Guides into the selected region were not deprived of creativity. No man has been deprived of it since it became connected with the pool of human soul-stuff. But they were left to exercise it in a relatively stationary society.

It would seem, for example, that the Lupemban people kept within their forest zone and their culture remained purely African. It was centred upon the Congo Basin, and it may well have been here that the complicated rhythms of Negro music and dancing began to develop. But on the fringes of the Sahara they will have come into contact with North African groups, and in Uganda and Rhodesia the Lupemban culture overlapped the Stillbay. As we saw, an interesting centre of exchange must have existed on the shores of Lake Victoria, where peoples of the Lupemban, Stillbay and Upper Kenya Capsian cultures—black, yellow and white—must have met. Broadly speaking, these cultures made little further progress and the people remained essentially hunters and fishers until the coming of iron in the first millennium a.d. or later.

We do not suggest that Africa was without spiritual guidance. On the contrary, all the evidence confirms that magicians continued to flourish and in some cases these magicians had authentic communication with the Demiurgic power. There are profound differences between

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African magic and Far Eastern magic. The latter is mainly concerned with nature and the former with people. We can see how the distinction goes back to the Epoch of Withdrawal. The African magicians repre-

sented the Creative Power: they could kill and bring to life; they could make their presence felt at a distance; when they died they went to a different state of existence from that of the ordinary man. Most important of all, they were often the rulers or chiefs of the community. The transmission of the creative secret was the guarantee of succession from the Chief to his son or his chosen successor. All this is very different from the Asiatic Shaman who did not claim any permanent power, but only that which entered him when he was possessed by the Great Spirit.

Associated with the Creator Image was the formation of highly organized social structures such as existed until recent times in parts of Africa. This ensured a moral order based upon reward and punishment, such as that of the Bantu peoples up to the last century. This, again, is very different from the social structures derived from Great Spirit beliefs.

It seems likely that, with the withdrawal of the true Guides from most of the African communities, their ruling chiefs became more magicians than prophets. We cannot compare the situation of even two thousand years ago—recounted still by witch doctors and story-tellers in Africa today—with that of the Epoch of Withdrawal and Concentration. Traces remain of an ancient tradition of magical practice aiming at the evolution of man's mental powers. Without any doubt, much was known of man's psychic energies and how to control them.*

In the creative centre, sun-worship, creator-worship and king-worship developed together with the newly created language. The creator god had the attributes of supreme authority and omnipotence. Authority corresponds with kingship and omnipotence, with the power of the sun over life.

We suggest, then, that from the African continent came an immense contribution—mainly through Egypt—to the progress of the human mind. We have postulated that this contribution was prepared by communities living in the Ethiopian massif. From the later traces, there seems little doubt that the proto-Hamitic peoples, remains of whom have been found in this region, contributed to the Egyptian stock. Many of the early carvings and paintings portray aristocratic figures remarkably

* In time, the motivation turned increasingly towards gaining control over the forces of nature. This combination of mental development with the desire for power over nature corresponds to the 'Way of Function' which we briefly referred to in Chapter 41. Cf. Vol. III, Chapter 41, p. 251.

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similar in facial bone structure to the Upper Kenya Capsian type who

flourished in East Africa about 8000 B.C. In the same works of art, we can see man of proto-Bushmanoid type. When the marshes of the Nile valley began to dry up, peoples must have come from the region of Libya into the newly fertile land. Perhaps others came from Mediterranean Europe, or from around Syria.

Although farming began about 7000 B.C. in South-west Asia, it did not appear in Egypt until some three thousand years later. The oldest Known Egyptian farming community is usually considered to be the Tasian culture of Upper Egypt, but records in the Delta region are very incomplete because the earliest settlements there were abandoned owing to desiccation and very many were swept away by changing watercourses or buried by sand. The early Neolithic cultures of Upper and Lower Egypt always differed yet had much in common. Although most probably Asiatic elements were present in the early farming communities—especially in Lower Egypt—there must have been a large native element in their populations and cultures. This is indicated by certain fine pressure flaked tools which might have developed from the North African Aterian or the Stillbay, and this native influence contributed towards the distinctive character of Egyptian civilization and to the Hamitic element in Egyptian stock and language.

In Upper Egypt, there were three successive cultures, all purely Neolithic and in some respects distinctively African. The earliest is represented by encampments at Tasa, near Badari, on spurs at the foot of high cliffs on the edge of the valley.

The next culture, probably developed from the Tasian, was the Badarian. This was much more wealthy and extensive. The Badarian culture apparently developed into the Amratian which approached true civilization.

In Badarian times the stock was apparently much the same as in East Africa, that is proto-Hamitic and Bushmanoid, but as the water level sank and the Nile valley itself became habitable Libyans, Semites and Nubians moved in and a mixed population spread along the river, chiefly concentrated in the Fayum and south of Asyut. Then, at the start of the Nagadeh II period, probably about 3500 B.C., a new wave of Semites arrived with a higher culture and at least an elementary knowledge of metal. They settled peacefully in Upper Egypt and introduced the Chalcolithic phase, colonizing Lower Egypt later. By the end of the 4th millennium B.C. a hybrid population had developed which was neither Libyan nor Semitic but Egyptian and which spoke a Hamitic language with Semitic elements.

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We have to rely on the later symbols of dynastic Egypt in order to reconstruct the early beliefs of the Egyptians. Symbols of the supreme gods Re, Horus and Ptah show the formulation of notions unexpressed in the previous millennia dominated in appearance by totemism.*

Horus was the supreme 'sky-god'—embodying the notion of the celestial or spiritual region. Ptah was obviously the supreme Intellect at work in the design of the Universe. Re the Sun-God was the visible presence of the creative power. There was a concern with the intersection of eternity with time—as shown by the cycles of the sun, and represented by Aker as the joining of two front halves of a lion together, guarding the two horizons. Later, Aker represents past and future. The animal forms of many of the gods were a symbolic convention to represent powers, qualities and principles.

The Creator-God notion found expression in many of the representations. One of the most important was Atum who created the universe from himself. King worship found expression in Horus.** The image of the sun was the central symbol of all these notions. According to our thesis, it was so thousands of years earlier in the creative centre of Africa. Why? Because no traces of such a conception are to be found in Mesopotamia or Syria—the regions which deeply influenced the thought of Egypt in so many other ways.***

The emergent Egyptian civilization of 4000 B.C. provides the strongest evidence for our suggestion of a Creator-God centre, which had begun to influence African cultures some four thousand years earlier. Throughout all its vicissitudes and conflicts, in Egypt the Creator Sun-God was to remain the supreme authority in creation. There was nothing comparable in the beliefs of Sumeria.

We have also to take into account the creation of the Hamito-Semitic language system. The first traces of language in Egypt show that an hamitic tongue was spoken by the people. It is evident that the language-system had been diffused before the founding of Egypt. This suggests other regions in North Africa—such as that of Libya—also Syria and Iraq in South-West Asia may well have been using kindred languages at about the same time. The cultural exchanges at the time make this

* Totemism is now recognized as a mnemonic device, useful for a people who have a complex ancestral lineage that must be recalled in various rites.

** According to Flinders Petrie, the triad Horus-Isis-Osiris predated the enneadic pantheon by millennia and Horus represented an African 'king' who lived about 7500 B.C. This interpretation is now generally rejected. The point is that the Creator-God notion, however it was brought into Egypt, was essentially African.

% The Indo-European sun-symbol was not associated with the notion of 'hvareno' or the divine power of kingship until the rise of Mithraism.

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highly plausible. Between 8000 and 4000 B.C. points of contact could easily have been established all over the total region now associated with the Hamito-Semitic language system. As we shall explain later, the 'high' new language would at first be the prerogative of the few, and only gradually pass into general use. By the time of the early civilizations, the process of education would have been far advanced. It seems that the Creator-God image was not so widely transmitted as the bi- and tri-literal language system. In the insularity of Egyptian thinking, the notion was carefully developed and only later found a really new form of expression in the monotheism of the Israelites.

The Hamito-Semitic language structure could not have arisen from practical demands. In South-west Asia, the early Neolithic peoples who appeared before the growth of Egypt would have had no need of more in a language than a terminology to deal with the events and objects of sensory experience. Behind the pantheon of Egyptian deities we see expressions of intuitions of fundamental modes of operation which work throughout the universe. The ambiguities and contradictions dealt with by the priests confirm the conceptual power of their language. Thus God is One in his authority and power, but Many in his workings.

It is not without reason that the ancient Egyptians and after them the Hebrews and later still the Arabs claimed that their language was of Divine origin. Such a structure could not possibly have existed before man was endowed with creativity and even then it must have been the work of Psychoteleios men of a high order. These languages were originally based upon the combination of two consonantal breaks in a sequence of vowels. Later they developed a tri-literal structure. The extreme artificiality and at the same time the immense power of expression given by the bi- and tri-literal root system was later to be responsible for developing a mode of thought that has contributed mightily to the progress of the human soul.

17.47.6. The Saviour God

We must take up again the story of the loyal groups in Europe who moved northward about 12,000 or perhaps 13,000 years ago. The glaciation of northern Europe was still extensive, but there was a route that was open and attractive. This was the sea route of the Gulf Stream past Spitzbergen into the sheltered regions of the Arctic Ocean. Many ancient legends attest that this route was known long before the beginning of history. Hesiod, who would seem to have caught the echo of the Demiurgic Intelligences in his myths of demi-gods and Titans, tells us that when Zeus the son of Chronos had gained the mastery, the Titans

went north and lived 'their hearts free from anxiety in the Islands of the Blest on the shores of the Ocean where the great maelstrom whirls.* All references to the far north—and certainly Iceland was known and had been visited by the navigator Pytheas of Marseilles—extol the mild climates to be found near the 'petrified sea', i.e. the ice-pack.

We cannot devote much space to this fascinating theme; but must see if there is any positive evidence that men of high culture lived in the shores of the Arctic Ocean in remote antiquity.** We must rely chiefly upon the hymns of the Rig Veda, the most ancient scriptures of the Aryan people who came to India from the North about 3,500 years ago. Eighty years ago B. G. Tilak, a great Sanskrit scholar, put forward the theory that these hymns with elaborate descriptions of sacrificial rituals could only have been composed by men of very high culture living within the Arctic Circle.***

The unchanging altitude of the constellations make it appear as if the heavens were revolving round an axis: the stars do not rise and set as they do with us. In some ways the most moving spectacle is the long drawn dawning of the sun which lasts a whole month, during which the warm glow of the dawn travels round the horizon every twenty-four hours. No one ignorant of astronomy who has not visited the Arctic regions could possibly imagine such phenomena. Another, less exclusively arctic but very typical impression, we should add, is the spectacle of the Aurora Borealis.

If we find in literature references to a night and day of six months, to the sky turning like a wheel, to a procession of thirty dawns and to the sky in flames and to great mountains of ice and snow: we cannot possibly doubt that the author's home was in the Arctic regions. All these occur again and again in the Vedic hymns. Some of them are also

* Works and Days, 172-3.

** The theme of the present section is developed at length in a paper by J. G. Bennett, *Arctic Origin of the Indo-European Culture, Systematics*, Vol. I, No. 3, 1963, pp. 203-32.

*** B. G. Tilak, *The Arctic Home of the Vedas*, 2nd edn., 1901. It should be said, however, that it is generally accepted by most authorities that the Rigveda was certainly not composed in its present form until much later. Woolley maintains that the Vedic hymns do embody elements which may be as early as 1200 B.C., in which the actual invasion of North-west India is 'rather vaguely remembered', but that it is impossible to say what stage of culture had been reached by the Aryans at 1200 B.C. ... 'a description based on the Rigveda and applied to the period 1500-1200 B.C. would be an anachronism unsupported by any evidence whatsoever; the culture

reflected in the Rigveda is itself that of a later period' (Sir Leonard Woolley, loc. cit., pp. 406—7). The Aryan invaders of India were mainly nomadic pastoralists, with no knowledge of building at all, and apparently without writing. The Indus Valley script died with its civilization. Although the Aryan knightly grade were also spiritual leaders

and sometimes poets and philosophers, their works, together with the Aryan epics, must have been orally transmitted for hundreds of years (loc. cit., p. 658).

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to be found in the Vendidad in the first and second Fargards, of which the antiquity—in terms of the oral tradition—is incalculable.

We should add the important place of sacrificial and sacred fire in Indo-European tradition. In the arctic region, fire would have a significance incomprehensible to people of the southern latitudes.

We have space for one detail. Ushas the Goddess of the Dawn is one of the favourite deities of the early Vedas; she is celebrated in twenty hymns and mentioned more than three hundred times. The importance given to her would be quite out of place for people living in sub-tropical regions where the day comes so suddenly that the dawn is seldom noticed. But the Vedas go further and describe the Ushas as thirty sisters who go round in five groups before the sun rises. This is just how the dawn would appear to priests on the shores of the Arctic Ocean.

17.47.6.I. EVIDENCE OF FAVOURABLE CLIMATES AND HABITATION

The evidence of the Indian and Persian hymns and myths is confirmed and amplified by those of the Celts and the Nordic peoples. It has been disregarded for half a century because no one imagined that the arctic region was habitable. The theory of the Ice Ages put forward by Ewing and Donn* requires that the Arctic Ocean was open to the Gulf Stream and remained relatively warm. It is plausible to suppose that movements in the ocean bed about 12,000 years before the present increased the flow of warm water and would encourage the pilgrims to undertake the voyage to the North.

Have we any grounds for supposing that the circumpolar regions were habitable? Plant remains from late glacial moraines, 11,000-9,000 years B.C., indicate a warm phase with continental summers in the far north of Finland.**

Finally, we have evidence that in northern Siberia the forests penetrated farther north at the end of the Ice Ages than in recent times. There was a relatively short period, lasting just over 1,000 years, during which European climates were generally warm. This coincided

with earth movements and the so-called Allerod Interstadial that has been accurately dated by radio-carbon as having started about 12,200 years ago.

* *Vide supra*, Chapter 45, the theory has not been generally accepted by geologists as explaining the causation of the Ice Ages; but the evidence that the Arctic Ocean was unfrozen during the last glaciation remains convincing.

** E. Hyypä, *The Climate and Forestry of late Glacial Times in Finland*, 1933 and *Late Glacial Development of North Finland*, 1936. Cited in Zeuner *Dating the Past*, 3rd edn., 1952.

With the end of the Allerod about 8900 B.C. came a brief readvance of the ice known as the Younger Dryas which was over by 8300 B.C. In the Preboreal—8300-7500 B.C.—and Boreal—7500-5600 B.C.—phases the climate became steadily warmer, and in the Atlantic—5500-3600 B.C.—brought about conditions such as we know them today. At the time of the Allerod the northern coast of Finland and Norway and nearly the whole of the Siberian coast were free of ice and largely occupied by tundra. Thus, from about 12,000 years ago, there were definitely regions where human survival was not only possible within the Arctic Circle, but may well have been, during the Allerod and Younger Dryas, easier than in most regions of continental Europe.

We need not insist upon the hypothesis of a northerly sea-route from South-western Europe. As the ice receded, Upper Palaeolithic reindeer hunters, such as the Hamburgians, occupied lands from North Germany, Denmark and Scandinavia to the east Baltic, frequenting the more northerly parts of these areas during the summer and retreating southwards in the winter. They were contemporary with an early stage of the Late Magdalenian culture. During the Allerod Interstadial, they developed Maglemosian cultures, such as the Ahrensburg and the Swiderian, whose peoples roamed the North European Plain from East Germany to the Volga. During this warmer period the frozen Baltic Sea ('Great Ice Lake') melted and drained, and the sea came in, to form the Yoldia Sea. It is not wholly inconceivable that a group or groups may have made the voyage by raft, or even in skin boats. They might either have set out from Jutland, on the north of the continental shelf or from the east Baltic and through what later became the White Sea.

It is known that peoples of Upper Palaeolithic stock did in fact live in the Arctic during the warm Boreal phase, and flourished there in the still warmer Atlantic climate. They were of the Fosna and Komsa cultures, derived from the Maglemosian, thought to represent a coastal spread from the Baltic region to beyond the Arctic Circle in northern Norway. It has been suggested that these cultures represent a still

earlier coastal adaptation whose traces in the Baltic area have been submerged.* Very early settlements have also been found within the Arctic Circle in northern Russia, west of the Urals.

* Cf. Professor J. G. D. Clark quoted respecting E. Fround's treatment of these Scandinavian cultures in *Ada Archaeologica*, xix, pp. 1-68 — Jacquetta Hawkes, loc. cit., p. 185, note. The Maglemosian cultures and their Mesolithic derivatives — especially the more easterly Swiderian and its derivative the Komsa—are believed to have descended from the Late Gravettian, coming originally from South Russia. 'Arctic' rock engravings resembling the Aurignacian (some as late as 2000 B.C.) are mainly associated with the Komsa culture, and may reach back to the Upper Palaeolithic

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The important point is that the Arctic group had withdrawn from the Cultural activity of the rest of Europe, and certainly from that of Asia. There was no sign in the eastern Gravettian of the purposive development of creativity which we noted in the Magdalenian. Technical advances were made, but this need not mean an intentional guidance of Creativity. However, the two streams were interrelated in South-West Europe, and it is not impossible that loyal groups of Magdalenians went northwards to join the Maglemosians when the rest of the clans were making their way southwards. They would have been led by their Guides, whom they accepted as sacred beings.

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The people of the Arctic centre were the Aryans, as they have been called from the name given in the Vendidad. Let it be clear at once that there is no such thing as an Aryan race, but that there is very definitely an Aryan culture. The elite who founded the Arctic centre were, we suggest, the creators not only of a linguistic structure which has fixed a pattern of human thought for thousands of years, but also the originators of a special set of beliefs that have been no less significant for the moral progress of mankind.

The selected group came to a region—foreseen from the start by their Guides—somewhere on the Siberian shores of the Arctic Ocean where we may suppose that volcanic action caused by crustal radioactivity would have produced zones of favourable climate as they do on a smaller scale in Iceland to this day. The effect of a more powerful Gulf Stream penetrating into the Arctic Ocean and pressed against the coast by the easterly flow of cold water towards Greenland, would be to produce exceptionally mild winters and short hot summers. Such conditions would be highly favourable to the discovery of leisure, and, under Intelligent guidance, to the realization that leisure of body gives the opportunity for activity of mind.

The Sanskrit and Zend hymns must come from the Arctic Circle, or at least have been based upon myths which originated there. In our view, the Arctic Centre—however created—must have been the source of sacrificial religion and various Indo-European traditions. Their core

in Russia. They are not, as sometimes suggested, directly associated with the Upper Palaeolithic art of South-west Europe, but they may be indirectly related to it, since at least the Middle and Late Aurignacian of the west is closely related to the east Gravettian, and, in addition to the small works of art and the 'Venuses' characteristic of the Gravettian culture, individual examples of Palaeolithic east Gravettian rock pictures are known in the area of the Sea of Azov (see J. Mariner and J. H. Bandi, *Art in the Ice Age*, 1953, pp- 161-3).

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is the theme of the hazardous and dramatic universe in which man is called upon to co-operate with the God in order to overcome the forces of darkness and chaos.

There remains the question of the Indo-European language. We have suggested that this originated from the Arctic Centre. Assuming such a centre, it is difficult to imagine an independent region being concerned with the creation of the language which was to accompany the transmission of the Hyperborean culture. However, the evidence is far from conclusive.* Guided by the myths of the ancient writers and thinkers, and by our interpretation of the traces of the Magdalenian culture, we will proceed on the assumption that the people who composed the Zend hymns had come from, or been influenced by, a Northern Source. Conditions in the Arctic were ideal for the creation of a complex analytical language structure. As we shall see later, the probable mechanisms of diffusion make it highly likely that the transmission of language would be dependent upon the spreading of magical beliefs and practices.

The purpose of the journey was thus to establish a culture and a tradition and to create a new language—all of which required a long period of isolation from the material activity of Europe and the South. The time available was 2,500 years or a hundred generations. The history of languages teaches us that this length of time is required to transform a language within an already existing structure. But this applies to language solidly established by usage. We are assuming that the pilgrims had only the very primitive ostensive language of the late Palaeolithic culture and were quite unable to express abstract notions or even to describe actions outside the immediate present. The new language

was to do all this and more. Let us not forget that notwithstanding its immense power, the Semitic group of languages has only very inadequate means for expressing relationships and actions in time and space. The Turanian or agglutinative languages were in the same situation until they borrowed from the Indo-European.

During the millennia of recorded history, no case is known of any entirely new language having been created. The development of any language, and especially one of the great basic languages, must have required not only a long span of time; but a capacity for consecutive far-sighted endeavour of which no culture of the present day would

* It should be remembered that whereas some authorities believe that the 'battle-axe' cultures spread southwards and eastwards from northern Europe, others believe that they spread in the opposite direction — from South Russia. There may well have been a centre of great antiquity in the area of the Sea of Azov.

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be capable.* We are reminded of the time scale of Demiurgic plans and actions and indeed we are forced to the conclusion that language creation must have required Demiurgic intervention. The Guides, whom we can picture as Psychoteleios men transformed under the inspiration of the Demiurgic Intelligence, were also the recognized leaders of the colonists. These Guides would, however, be different from the men of Individuality of later Epochs for they were formed from a soul-stuff that had not been charged with a thousand generations of human experience. They could not have known what later men could know, but they were able to see what men have lost the power to see. They could have a far more conscious and intimate communication with the Demiurgic Intelligences. Without this they could not have undertaken and carried through such tremendous undertakings as the exodus to the Arctic, the creation of the Aryan root language and the formation of the Aryan tradition of the Saviour God.

If we are in any doubt about the reality of the exodus, we cannot dispute the second part of the undertaking. The languages descended from the original Aryan are with us today, and they are spoken by 40 per cent of the earth's population. No one who has studied the amazing construction of the older languages like Sanskrit and Lithuanian can doubt that the parent of them all must have been the creation of men of surpassing genius and farsighted understanding of human needs.

We now have to picture the life of our cultural ancestors during their sojourn on the shores of the warm Arctic Sea. They must have enjoyed ample food supplies. Reindeer abounded wherever lichen grew. In warmer zones there were deer and horses. There were seals and the seas teemed with fish. Algae provided the elements lacking in flesh and fish

food. Life was geared to the rhythm of hot summers with continuous sunshine and the long dark winters of the Arctic. This meant long periods of forced inactivity which provided ideal conditions for the creation of a new linguistic form and the elaboration of a refined culture. We can even, with some confidence, reconstruct the procedure.

The colonists could speak only the non-structural language of their former home. This language must have been entirely pragmatic, appropriate for dealing with the immediate situation. This we deduce from the consideration that mankind had not hitherto been placed in a situation where reflection was either desirable or possible. Such language could not be converted into a new form capable of expressing

* The attempts in our time to create new languages have led to very little. In any case, they are not authentic new tongues but eclectic constructions built up from existing roots and grammatical forms.

abstract ideas or even of referring to situations not perceived by the senses. To introduce a new form of language, a motive powerful enough to attract and hold attention was needed. This was supplied by the overwhelming sense of human impotence in face of the prodigies of nature enacted before people day and night.

Most philologists agree that languages and myths have developed together. This is certainly true of the Indo-European family. The long nights and the procession of the dawns rosy and beautiful, the break up of the ice-floes when the sun reappeared, the turning of the wheel of heaven: all these were made the theme of the saga of the salvation of the home of gods and men from the jealous serpent power lurking in the south. We find the saga in one of its oldest forms in the Vedas in the ritual that celebrates the conquest of the Saviour God Indra over the serpent power Vritra who has taken the sun captive in the nether regions.

The myth takes on an added poignancy in the light of the colonists' escape from the evil powers that had taken possession of their homeland. Thus the notion of human good and evil became linked with the Arctic day and night. We cannot, unfortunately, in this volume, work out the marvellous theme in all the details. We find it over and over again in Indo-European mythology, folklore and ritual. It is the central theme of the Vedic religion—almost certainly the oldest religion of mankind. The following passage* makes remarkable reading when we reflect that the two decisive factors that made life possible in the Arctic were the hot summer sun and the return of the warm waters of the Gulf Stream: 'The conquest over the waters was something grander, something far more marvellous and cosmic in character than the mere breaking up of the clouds in the rainy season; and under these circum-

stances it was naturally considered to be the greatest of Indra's exploits, when, invigorated by a hundred nightly Soma sacrifices, he slew with ice the watery demon of darkness, shattered his hundred autumnal forts, released the waters of the seven rivers upstream to go along their aerial way and brought out the sun and the dawn from their place of confinement inside the rocky caves, where they had stood still since the date of the [war of the Gods] . . . which commenced in higher latitudes every year on the 40th day of Sharad or autumn and lasted till the end of winter. . . . The story of the release of captive waters is an ancient story; for Vritra appears as Orthros in the Greek mythology, and Vritra-han, as Verethraghna, is the God of victory in the Parsi scriptures. Now this Vritra-han may not have been originally the same as Indra, for the word Indra does not occur in European Aryan languages, and it has, there-
 * B. G. Tilak, *be. cit.*, pp. 295-6.

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fore, been suggested that the conquest of waters, which was originally the exploit of some other Aryan deity, was probably ascribed to Indra in the Vedic mythology, when Indra became the principal deity in the Vedic pantheon. The fact that Tishtrya, and not Verethraghna, is said to be the releaser of waters and light in the Avesta, lends some support to this theory. But whichever view we adopt, it does not affect the explanation of the Vritra legend. Clouds and rain cannot constitute the physical basis of the legend, which is evidently based on the simple phenomenon of bringing light to the people who had anxiously waited for it during the darkness of the long night in the Arctic regions. . . . Indra may have become a storm-god afterwards; or the conquest over Vritra, originally achieved by some other deity, may have come to be ascribed to Indra, the rain-god in later times. But whether the exploits of Vritra-han were subsequently ascribed to Indra, or whether Indra, as the releaser of the captive waters, was afterwards mistaken for the god of rain, like Tishtrya in the Avesta, one fact stands out boldly amidst all details, viz., that the captive waters were in the . . . nether world, and that their captivity was associated with the annual struggle between light and darkness in the original home of the Aryans in the Arctic regions.' The theme of the war of the Bright and Dark powers was sung in hymns and enacted in ritual, designed to associate man with the Saviour God. For this purpose, a new language was created, a sacred language, to be used only for sacred purposes. To be initiated into the use of the sacred language man must start by proving his worth. Hence the subsidiary myths and legends of heroes and their exploits. The new language could be as artificial and as difficult as the Guides and their Specialist* helpers might wish. The people did not expect to use it for their current needs and respected it all the more because it was reserved for sacred ceremonies and the recital of the sacred hymns.

Generation after generation passed. Gradually the new language became familiar. The entire life of the community turned upon the ritual practices. The Guides were replaced by priests: though no doubt they continued to instruct and direct selected groups of Initiates. Finally, after perhaps a thousand years, the old language went out of use and after another thousand years it was completely forgotten. The miracle of the creation of the Aryan root language had been accomplished.

Meanwhile the climate had changed, and the Arctic Ocean no longer received the beneficent waters of the Gulf Stream. To East and to

* This is an anachronism, for the structure of society of Chapter 41 did not exist at that time. The term is used to draw attention to the role of men who were candidates for initiation.

West, the glaciers were melting, but the Arctic Ocean was freezing over. To the South, the routes of the great rivers, the Ob, the Yenisei and the Lena were opening a way of escape from conditions of life that were growing too severe for all but the hardest of men to endure.

Climates were changing everywhere Round the shores of the continents the waters were rising and submerging the continental shelf. The prevailing wind systems of the whole earth were profoundly modified by the disappearance of the glaciers, the tropics grew drier, marshes previously impassable drained, lakes dried up, new routes were opened and with them a new Epoch began.

So we must leave what must have been one of the greatest periods of human history. It was the age when men learned to think. The mind of man was never again to be occupied exclusively with the immediate concerns of his bodily life: his eyes had been opened to some of the mysteries of Creation. This had been the accomplishment of the great beings who, in human form, directed the work of language creation and the arousing of thought. No doubt, thought was still the privilege of the few, but it was human thought—the activity of the human mind.

We, who today live by thought and take it for granted, must needs make a very special effort to place ourselves in the situation of men who could use their senses, who had desires and impulses like ours, who could communicate by speech and who could accomplish great practical tasks and yet who could not think in the way we think by means of symbols, sounds and signs that represent ideas. For such men, life must have had a vividness that in our day is reserved for children and for those favoured few who retain the direct perceptions of childhood. Without thought, there can be no purposes, no programmes of action

directed towards the future. Without thought, men were like children dependent upon the guidance of adult minds.

If once this state of affairs is thoroughly grasped and penetrated by deep reflection, the conviction is inescapable that, at the start of the Great Cycle that we have called the Maturing of Mind, the ordinary people of the world must have been dependent upon beings of a different kind from themselves. The hypothesis of Demiurgic Intelligences ceases to appear as an unnecessary multiplication of entities, condemned by William of Ockham, and takes its place as the only reasonable account of human development.

17.47.7. The Epoch of Diffuson

The changes of climate following the retreat of the glaciers affected all mankind, as spring did in Chaucer's day and does still. All the

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world seems to have been taken by a wanderlust that spread mankind throughout the inhabitable world. It was by no means always forced. Areas which now lie under desert sands or sea were still rich in food supplies. Nor can it be attributed entirely to the conservatism of peoples unable to adapt themselves to changing conditions. Men were going forward into new lands—spreading into virgin regions, reaching towards the river valleys and gathering on fertile plains.

From the four Centres of Transformation, men came, endowed with the gifts of language and insights into the secrets of nature and the creation. They made their way among the moving populations of the world, conveying to those who were most responsive the new ideas, rituals and forms of speech. Amongst the groups who had remained within the area of the great confusion there were loyal Guides ready to receive the message from the sacred beings who had led the withdrawal. A. slow process of education was now under way.

The work was fraught with hazard. The disintegration of the preceding Epoch had left the loyal populations amidst groups who had lost contact with the pattern of the future. Some of these small bands would not have been lacking in initiative and forms of expression. For all that, so much was achieved that we can trace the movements of the people who were influenced by the 'missionaries' from the four centres. To a large part of mankind, the techniques and ideas necessary for the next great step forward were transmitted within a few centuries.

At first, they remained in the mind of man. Only over many thousands of years were they to penetrate into the social and technical activity of people. We must remember that human society was quite unlike our

own. Authority was exclusively the prerogative of the magicians. Cohesion was achieved through relationships of sex and heritage within a field of common ritual. The step from the 'tribe' to the 'nation' was to take more than six thousand years.

Technical advances were limited by the degree of social organization. Exoteric instruction in specialized arts can hardly have begun. Programmes of constructive work were not possible among people who could not have grasped the extent of man's power to transform his environment, beyond the mere provision of shelter. The stage of gathering and protecting continued to dominate the lives of nearly all peoples. The exceptions, as we have seen, were those who came under the influence of the Great Mother culture.

The technical achievements of the first Neolithic people, remarkable as they were, should not over-occupy our attention. The Epoch of Diffusion was not simply a time of transmission through contacts but

an intentional action of education. This was its essential nature corresponding to the existential movements initiated by environmental and edaphic forces. A link was being formed between the hidden Guides and responsive men. The redistribution of peoples influenced by the four centres was itself organized. From each of the four main cultural 'homelands' people moved in definite directions. The following summary suggests what may have occurred—the routes followed and the points reached by successive waves of migration. In many cases, we shall have to follow the cultures right up to the end of the next Epoch in order to grasp the pattern of distribution which emerged at the end of the Epoch of Diffusion, about 5500 B.C.

17.47.7.1. THE GREAT MOTHER CULTURE

The Near East entered the Neolithic phase more than 9,000 years ago.* The non-structural language we postulated for this culture was sufficient for the requirements of small agricultural communities. It can be readily understood that the Great Mother Culture tended to expand slowly since it tied people to the land. However, the spread of agriculture was induced by exhaustion of the soil. Before crop rotation and manuring—such as we find, for example, in the later Danubian cultures of Europe—this was common everywhere apart from a few exceptional valleys and alluvial plains. When farming had been permanently established in an area, towns grew up with astonishing rapidity and the increasing density of population inevitably led to fresh expansions of cultivated land. In the earliest settlements, too, we find evidence of trade between communities hundreds of miles apart. The spread of the Great Mother Culture appears to have gone in three main directions.

1 A. Europe

It is beginning to be understood that Anatolia and South-east Europe were an integral part of the region in which farming began. Very early farming cultures have been discovered in central Bulgaria and north and central Greece.** From the Aegean and possibly Syria, the new arts spread westwards along the Mediterranean. Inland, the Balkan tradition expanded to the middle Danube and Transylvania, to form the beginnings of the Danubian Neolithic culture, which, with remarkable homogeneity, extended west, along the valleys and surrounding

* It is interesting to compare this with the evidence from a site — Tehuacan —in Mexico. Traces in a cave show continuous occupation from 10,000 B.C., but cultivated corn did not appear until around 5200 B.C. and a full Neolithic culture until ca. 2000 B.C.

** Cf. Robert J. Rodden, 'An Early Neolithic Village in Greece', *Scientific American*, April, 1965.

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loess, roads from Hungary to North Germany and from Galicia to Belgium. Eastwards, the same Balkan tradition led to the Black Earth culture which spread from the Carpathians to the Dnieper.*

The Western Neolithic culture began in Spain, southern France and northern Italy. It was then taken northwards in two streams: one up the Rhone valley, the other by sea up the Atlantic coasts of the Iberian peninsula to France and Britain. The best known of these two branches are the Swiss Lake villages and the Windmill Hill culture of Britain. Crude figures of the Mother Goddess have been found in camps of the Windmill Hill people—the most westerly sign known of her cult. Carbon 14 dating indicates that France and Britain were extensively settled 5,000 years before the present.

Almost without exception, images found in their settlements have shown that the early Neolithic peoples of Europe practised a cult of the Mother Goddess. But at first there is no evidence of organized ritual, priests or temples among the simple peasants and herdsmen of Central and Western Europe. Later, the great Megalithic tombs began to be built often with portals and forecourts designed for ritual use and, later still, the circular sanctuaries and alignments of Brittany and Britain were added to the common tombs.

This Megalithic architecture is found from the east Mediterranean to Scandinavia and the Orkney and Shetland Islands. Its coastal distribution indicates that its practice was diffused by sea. It has frequently been suggested that the religious ideas and rituals which it represented, as well as the knowledge and direction needed for its execution, were

spread by sea-going 'missionaries' of much higher culture than the peasant peoples to whom they carried their message of rebirth.** The Megalithic funerary cult may have incorporated some form of ancestor worship. And a cult of the axe, perhaps a masculine symbol,*** is fre-

* The Danubian was a peaceful, self-supporting peasant culture, with few permanent settlements. The Black Earth was better able to maintain permanent villages owing to the richness of the soil, especially in the region of the Lower Danube.

** Gordon Childe has suggested the chamber tombs belong to a tradition which dates back to the cave-dwelling Natufians of Palestine. We should also add that there is evidence of an indigenous Megalithic architecture in southern Jutland independent of the funerary culture. It is the Earth Mother notion, however, which concerns us here.

% It is perhaps not without significance that one of the very few Neolithic peoples not known to have been associated with the Great Mother cult seems to have shared in that of the axe, and that this was the Trichterbecher people of the First Northern culture, who reached Denmark and Sweden before 3000 B.C.—probably from Poland. It has been suggested that the absence of traces of the Great Mother among this people might conceivably be linked with the later male sky deity of the battle-axe peoples of the North.

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quently associated with the Great Earth Mother. Axe-amulets were often worn, and in Denmark axes carved in amber and ceremonial axes were sometimes placed in bogs as votive offerings.

IB. Iran and India

The Neolithic economy spread very early to Persia, notably at Sialk. In Northern Iran, important farming settlements developed round the south-east corner of the Caspian. From these, the new arts were taken slowly on either side of the central desert, the two streams converging in Baluchistan. Many farming villages then began to develop on the uplands west of the Indus. They had a strong native element, and the very early appearance of the 'Zebu' shows that indigenous cattle must have been domesticated, and were probably crossed with cattle brought from Persia. Large numbers of these hill villages were established before 3000 B.C., but the Indian farmers retained links with Iran and Iraq, especially the former. It was from among these villages that pioneering groups later went down to settle in the plain and to found the great civilization of the Indus Valley and the cities of Harappa and Mohenjodaro.*

IC. North Africa

The Mother Goddess cult was taken from South-west Asia to Libya and Egypt by colonists bringing with them the seed grain and sheep or goats with which they introduced farming to Africa. Her images have been found in the early settlements of Upper Egypt and will certainly have been present in the first settlements of Lower Egypt which have long disappeared.

By the 5th millennium B.C. the pattern of diffusion is discernible. From the beginning, some 10,000 years ago, there has been a single culture specializing in the arts of agriculture and domestication. Amidst these, the diffusion of the Great Mother Image went on, leading to an organization, art and set of customs which were quite distinctive. Such

* There is no doubt that the Mother Goddess was worshipped in this civilization. Her figurines often resemble those of Mesopotamia and India, but she is represented in other forms —from aniconic stones to naturalistic terra cotta figures. She was also Mahadevi, the consort of Siva —the male principle represented by the linga. A seal from Harappa shows Siva as a three-faced god seated on a low stool in an attitude typical of Yoga. These gods were introduced into the Aryan pantheon after the destruction of the Indus Valley civilization. An interesting discussion of the religion of the Indus Valley civilization and Dravidic India may be found in Sir L. Woolley, *The Beginnings of Civilization*, pp. 748-52.

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we find in south-eastern Europe and Anatolia, moving into Iraq, Iran and the Turkman, entering into Africa and concentrating in the eastern Mediterranean.

17.47.7.2. THE GREAT SPIRIT CULTURE

The peoples influenced from the Great Spirit centre lived mainly by hunting moving herds. Already very mobile under the rapidly changing conditions at the end of the glaciation, they undertook by far the boldest and most extensive migrations. Within three thousand years, the Great Spirit Culture had spread over a third of the land surface of the earth. The following appear to have been the main movements.

2A. America

During the last phases of the Ice Age, one or more groups of predominantly Mongoloid stock crossed from Siberia and South-east Asia to Alaska over the land bridge that is now the Bering Straits, for Alaska was only glaciated in its mountain regions. The bridge must then have been a broad plain with good grazing, and it is known that animals

such as mammoth, bison and antelope entered America at the same time as man.* Two routes were used, following the Pacific and Arctic coasts free of the ice which blocked the higher regions. The Paudorf Interstadial was the most probable time of the height of the migration.

These later Palaeolithic hunters followed the Mackenzie River into the northern plains. From there some went on up the Missouri, crossing Snake River Valley and thence southwards on the Pacific side of the mountains, whence it is thought that they passed eastwards into the Rio Grande. Others went east of the Rockies, early freed from ice, and slowly spread south. The two streams may have converged in Central America before the entry into South America where they settled—probably reaching the southern tip by about 6000 B.C.—and developed the great civilizations of the Andes. The two branches are known as the Palaeo-western and the Palaeo-eastern traditions, but both were present in the Great Basin region of South-west U.S.A.

The Palaeo-eastern branch were essentially big game hunters. They

* According to recent investigations, the spread of fauna and flora requires the existence of a vast plain between the two continents open for many thousands of years.

Soundings show a region of up to 1,300 miles in breadth not more than 300 feet under water. The warm Arctic Ocean of the glacial period would have provided an equable climate for this region exposed by the withdrawal of water into the glaciers. Cf. W. G. Haag, *Scientific American*, January, 1962, 'The Bering Strait Land Bridge.'

** Cf. Butzer, *Environment and Archaeology*, pp. 394-5.

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hunted mammoth and bison, possessing spear-throwers* like the European Upper Palaeolithic people, and their way of life much resembled theirs. Finds have shown that they reached the valley of Mexico before 10,000 B.C. and probably earlier. They must have been not unlike their descendants, the Red Indians. The Palaeo-western branch depended largely on food gathering, and collected vegetable foods. They were inventive, for at Danger Cave, Utah, they were making basketry by 9000 B.C., the earliest known in the world. By 7000 B.C. their considerable use of milling stones show that flour from wild plants was a main element in their food, although mammoth, horse and bison were still being hunted. By the Archaic period—from about 1000 B.C.—there had evolved the bewildering complex of distinctive cultures which we can trace among the Red Indians today.

Throughout we find the Great Spirit tradition—in the sacred dances of the Pueblo, in the thought of the Cheyenne** and in prevalent Shamanism—used for example in musical composition. The many languages of North America are predominantly, but not entirely, agglutinative and throughout lacking in abstract notions of time and space.

The great civilizations to the south remain a mystery. In the notion of Viracocha— 'ancient foundation, lord, instructor of the world'*** — the most ancient god, we have a hint of the primal Great Spirit tradition. Yet there can be no doubt of the influence of Creator God notions having a strange parallel with those of Egypt. Sun-worship—towards the God Inti—was a powerful force amongst the Incas.**** This is about all the evidence we can muster for the existence of an Andean Centre of transformation referred to in Section 17.47.3 above.

We must not forget the remarkable culture of the Eskimo, stretching from Greenland across to North-east Siberia. The 'communist' social organization of the Eskimo—in which, for example, a man's status is assessed by the number of dependents he can support—is an unique

* Some authorities hold that projectile points were developed in America out of the late chopper-chopping tradition of East Asia, others suggest that the eastward spread of the Upper Palaeolithic blade-and-burin tradition into the Lake Baikal region of Siberia was earlier than is generally believed, and that elements of this great European culture were among the early migrations to Alaska. In any case, it is probable that early American cultures were mainly developed after the migrations.

** 'Indians know nothing of the beginning, nor will they say there is to be an ending. It is here,' explained the late Alfred Wilson, head of the Native American Church. Cf. Collier, *Indians of the Americas*, pp. 140-2.

*** Collier, loc. cit.p. 38.

**** In Peru, Viracocha was the Creator God of the aristocracy incarnate in the Inca Emperor.

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expression of Great Spirit notions and complements the social consciousness of the Chinese peoples. The language is polysynthetic but involves a great complex of inflexions—suggesting the possibility of a Hyperborean transmission from the Arctic centre. However, the culture is undoubtedly of the Great Spirit Tradition and Shamanism appears to have reached great spiritual heights.*

It. The Pacific

To South and East people moved into Burma and India; southern China; and, eventually, into Indonesia, Polynesia and the Pacific Ocean—including, apparently, New Zealand but not Australia. They appear to have arisen in South-east Asia. While still in Asia they were dominantly Caucasoid, later amalgamating with a Mongoloid strain coming from Central Asia. The coalescence of a genetically stable racial group was further complicated by an Oceanic Negro strain which can be associated with the Australoids.** The southern Mongoloid diffusion is dated between 8000 and 6000 B.C. By the 2nd millennium B.C. the Chinese were essentially Mongoloid and the 'sea-faring' peoples were already in the Pacific. *** The mythical homeland of the Polynesians

Ilawaiki—suggests, on linguistic grounds, the island of Java. However, Java was only one stage in the long and complicated migration. The great movements across thousands of miles of ocean suggest a high degree of cultural development also shown in the long-extinct structured writing system they brought with them. The Polynesian and Melanesian languages are rich in terms of relationship and closely connected with the earliest Indonesian and South-East Asian proto-languages that can be deduced. Many ancient compositions still exist in the remarkable memories of the priests highly trained in the ancient oral tradition. The sense of a beneficent spiritual power in all things pervades the whole way of life. They share this sense of cosmic joy with the Indians of North America.

* An Eskimo, speaking of his tradition said: 'I believe in a power that we name Sila and which cannot be explained by mere words. It is a spirit which maintains Order in the universe, which allots the seasons. . . . No one has ever seen this spirit. Its haunts are mysterious. It is at the same time quite close and infinitely far from us.'

**The movement of Australoids into Australia is assumed to have been made sometime around the end of the last glaciation. During a glacial fall of sea level, the maximum sea-distances to be crossed are only of the order 100-200 km. The Australian aborigine appears to have acquired certain elements of the Far Eastern tradition before his migration.

]; As late as a.d. 600 dark-skinned sea-faring people were known in southern China.

2C. Western Asia and Scandinavia

A third main movement included the area now covered by the Gobi Desert and what is for us the Oxus (Amu Darya). Most of central Asia was influenced by the ancient Shamanist culture. The wave may have carried through into Europe where the Finno-Ugrian group of languages is still associated with distant memories of Great Spirit worship. The Finnish and Scandinavian myths appear to have a double derivation

from the Hyperborean and Far Eastern sources. If this view is correct, the Great Spirit culture virtually girdled the earth, since the Scandinavians eventually crossed over to America. Certainly, the extensive Shamanism of northern Europe suggests a link. From Scandinavia across to North America there is the same tradition of the Seer who is a link between the human community and the spiritual world.*

17.47.7.3. THE CREATOR GOD CULTURE

Assuming that the African centre was in Abyssinia as we have suggested, it is possible that only a northerly route was directed by Guides who understood the purposes for which the Creator God notions had been developed. We have not devoted to the development of the Triliteral language system the attention that this tremendous achievement merits. Perhaps the native Bushmanoid strain may have some underlying connection with the essentially rhythmic character of the Hamitic languages.

Guides will have been among the founders of Egypt, and almost certainly had much to do with the remarkable homogeneity achieved by this country which, as we have seen, included several different stocks. The Ancient Egyptian language—now extinct—was one form of Hamitic. The influence of the Guides in Libya spread throughout North Africa and into the Sahara; and the whole of this area once spoke the Berber form of Hamitic, which in ancient inscriptions is known as Libyan. That influence also extended eastwards into adjoining areas of Asia, where the Semitic-Hamitic languages included Arabic. Certain Abyssinian languages are also of this type, including Amharic—the language of the Emperor. In Abyssinia, too, Cushiti-Hamitic is spoken. To some extent, the influence of the Guides extended eastwards into Somaliland and southwards into Kenya and Lake Victoria. The Chad languages now spoken in northern Nigeria and the surrounding area also belong to the Hamitic group, but the origin of this is unknown.

* The initiation ceremonies are much alike for the Eskimos, American Indians (including those of Meso America) the peoples of Siberia and of Scandinavia and north of Central Europe. Cf. Marcia Eliade, *Shamanism*.

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Speakers of Chad and Cushitic forms are predominantly negroid, while peoples speaking other forms of Hamitic are—and always were—predominantly white.

It would appear questionable whether the Abyssinian centre greatly influenced the forest peoples of the Centre and West. There may have been some other—purely African—centre. We tentatively suggested

earlier that this may have been situated in the Congo Basin. Yet the Bantu languages and the Bantu peoples are believed to have originated in the Nigeria-Cameroon region. This language came to be spoken in the Congo Basin and Angola. But it was not until about two thousand years before the present that the Bantu began a general south-easterly migration. Their invasions progressively displaced the Bushmen, whose primitive culture may date back to the pre-creative Age, and who at the last were driven into the Kalahari Desert by Bantu and Boer combined.

According to a strong South American tradition, men from the West brought the Sun-God and Sun-King worship to the Andes. It seems to be altogether unlikely that men of the stone age could have found their way across the Atlantic. We must remember, however, that the evidence we have shows nothing of this form of worship earlier than a few centuries B.C. The origin of Andean sun-worship remains an unsolved mystery.

17.47.7.4. THE SAVIOUR GOD CULTURE

Apart from the linguistic and intellectual achievements of the Arctic centre, the peoples influenced by the Hyperborean notions may be credited with the highest skills in the domestication of animals. It is noteworthy that the root word for horse— Sanskrit asva, Lithuanian aszwa, Greek hippos, Latin equus, Celtic ech, Anglo-Saxon ehu, Tocharian* yakwe—is one that is common to every branch of the Indo-European family. The centum group—Celtic, Italic, the Germanic in part, Greek, Illyrian and Ligurian—show one main stream of influence in Europe. Also included is the Nashili dialect of Hittite though some scholars made it representative of an independent branch. The sentum group—Baltic and Slavic, Armenian, Iranian and Sanskrit—show a connection of peoples in the Baltic regions with those moving around the Caspian Sea.

4A. Northern and Central Europe

We have seen that the Maglemosian hunters and fishermen of North Europe and Russia, and their Mesolithic descendants, were

* A 'dead' language, the only one of the centum group found in the Far East (at Sinkiang).

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culturally linked with South Russia; and that these peoples were ancestral to the early Indo-European speaking 'battle-axe' cultures who ranged between the North Sea and the Volga, and inhabited Cis-

Caucasia. These were 'Aryan' tribes, and it would seem that their language and beliefs must have been diffused among them from the Arctic centre.

4B. Southern Europe

Nomadic herdsmen came south-west of the Urals, passing north of the Caspian Sea. These eventually gave rise to the southern Indo-European cultures from central France to Greece.

4C. Western and Central Asia

Another stream entered the Central Asian plateau—through the Ob and Yenisei river valleys—and met and blended with peoples from the Far East to produce a variety of cultures. The main body was eventually obliged to move south again as the dry period of 7000-6000 B.C. desiccated the plains. They had a great influence in the Oxus-Jaxartes region of the Turkman and probably filtered into Iran and Afghanistan even before the later destructive Indo-European invasions—to produce the Iranian, Median and Bactrian cultures.

17.47.7.5. THE HYPERBOREAN WORLD

The evidence suggests that, while the Great Mother people were spreading south of the Caspian Sea, the Indo-Europeans, infused with the Hyperborean culture, were moving just to the north. As yet, the two were living in totally different worlds—geographically, technically and mentally. In the next Epoch we enter a time of confluence that was to culminate in the seizure of power in Anatolia and northern Iraq, Persia and India.

Wherever the Hyperborean influence spread we find notions of a hazardous universe. The Celts, the Norse people and the Iranians possessed visions of the end of the world that though quite distinct in every detail share in a common idea. A maleficent power threatening to break loose from its bonds and bring destruction to the world figures in all of them. Ancient memories were, no doubt, incorporated in the Eddic account of creation beginning with the formation of great ice in the void. The images often suggest the Arctic home, where the heat of volcanic action clashed with the cold of the winter ice and snow. Above all, we find the moving theme in Norse lore of the Saviour-God

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Odin who sacrifices himself upon the world-tree Yggdrasill 'myself given to myself'.*

17.47.7.6. THE BEGINNING OF THE GREAT TRADITION

Such is our speculative attempt to combine the general views of linguistic and ethnological scholarship with our basic thesis of the four Centers of Transformation. We have, perhaps, not laid sufficient stress upon the need for leadership in such enterprises as language creation and the dispersion of cultures. It is often assumed that these things happen by themselves, without intention or foresight, under the action of environmental pressures. Such assumptions are disproved by the evidence of history. All the known migrations—the hordes that invaded South-West Asia and Europe from Central Asia, the movements of colonization—whenever we have known the details, prove to have been conducted by resolute leaders. The migrations we are studying in this section, were not mass movements of entire populations—lack of food supplies would have effectively prevented that, quite apart from the unlikelihood that any form of social organization existed outside the ties of consanguinity in tribes of hundreds or thousands at the most. Yet out of them emerged the pattern of the modern world.

If we accept the hypothesis, that runs like a connecting thread through the whole of our reconstruction of the evolution of man on the earth, of guidance by the Demiurgic Intelligences; we must suppose that, in the complex movements of groups and communities, by which languages and cultures were distributed throughout the world, Demiurgic Guidance played a decisive part. We must not fall into the error of projecting modern conditions of life into the remote past. In the course of ten thousand years, the responsibility for man's destiny has been slowly but surely placed in his own hands; until, at the present time, modern man carries a heavy burden. The Demiurgic Intelligences are still concerned in human affairs, but much less directly .**

These remarks had to be made in order to introduce the notion of the Great Work that will occupy an important place in our further researches. By Great Work we mean the Intelligent, creative activity by which the Foreordained Plan of life upon the earth is executed. We have been studying the Great Work—the Magnum Opus—from the moment we agreed that Evolution is intelligently guided. It is, however, con-

* From the Havamal. Cf. Ellis Davidson, *Gods and Myths of Northern Europe*, p- 144.

** This anticipates some of our conclusions in the last chapter and must be taken only to emphasize the difference between modern and ancient conditions.

venient to use the term in the narrower sense to mean the contribution man himself makes to the Magnum Opus. It can be said that, in this restricted sense, the Great Work began about 35,000 years ago with the

entry of the creative energy into the human mind.* At that stage, the initiative and guidance must have been entirely the responsibility of the Demiurgic Intelligences acting through Guides in conscious contact and union of will.

The Epoch of the Creation of Language—the first Epoch of the present Great Cycle—enabled a new class of men to be formed: that is Psychokinetic men developed by their own endeavours, though helped, of course, by the Demiurgic Guides. These were the first Priests and they superseded the Magicians of the preceding Great Cycle. The Priests of the Migrations were leaders of their people, morally, socially and technically. They were the visible manifestation of the Creative Power by which mankind was energized. They were also the first self-made servants of the Great Work. These priests corresponded to the Initiates of our twelve-term social structure, **

The transmission of the secret rites and linguistic formulae depended on memory developed to an extent unknown in our modern world. Many observers have remarked on the accuracy with which ancient legends and rites must have been preserved in many parts of the world, even until recent times. There is little doubt that sacred hymns and epics could have been transmitted from generation to generation over many thousands of years without serious distortion. The sanctity of the new languages assured their transmission over vast areas. Gradually, the ordinary people, instead of just listening and receiving, began themselves to speak in the new languages. In the beginning, however, the sacred speech was the sole responsibility of the priestly caste.

When we survey the world scene at the dawn of the historical period—say seven thousand years before the present—we cannot help being in wonderment at all that mankind had already achieved. The greatest marvel was the creation of at least three radically different linguistic structures, an achievement altogether beyond the power of modern man. They had domesticated more species of plants and animals than man has done in the subsequent seven thousand years. They had penetrated into almost every habitable region of the globe and adapted themselves to conditions of existence from the Arctic to the Equator.

* According to a Sufic tradition preserved in Central Asia, the Schools of Wisdom have existed for 40,000 years. This shows remarkable agreement with our conclusions reached from independent premises.

** Cf. Vol. III, Chapter 41, Section 15.41.4.5.

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No one contemplating this situation without fixed preconceived notions of 'early man' can doubt that very high intelligences had been in action.

In formulating the notion of the Great Work and of the Psychoteleios men who direct and the Psychokinetic men who serve it, we have done no more than state this as a working hypothesis that will help us in our further research. The hypothesis is not reducible to a scheme that postulates men of outstanding natural gifts of creativity and leadership. It stands or falls on the assumption that there are Intelligences of a higher order than human and that these Intelligences have at all times been concerned in the evolution of life on the earth. The Guides of the Epoch of Diffusion are assumed to have been Psychoteleios; that is, completed Individuals conscious of their Demiurgic Nature. The Initiates or Priests were Psychokinetic men seeking, through service to the Great Work, to qualify for Individuality.

This was the start of the Great Tradition which is the expression of the aims and activities of the Great Work in forms that could be understood in each Epoch. The Great Tradition is also called the *Philosophia Perennis*, the declaration of human destiny that is uttered in new forms from age to age. There can be no doubt that the principal reason for the creation of new languages and the mythology that accompanied them was to enable the Great Tradition to be transmitted from the Guides through the Initiates and Priests to those men and women whose minds were prepared to look beyond the immediate present.

17.47.8. The Exoteric Epoch

The price that had to be paid for the diffusion of the four great cultures amongst mankind was a tremendous increase in the complexity of social life. Migrations and technical advances brought with them new stresses—especially in the regions where people of different traditions came into contact. In these regions we find traces during the next Epoch of a transference of authority and responsibility to men not connected in consciousness with the Psychoteleios Guides. The Epoch began about 7,500 years ago and its completion can be conveniently dated by the unification of Egypt about 3000 B.C. The outstanding theme, or Master idea, of this stage in human development was the exteriorization of the Great Work. For the first time, an exoteric group—or 'middle class'—appeared who, without initiation, could make an intelligent contribution to the progress of mankind. This step was a direct encouragement of initiative and at the same time made necessary by the changed conditions of life which emerged with the birth of civilization.

The stage we have just left coincided with the post-glacial climatic



optimum which lasted until about 5000 B.C. on the Atlantic coast, but turned into dry climate with violent duststorms and the spread of deserts in central Asia and the Sahara. Favourable conditions for the slow movement of tribes of hunters and herdsmen and the still slower movement of agricultural communities had made it possible for all four cultures to meet.

Linguistic analysis shows that, before writing began, there was an interaction between the inflected or Aryan languages, the triliteral or Africa-S.W. Asian group, the agglutinative or Great Spirit family and the gestural or Neolithic languages. Because of these interactions we find a limited interchange and sharing of roots. It is very significant that this sharing concerns abstract and mythological notions rather than words for material objects and bodily actions. One example must suffice: the root KRR which appears in all the Indo-European languages with meanings similar to that which it has in our word Creator, appears also in all the triliteral languages from ancient Egyptian to Arabic to signify decision, destiny and creative activity. In the Turkic or agglutinative languages the root conveys the notion of irreversible actions such as staining or graving on stone and hence the idea of the visible world as the trace or manifestation of the spiritual.

We cannot dwell on these evidences, or upon the equally interesting but exceedingly complex indications of the mutual influence of the myths and legends that the four centres had built up, to give form and permanence to the ideas of the Great Work that were needed for the future.

We must consider what each tradition had to contribute. There is little doubt that the notions of the sun as Creator, of the sun as King and hence of the King as God came from some African centre. The oldest Indo-European myths are without any such concepts. There the Sun God Indra is not the Supreme Creative Power; but rather the Saviour God who puts his own existence in peril to save the world. No two conceptions could be more opposed than these.* The central theme of the Vedas is the tremendous struggle with the powers of darkness in which man has to play his part. Even when a supreme God is referred

* In her brilliant study of Man and the Sun, Jacquetta Hawkes tries to make out a case for the universality of sun worship among early people. She admits difficulties with the Indo-European tradition. Thus: (loc. cit., p. 171): 'His faint solar aspect appears in the Rig Veda where he smiles through the clouds, yet already he is vague, he has no hymns devoted to him alone—he, too, has been kicked upstairs.' She admits much the same of the Sumerians (loc. cit., p. 78): 'In early Sumeria he (the Sun God) occupied a relatively small corner of the pattern of national theology.' China and the Far East are not even mentioned and indeed there are no traces of sun worship in the regions of the Great Spirit culture.

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to, as in the famous Creation Hymn; we find that, after enquiring what this reation is for and whither it is bound, it answers its own question in the last two lines:

'He who surveys it in the Highest Heaven
He alone knows—and even He may not know!'

The Drama of the Universe was the magnificent theme of the hymns of the Aryans—even those borrowed so late in the day by Homer. Nothing resembling this is to be found in the Egyptian inscriptions. This hymn is quoted by Jacquetta Hawkes:*

'Sol torch taking captive all lands every day,
As one beholding them that walk therein;

He makes the seasons by months

He: when he desires, Cold when he desires.

He makes the limbs to languish when he unfolds them

Every land is in rejoicing

At is rising every day, in order to praise him.'

These hymns obviously belong to a much later period than the Epoch that we are about to study, but the differences initially were certainly even more narked. Let us set down what we can reconstruct of the beliefs of the four groups before the beginning of history.

17.47.8.1 GREAT MOTHER CULTURE

Man originally came from woman without a father. The role of man in procreation was little understood. Children belonged to the mother's clan. The Great Mother is also the Breast of Nature from which all life is nourished. The special place of woman in agriculture gives her pre-

eminence in the home. The culture is essentially practical and innumerable local cults are connected with seedtime and harvest, with rain and sunshine. . The sanctity of the home makes for a closely knit and conservative society. It is not surprising to learn that these people were the first householders. The Great Mother not being identified with a supreme God or Spirit takes different form and different name in different places. Later she begins to acquire a consort or even many husbands—but this is the result of the impact of other cultures. The

* Loc. cit., p. 112. The chapter entitled 'Sun of Life' is a magnificent account of the place that the Sun and Sun Worship occupied in Egypt from start to finish of its long history.

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primitive notion is that of the Virgin Mother who is impregnated by the Life Force that has brought animals and plants to the earth and chose the Great Mother in order to bring man.

17.47.8.2. GREAT SPIRIT CULTURE

Here there are no personal gods either male or female. The Great Spirit is everywhere the same. When it takes a more sophisticated form as Tao it produces everything: but not as Creator. The coming of life, and of man also, is the spiritualization of matter. Nothing is 'made', because everything already is.

There are no problems here like those of the Hyperborean nor is there the Triumphant Sun God of Africa. The Spirit power is omnipresent and almighty, but it works from within. It does not reign in Majesty like Re or Atum; nor does it have to struggle and suffer like Indra and Mitra. Since the Spirit works invisibly and within man and nature, the all-important need is to secure this working for oneself and one's community. Those who have this working—the Shamans or Guides—are the indispensable link between the community and the Great Spirit. They are neither rulers nor a sacramental priesthood: they are men chosen by the Spirit to be its vehicle; therefore they are nothing in themselves and yet they are to be feared and followed because of the Spirit Power that works through them. This accounts for the immensely wide dispersion of the Great Spirit culture and its ability to resist change even to our own time.*

The effect of the Great Spirit culture upon the external life is to produce closely-knit communities united by a common spiritual action. This made the long migrations possible. It also may account for the fixed social structures of the Far East and the interest taken later by the

Chinese and other Far Eastern nations in doctrines of the social order. The cult of ancestors and the sacredness of the family can also be traced to the sense of continuity of existence that the Spirit Power produces in a society. We might also add that the attitude towards death in all cultures which have originated from the Great Spirit centre, and which is so incomprehensible to those of other cultures, is also to be ascribed to the mystical sense of perpetual renewal that the Spirit gives.

17.47.8.3. CREATOR GOD CULTURE

In marked contrast to the Hyperborean anxiety for the welfare of gods and man, the Southern folk are confident that the Creator God

* For example, among the Pueblo Indians of western U.S.A.

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is immortal, omnipotent and able to endow his earthly counterpart with the same qualities. Not only is the God endless, but man also is destined for immortality. Immortality is attained through the King. If the Divine law is not violated, a man dies to rise again 'beyond the mountains' where the Sun-God will take him directly into his care. The sun was the Father of the people as well as Creator and his role as the supreme Father was enacted by his representative on earth. Authority and responsibility was always in a 'vertical' direction, from higher to lower, and never between equals.

It might appear that we are overlooking the 'polytheism' of the Egyptians. The assumption that the Egyptians believed in a Pantheon of divine and semi-divine beings, has been discarded by serious Egyptologists. It is now agreed that the various Neter formerly called 'gods' are symbols of various natural and moral qualities by which the creative power is manifested in the world. The idea of manifestation occupies an important place. This is just the opposite of the Far Eastern belief which holds that the Great Spirit never manifests, nor takes any kind of visible or even imaginable form. The Creator God culture turns on the obligation to manifest.

This led to the doctrine of Divine Kingship and to the need to build great structures and create imposing works of art. The splendid pageants and elaborate rituals of Egypt probably descend from a very ancient belief in the need to make the Divine Power visible to all people.

17.47.8.4. SAVIOUR GOD CULTURE

In this stream, far more than in any other, we find the recognition that existence is itself a problem. Not only the hazards of human

existence, but also the insecurity of the gods were powerful formative influences upon the receptive minds of the Indo-European culture. So strong was this feeling, that it has continued to influence thought and action to this day.

Recognition that existence is dramatic cannot be discerned in any of the other three traditions. It seems also, that the people of the North were the first to grasp the significance of sin as the voluntary acceptance of evil. With this awareness, comes the acute need for salvation that we can recognize in the Zend Avesta, in the Norse Sagas, and even in the Vedas though less clearly.

Because of their sense of insecurity, the Indo-European people were seekers. Initially, they sought security by going south to find the sun. When they discovered that the people of the sun could not understand their problem, they turned upon themselves and looked for security in

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transformation.* Their beliefs and practices were so powerfully affected by the cultures through which they passed in their wanderings that we cannot do much more than guess at their state during the time of their wanderings. What we must recognize is the powerful influence of the Hyperborean language and beliefs—although they were transmitted to several distinct races.** These have been the people who have hastened forward the development of the human mind, seeing more clearly than any other that Creativity is the distinctively human characteristic.

17.47.8.5. THE PROGRESS OF THE EPOCH

This most inadequate sketch of the four great cultures must serve as an introduction to the study of their mutual impact in the Exoteric Epoch that began some 7,500 years ago and ended with the foundation of city states in Mesopotamia and the Indus valley and dynastic rule in Egypt.

It was, perhaps, within the Plan of the Great Work to produce the four basic cultures under conditions that would allow them to reach a maximum degree of differentiation of beliefs and specialization of language before they were allowed to meet. If so, it was a rare stroke of genius and example of foresight.

Each culture had great value in its own right. China developed a magnificent civilization by progressive refinement of the Great Spirit Culture. The American Indians and the Polynesians produced variants the value of which was unfortunately not perceived by those who destroyed them. Egypt gave the world the example of the most prolonged

manifestation of a single line of culture in history. In Africa powers were acquired that would have been of great value to the human race if, unfortunately, these also had not been first debased and then destroyed by invaders. In the far West, the Nordic and Germanic cultures were prematurely overtaken and failed to give the fruits of a very special insight into the Drama of Existence of which they touched the fringes. The Great Mother culture probably survived in the Mediterranean until the catastrophe to be described in the next section.

* The 'creation of the world' from the combination of the heat and light (of the South) and the cold and dark (of the North) that we find recounted in the Prose Edda and other mythologies of northern Europe is a wonderful record of this period in Hyperborean history. Between Muspell in the south and the ice and snow of the north was the emptiness of Ginnungagap wherein the heat and the cold produced the primal giant Yonir. Cf. Ellis Davidson, *Gods and Myths of Northern Europe*.

** The Mediterranean, the Nordic, the Caucasian and the Indian are as different as races of *Homo Sapiens Sapiens* can be, but they are amazingly similar in the cultural formation they have received from the Arctic source.

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These few illustrations refer to the four cultures in their 'pure' form. Of much greater interest are the 'hybrid' forms. The mutual impact came in South-west Asia and made this area the birthplace of civilization and of the great religions. It also became and has remained the principal centre from which the Great Work of the creative evolution of mankind is guided and helped.

The human population was rapidly increasing and the early small communities bound together through kinship grew into scattered, loosely-knit units. At the same time, different cultures were coming into contact—not only people supported by different techniques but also people inspired by different beliefs. In Europe, Africa and Asia there must have been numerous encounters. We can scarcely doubt that, at the beginning, the various groups would have been kept from open confrontation—until the necessary work of intentional diffusion had been achieved. The time had now come for the organization of social life to be partially dependent on men having intelligence but little contact with Individuality.

The rise of Neolithic settlements and the spread of herdsmen and bands of hunters was balanced by an intermediate group of men being given a special position of responsibility. Until this third Epoch, men were of two kinds: the Guides and their chosen helpers destined for Individualization; and the ordinary people destined to return to the Soul-Stuff Pool. The new social structure may at first have corresponded to our three-fold scheme of Psychostatic, Psychokinetic and Psychote-

leios groups of men. The forms which the new middle group assumed depended on the cultural traditions. There came the exoteric priesthood acting as representatives of the sacred guides and cooperating with the authentic Initiates. In this way, the 'paths of transmission', leading from the Psychostatic to the Psychoteleios groups were brought into being. But not only priesthood was involved—men were assuming responsibility in all branches of specialized activity. The accelerated pace of the Chalcolithic phase is an indication of the presence of men acting not simply from instruction and guidance but from their own intelligence and initiative as well.

Men of the middle group assumed increasing responsibility. The compresence of different peoples required a degree of social organization unnecessary before. Sharing of land and exchanges of techniques had to be regulated to avoid general confusion. There was also the need for interpretation whenever two streams of culture met.

The course of events in many regions of the world remains obscure. The Bering Straits had again become impassable, and the Americas

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were left to develop independently for six thousand years. Travel into Africa became impossible in the hot, wet period known as the 'Atlantic phase': the dark continent was cut off from the North until the third century a.d. and the Arab penetration began thousands of years later. Even central Asia, that must have been for twenty thousand years the home of hunting tribes with no fixed dwellings, had been rendered almost uninhabitable by the great winds and dust storms. Deserts were appearing in the Sahara, the Gobi, around the Red Sea, in the Punjab, in Arabia and in North America. At the same time the great river valleys were becoming inhabitable.

There began a great process of construction in geographically defined regions. In the fifth millennium B.C., we have evidence of great works in Upper and Lower Egypt and by the fourth millennium the beginnings of Sumer. We find traces of undertakings in Norway and Denmark and then evidence of the Danubians who probably came from the south to occupy large areas of western Europe.

The sites in South-west Asia show a remarkable cultural continuity. The earliest shrine at Eridu in Sumer was rebuilt and enlarged through succeeding occupations until we find records explaining its dedication to the god Ea, interpreted in later times still as the 'Lord of Wisdom'.

At Sialk in southern Iran we see continuous development from early settlement to occupation by a colony of literate Elamites who had developed civilization in the alluvial valley of the Kerkha. We must remember, in this context, that the agricultural communities of the Great Mother Culture had been settled in these regions for several thousand years before this time.

The whole region of the fertile crescent from Egypt to the Persian Gulf was the scene of a tremendous work of construction. Here, the confluence laid the foundations of our present cultures. A potent factor in the development of a social structure was the invention of the irrigation system whereby the yield of crops and, in consequence, the density of population could be increased several-fold. Irrigation was probably first introduced in the steppes of Iran and Iraq. In the fourth millennium B.C. the swamp and marsh of the Mesopotamian delta was brought under control by a vast labour of drainage and irrigation. Even today, traces of the old channels are still discernible: reflecting on the technical skill and organization that must have gone into them, one can become aware of the Intelligence then at work. We must not under-rate the power of appreciation that could see the potentialities in the situation. The step towards urban civilization came as a planned development. Europe at this time was suitable for settled agriculture

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and urbanization, but they did not come for more than a thousand years—and then from the East! With settlement, came ownership of land. With the specialized development of the practical arts, came the exchange of goods; and with large communities, came the need for the maintenance of order. Behind the magnificent achievements of the time, was the plan of transferring responsibility to the human mind for its own progress and, eventually, for its contribution to the Great Work.

The technical advances of the fourth millennium were truly astonishing. Even before this time, observations were being made of the cyclic behaviour of the stars, the sun and moon. A calendar—in the sense of an organized system of reckoning long durations—must have been operative a thousand years and more before the so-called 'historical horizon' marked by written texts.* A cluster of inventions could be enumerated such as the potter's wheel, the use of the motive power of oxen, the plough and so on. There was also developed a true money economy and systems of weight and measures that gave commerce a powerful impetus to expand. The innovation which was the most far-reaching, however, was the invention of writing. Without writing, the complexity of communications and records necessary to very large settled communities could not become organized. At the beginning, there appear to have been two kinds of representation: symbolic and indicative. The symbolic pictures were records of the ideas of the culture, whereas the indicative

pictograms were records of concrete events. By the end of the Epoch, they had come together as a means of recording expressions in the languages of the peoples.

By the accidents of climate and the use from the start of burnt brick, we have far more copious traces of the history of Sumer at the end of the Epoch than of any other part of the world. There is no doubt that the Sumerian script was phonetic. Succeeding peoples speaking Semitic tongues adopted the notation on settling in Sumer. Later, the Elamites also look over the method. In this way, the languages of the various cultures began to influence each other. It is interesting to note that in Egypt the words for the numbers one to five and ten were African whereas the numbers six to nine were Semitic—a sure sign of borrowing. The settlers in the Indus valley and those who later founded the early Chinese civilization in the valley of the Huang Ho, were not slow in acquiring the art of writing. What did this mean for the structure of the languages? obviously, the language of the Great Mother culture was well suited to the phonetic system of the Sumerians and may have been a major

* Santillana suggests the calendar was evolved 'between 4000 and 6000 B.C.', *The Origins of Scientific Thought*, p. 13.

ingredient. For the great root-languages, however, there must have been a large amount of simplification. It is no accident that the vast majority of the early texts were concerned with commerce and day-to-day administration. With the coming of writing, the spoken languages themselves must have lost much of their original subtlety.

One important result was that man could bequeath to future generations records accessible to exoteric levels of society. The literate part of the community, though small, was a late manifestation of the 'middle group' which was assuming greater and greater importance.

We must pause and consider the overall distribution of progressive cultures. In the Nile valley, the major powers of Upper and Lower Egypt had formed. The valleys of the Indus and the Yellow River were being settled and urbanized. We find advanced cultures in Iran and Syria, and the whole of the eastern Mediterranean appears to have been dominated by the Great Mother culture and was making its way into Europe through colonization. We come to the time of the megalith builders—beginning in northern Europe around 3000 B.C., and the grave-passage people spreading to Malta and Iberia. In central Europe, the expanding Danubian culture was being threatened by the Westerners spreading throughout western Europe. Trade connected Asia Minor with Mesopotamia, Sumer and Akkad, with India and even, perhaps,

China. In the north, the Indo-Europeans were developing in ways which have left almost no traces.

In the central region, people from the nomadic tribes were probably involved in carrying the trade of the emergent civilizations. At the same time, it would appear that specialists in the new arts roved far and wide in the exercise of their skills. There were also peoples relatively untouched by the revolution in progress, but nevertheless destined to make significant contributions during the next Epoch. The great achievements of the Exoteric Epoch are now the heritage of mankind; but so also is the price that had to be paid. This was the exposure of man to material forces. The pursuit of wealth and possessions for their own sake, that had played no part in the life of the migrants, or of the groups of farmers who no doubt moved from place to place as the land lost its fertility, now began to dominate men's minds in all parts of the oikoumene.

With property and money, the latent egoism of the human soul-stuff found an instrument of self-expression that has been a major factor in determining the course of subsequent history. There were no doubt evil men, and men more or less tainted with evil, from the first contamination of the soul-stuff. Violence of the kind vividly portrayed in

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the story of Cain and Abel must frequently have been unleashed in the meetings of cultures with different notions of man and his destiny. Egoism could cause jealousies and hatreds, disobedience to the authority of the guides, selfish disregard for the needs and sufferings of others: but it could not deploy all its potential for harm until mankind acquired a social organization.

It may well have seemed that mankind was paying with moral deterioration for material progress. We have faint echoes of the moralist's lament in the oldest literature. It may indeed be true that the exoteric society could not understand its responsibility and that the world of 5,000 years ago was in a state of disorder.

We find an increasing preponderance of implements of war amongst the traces. The early Danubian settlements had been without fortification—now protective devices predominate. The two kingdoms of Egypt were in armed conflict and in Mesopotamia we find signs of settlement through conquest. In all probability, the stories of the 'Flood' record an upsurge of violence and social disintegration amongst the city-states. Reading back from the records, we can see the origins of class-oppression on the part of the exoteric priesthood. The middle group which had been given authority had established the relation of 'masters and slaves' in order to preserve social coherence in the face of

the stress of the meeting of cultures and the expansion of population. The visible fruit at the end of the Epoch was exploitation and a weakening of the chain of transmission necessary for the psychokinetic life. Undoubtedly, the 'way of initiation' became, at this time, a hidden mystery and remained so until the great events of the stage of Revelation.

17.47.9. The Hemitheandric Epoch

The response of the Guides of Mankind was not to withdraw responsibility from the Exoteric Society but to increase it. The means used were to present to the people the picture of men like themselves in appearance who were nevertheless superhuman, or godlike in their true nature. It was not intended that these men should be mistaken for gods. They were not Divine Incarnations though, at first, they were no doubt Initiates destined to achieve Individuality. To express the special status accorded to them, we have used the term Hemitheandros: half-god, half-man. Because their role in human societies is the dominant theme of the next two thousand years, we call this cycle the Hemitheandric Epoch. The theme developed according to the prevailing cultures. In Egypt the Hemitheandros was almost at once identified with

the Sun God Re. In regions of the Great Spirit Culture—particularly in China—he was the wise man wholly possessed by the Spirit-Power known as Shang-ti. In the regions mainly influenced by the Aryan beliefs, he was the Hero who associates with the higher powers and risks or even sacrifices his life for his people. In the Great Mother regions of the Near East, the Hemitheandros was the son of the Great Mother: as Zeus was the son of Cretan Rhea.

A deeply significant and almost universal attribute of the Hemitheandroi is that they were believed to have learned the secrets of immortality—the duraosha haroma 'from whom death flees'—and could enable others to enjoy the benefits of their achievement. This was part of the general doctrine of Hvareno* according to which the Hemitheandros was vested with a sacred power which he alone could dispense and which therefore made him indispensable to his people. In an early Sumerian tablet telling the story of the Flood, we learn that, at the beginning of civilization, 'the exalted Tiara and the Throne of Kingship had been lowered from heaven.' In old Norse, kingly power is described as 'the Licence from the Great Bear'.

Generally, the Hemitheandros was not a priest, although his actions had a sacramental character. In Egypt, the flooding of the Nile depended on his due performance of the sacred rites. The early Sumerian and Akkadian kings and governors are portrayed as the executives of the

great gods. The Hemitheandros took over the fertility cult that belonged to an earlier Epoch and transformed it into an act of service or kingship that assured the return of the seasons.** Even in the later Hittite empire the king would leave foreign campaigns to his generals in order to perform his sacramental duties in his kingdom.***

The new image entered into human society towards the end of the fourth millennium B.C. We may be sure that the rise of kingship and the great Social changes, were the result of the intentional work of the Initiates and Guides. The rise of kingship might be explained in terms of human love of power among the few and the equally human desire to shirk responsibility among the many. But these were not ordinary tyrants; they were—especially at first—lawgivers, healers, sages and

* The term used in the Avestan hymns for the sacred power that invested the true king.

** The great New Year Festival of Babylon involved complex rituals in which the king enacted ritual humiliation, triumph over chaos and mating with a goddess.

*** The Hemitheandric idea though not the reality, was still alive in the time of Hattusilus III (ca. 1275 B.C.) who wrote: 'The goddess, my lady, always held me by the hand; and since I was a divinely favoured man, and walked in the favour of the gods, I never committed the evil deeds of mankind.'

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symbols of an ideal theocratic society. The men themselves were not ordinary ran. Making all allowance for the halo cast by a remote antiquity, we cannot doubt that the white Emperor of China was remembered as a man saturated with the sacred power of the spirit.* The oldest Uparishads tell us of Brihadratha the king and sage, of Ikshvaku the saviour of the Aryan people, of Manu their lawgiver. These may be half-mythical figures but the high stature and achievements of some Hemitheandroi are certainly historical. Menes, the first king to rule over a united Egypt, was the creator of new social structures, and Imhotep (ca. 3000 EC.) the astronomer, architect, sage and physician, later worshipped as a 'hero', and even as the god of medicine, established new sciences. Long before the great legal code of Hammurabi, the kings of Sumeria were concerned with the dispensation of humane justice. We can mention Urukagiva and Gudea of Lagash as well as Ur-Nammu of the Third Dynasty of Ur.** We must add the enigmatic figure of Melchisedec, tie Priest King of Lagash who blessed Abraham (probably ca. 2000 B.(.) and whose name has left such a deep impression on the Christian tradition.*** It may be that we have a glimpse here of a higher figure than he Hemitheandros—that is of a Messenger, a Psychoteleios soul in direct touch with the Demiurgic Intelligences.

Behind the steps taken, we can discern the guidance of the Demiurgic Intelligence that is never violent nor hasty. One principle of the Great Work that must already be clear is that it operates entirely within the framework of the natural order and according to its laws. The Hemitheandros was—at least in theory—not a capricious autocrat, deciding the destiny of his people to suit his pleasure or intervening arbitrarily in the course of nature, but the pre-eminently wise ruler who could do what no one else could do because he was endowed with a special power. That this description ceased to be valid after the end of the second

* Huang Ti, who ruled Eastern Honan and Shen Nung who ruled Western Honan were remembered, together with Fuhi, as the bringers of pictorial writing, marriage, agriculture, medicine and many arts. They probably lived at the beginning of the third millennium.

** The beneficent influence of the early Hemitheandric rulers can be gauged from an inscription at Kish of about 2,400 B.C., in which Urukagina refers to the re-establishment of the ancient laws and says that as a result of his administration 'the maid was the equal of her mistress, and master and slave consorted together as friends, the powerful and the humble man lay down side by side, and in place of evil speech only propitious words were heard; the rich man did not wrong the orphan, nor did the strong man oppress the widow.' Quoted by L. A. Waddell in *The Makers of Civilization in Race and History*, London, 1939. Ur-Nammu (ca. 2050 B.C.) has given us the earliest formulation of a legal code. It seems that the early law was even more humane than that we find in Hammurabi.

***He is mentioned eleven times in the Old Testament.

millennium B.C. does not diminish its importance for our understanding of the purpose behind it all.

Two objectives can be discerned in the decision to launch the cult of the Hemitheandros in its various forms. The first was to create an authority that would regulate the activity of the exoteric society. This was achieved partly by the establishment of a governing section within the exoteric class. These administrators, reflecting the Sacred Power of the Hemitheandros, ruled the people in his name.* Exoteric priests and scribes in effect ran the great cities. The system gave scope for injustice and the hemitheandric men had to intervene to redress the balance. They stood outside the exoteric society and were able to mitigate the class-conflict which threatened the social stability of the city-states. In many regions, written codes of law were promulgated. Some of these were so farsighted that many of their provisions are to be found in the jurisprudence of our own age.

The second objective was the formation of notions about man and his destiny that would prepare for a more responsible participation of the people in the Great Work. We have referred to the belief that the Hemitheandros had the secret of immortality. This was certainly a factor of decisive significance. Not only was immortality promised to those who linked their lives with that of the hero; but it was a superior immortality, not a descent into the shades which was the fate of ordinary people. We can discern this teaching everywhere: in China, in Egypt, in Sumeria, in India and in the distant echoes given by myths of the Celts and Norsemen.

By communicating to the exoteric society belief in the soul and its immortality, a sanction was given to the moral order and to theocratic institutions in general. This was of vital importance to the Great Work, for it helped to awaken the people to motives for action that might conflict with their egoism and animal passions. Until that time, the foundation of the social order was the lack of initiative on the part of the masses and their consequent faith in and obedience towards the Guides and their helpers. From the start of the Hemitheandric Epoch a profound change of attitude was apparent. Men were no longer dependent upon an unseen source of strength and help; but upon a visible man. He was the guarantor of the social order and the link with immortality, ** Similar ideas were germinating all over the world. The

* In Sumeria, the city-governor was the 'tenant-farmer' of the 'God' of the city. In China, the king ruled by the mandate of 'Heaven', the t'ien-ming.

** Cf. J. Murphy, *The Origins and History of Religions*, p. 200. 'In a way that is very striking, for many hundreds of years in this civilization, the higher religion of an approach to the gods or the attainment of immortality had no existence except for the

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mythology of Sumer and Akkad is full of concern with the mystery of the secret of immortality. The passion of the heroic search of Gilgamesh is a reflection of the awakening of human reason to the possibility of a real immortality—not mere persistence in the underworld. Later, scepticism abounds—but out of this was to rise the truly religious sense of a personal bond between God and man. The failures of the heroes were a preparation for the notion of the God of Salvation, brought by the Indo-European tradition. Taken as a whole, the Epoch we are studying shows the signs of the awakening of an exoteric religious sense. Peoples in whom the main cultures fused were the bearers of the seed of religion which was to be born in the Age of Revelation.

We should also note the importance of divination in this Epoch. The omen literature of Sumeria and Babylonia is extensive—celestial phenomena, physiological signs and the flight of birds were used. In China, there is evidence of a form of astrology being practised perhaps as early as the fourteenth century B.C. Nowadays, it is taken that astrology as we know it did not develop in western Asia before the Seleucid period. Yet for millennia astronomical observations had been accumulated and systematized—especially in Babylonia. The Ziggurats and Bittmarti or 'houses of observation' were undoubtedly used for this activity, but more than the construction of a calendar was involved. There was an understanding of the significance of synchronous patterns and their influence upon the course of events both personal and social.

We must return to the conclusion reached in the last chapter that the magicians guiding the human population had brought the modern races of man into being by the genetic control of mating. The belief that mating is a secret science persisted into historical times and is still held in many parts of the world. In our view, this secret science really existed

king . . . The privileges of religion were confined to the royal gens or caste, to the aristocracy which ruled the country; and these privileged ones might number about five hundred.' The author does not see that the Egyptians distinguished between the active religion of the Pharaoh and the passive religion of the Plebs. Both were valid and equally necessary, the one to the other. James Blaikie, writing of the creed of the Egyptians, asserts that 'The idea of immortality has been nowhere more tenaciously held than in ancient Egypt, and the documents relating to it have an overwhelming preponderance in the religious literature of the nation.' The essential link between the Hemitheandros, represented by Osiris, and the existential man seeking the immortal essence is expressed in many passages; for example, in The Book of the Dead the soul recites 'Homage to thee, O my divine father Osiris! Thou hast thy body with thy members. Thou didst not decay, thou didst not become corruption ... I shall not decay, I also shall not see corruption ... I shall have my Being, I shall live, I shall germinate, I shall wake up in peace' (Erie, of Religion and Ethics, Vol. IV, p. 243).

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and was a powerful influence in human development.* According to some traditions, the candidates for admission to the psychokinetic society in ancient times were selected even before birth, from knowledge

of the characteristics of their parents and the circumstances and time of their conception. **

Whereas the visible priesthood indulged in the complex rules and formulations of hepatoscopy, the power of divining the crucial patterns at the conception of children of good heritage was probably confined to counsellors and initiates.*** The power would have depended on the exercise of finer perceptions. It is very probable that in the Hemi-theandric Epoch the human mind could develop sensitive perceptions far more easily than it can today.****

These 'rumours of the past' are not without their importance for us today. The maturing of the human mind is not a one-way traffic along a well-marked highway. At certain stages a particular power or group of powers is developed ahead of others. This may be needed under the conditions of a particular historical period: later these powers may be allowed to go into abeyance in all but a small minority. The main stream is then developing other powers upon which all attention is concentrated. Thus development follows the same zig-zag pattern in the human

* Although astrologers are regularly consulted about marriages by hundreds of millions of people, in Asiatic countries especially, little authentic knowledge remains of the way in which the selection of mates should be determined. It may well be that this science will have to be revived to save the human race from serious deterioration due to the survival of the unfittest.

** Cf. Vol. III, Chapter 41, Section 15.41.4.

*** We have not given a detailed account of divination. In Chapter 42, pp. 43—45 we mentioned the importance of correspondences between spatial and temporal patterns. This is brought into experience through the zones and regions of eternity and hyparxis. The state of consciousness of the diviner brings the two patterns into his present moment. Through the hyparchic component, he is able to recognize the significance of the patterns. As we pointed in Vol. II, Chapter 26, synchronicity is a Paraesthetic reality on the boundaries of fact and value. Since it cannot be reduced to fact, causality cannot be applied nor the presence of the observer abstracted. We might add that causality as an over-riding principle of explanation was not introduced until about the sixth century B.C. and then one of the key thinkers was the Buddha.

**** Cf. Gurdjieff, *All and Everything*, pp. 471-2, where he speaks of the 'sensibility of perception' 'deteriorating century by century' during the 'Babylonian civilization'. Also p. 1235, 'The general life of mankind has been divided into two streams since the time of what is called the Tikliamishian civilization which directly preceded the Babylonian civilization. It was just from then on that there gradually began to be and ultimately was finally established that organization of the life of mankind which as every sane-thinking man ought to constate, can now flow more or less tolerably, if people are divided into masters and slaves.' The Tikliamishian era, as can be inferred from other parts of the book, corresponds to our Exoteric Epoch and the Babylonian to

the Hemitheandric. The 'division into masters and slaves' refers to our 'exoteric society'.

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mind as it has been observed to do in nature. This is overlooked and so we make serious mistakes in evaluating the past.

The aim of the secret divination was to select for special training men capable of dealing with the immense tasks in hand. The Great Work had need of men with certain highly developed mental powers for the setting up of the social structures which were to maintain human life for four millennia.

These structures are what we call civilizations.* The greatest achievement was the establishment, first, of stable city-states and, later, of empires, deploying great resources. Material achievements ranged from shipbuilding and navigation to metallurgy and the introduction of copper, bronze and iron into the life of man.

During the Epoch, intercourse between the most remote centres of population proceeded regularly, and, on the whole, safely. Experiments were made with almost every known form of social organization, from the communism that prevailed in Egypt from the 9th to the nth Dynasties to the nearly contemporary theocratic monarchy in Lagash. Hundreds of thousands of clay tablets bearing records in cuneiform, papyri inscribed with hieroglyphs, and inscriptions on stone and metal have been preserved, and, as they are being deciphered, we can form the picture of a mode of life that seems strangely like our own. But the differences are more significant than the similarities. For example, throughout the Hemitheandric Epoch, respect for human life was almost completely lacking. Side by side with an advanced jurisprudence—belonging to the social level of history—we find inscriptions in which kings, and even priests, boast of cruelties that modern man can scarcely bear to contemplate. For the contrast of high virtues and a low regard for human life we need to go no further than the Homeric poems, which give a picture of life towards the close of the Epoch on a level intermediate between the civilizations of Egypt and Babylon and the contemporary Neolithic societies of Europe. Homer succeeds in conveying to us a feeling of the superior and semi-divine status of the Heroes and of the still deeper respect accorded to the spiritual beings who stood above the hierarchy of exoteric authority. Thus the prophet Tiresias alone, among the dead encountered by Odysseus in his descent into Hades, retains the full power of speech and sense-experience. The Heroes of the Hemitheandric Epoch were inspired by a passionate force of life such as we can scarcely picture.**

*Cf. Vol. III, Chapter 41, Section is.41-,7.3.

** The hero-king, Agamemnon, who stands weeping before the walls of Troy 'like a fountain of black water pouring in dark stream from beetling crag'; Odysseus, the

The Hemitheandric Epoch was marked by another great flowering of science and technology. Babylonian civilization is renowned for its development of astronomy and mathematics. Old-Babylonian texts, dating from 1800 to 1600 B.C. reveal a fully developed set of techniques corresponding to an algebra in all but formalism. Around the same time, we find, during the twelfth dynasty in Egypt, the amazing series of papyri which demonstrate a highly integrated tradition of medical practice and great achievements in arithmetic and geometry. In all probability, most of the innovations were, in fact, made by 2800 B.C. Strangely enough, the earliest megalithic constructions in Europe date from about 3000 B.C. or a little before—the period of the inception of pyramid building.** The accuracy of the Egyptian constructions was astonishing—to within 1 in 4,000 for the Great Pyramid. Even more astonishing is the social organization implied by such undertakings: the control of thousands of workers on a single site, for example, is evidence of an effective administration. In Harrappa and in northern China under the Shang dynasty we find traces of an organized technology geared to public ends. We can add that, by the end of the second millennium, systems of weights and measures were in general use from Egypt to India.

Notwithstanding spectacular archaeological discoveries, we are still far from appreciating the achievements of the Epoch. Egyptian and Babylonian writers show a capacity for observation and systematic technique that was unsurpassed for millennia. They laid the foundation of the scientific tradition which was to reach Europe about three thousand years later after passing through the Greeks and Arabs. The first steps were empirical and technical. There was no suggestion of man being able to find out about the structure of the world through his mind and his senses. That was why so little progress was made, for example, in Egyptian medicine after the first major creative phase at the start of the Epoch. 'Chaldean' speculation properly belongs to the next major episode in human history. 'Theoria' did not yet exist, but when it came with the Ionian philosophers, they drew on the cosmological

wisest of the Greeks, who throws himself on the floor and howls like a spoilt child when he is told to visit the Underworld — in short, all the Homeric heroes, with their emotional upheavals, their childish vanity, their lust and their cruelty, seem to us to be strange monsters. We can equally understand the agony of the young Simone Weil reading the scriptures of the ancient Hebrews and asking whether she is expected to find in their barbaric practices a prior revelation of Christian faith.

** With Zoser of the 3rd Dynasty, the architect being Imhotep. This is variously dated, but is probably very early in the third millennium B.C.

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notions of Babylon and Egypt and availed themselves of their vast fund of accurate data.

In the perspective of our own present moment of history, the science of the Hemitheandric Epoch appears as a single phase of technical achievement. We should remember that it was a whole cycle of transformation. At the end of the cycle men looked back towards the first great thinkers and their traditions with some awe and reverence. The separation of exoteric society from the esoteric groups was almost complete. A powerful myth was created and carried eventually into Europe—the myth of the 'ancients' who 'knew the true science'. This was as important a contribution as the techniques actually evolved. It led people to search for something which they themselves had to create.

The penetration of creative activity into the middle order of society during this Epoch has left its traces in works of art. These are not only more abundant than those of the preceding age; but also of far higher skill and variety. Until this time, art was mainly esoteric and magical: but in the Hemitheandric Epoch it was first used as a means of expressing the value system of cultures.

The architecture of Greece no longer stands before us as something unprecedented, but rather as an offshoot of Egyptian and Assyrian creativity. Karnak is to this day the world's masterpiece of majestic building. The refinement of the goldsmiths' and the jewellers' arts as executed in the cities of Mesopotamia, goes back to the third millennium. By the start of the second it had already spread to Crete and to the Far East. Such skill had the weavers and designers of women's costumes achieved, that the ladies of Minoan Crete and of the 18th Dynasty in Egypt can well be called the best-dressed women in history.

We must turn from this general survey of characteristics of the Epoch to the general pattern of events. By the third millennium B.C. the whole of the eastern Mediterranean was dominated by the Great Mother tradition and colonists were entering into Europe—Iberia, southern France, Malta and Great Britain. In the Far East the Great Spirit tradition was concentrated in the emerging Chinese nation on the banks of tributaries of the Huang Ho. Probably, it was then that the Polynesian and Melanesian travellers were embarking into the Pacific. In North America, the Indians were entering their 'Archaic period' with the articulation of a complex tribal structure. The middle third of the period appears to have been a time of troubles—we have evidence of a discontinuity in the dynasties of Egypt, conflict between northern

and southern China, and the wars of Sargon of Akkad. By 2000 B.C. Crete has risen to a dominant position. It is about the time of Ham-

murabi in Babylon. Civilization flourishes in India, Elam, Syria and China. To the north, just south of the Caucasus, Indo-European peoples infiltrate into the settled communities there. To the south, Egypt is giving full expression to the Creator-Sun-God dogma. The whole region bears the traces of a magnificent time of achievements in art, science and government. Abraham is leading his people into their homeland and the Semitic-speaking peoples throughout South-west Asia are developing their own traditions out of the impact of the great cultures. Babylonia is at the cross roads of the world and her influence is widespread. Even at the time of Akkad there was trade with India, and there may even have been connections with China. Egypt has colonies in the eastern Mediterranean and seems secure in her own region in North Africa.

By 1700 B.C. Sumeria is controlled by the non-Semitic power of the Kassite dynasty—coming from the East—bringing elements of the Hyperborean and the Great Spirit cultures. Egypt has entered one of her 'Intermediate Periods' which are a sign of a time of troubles. Later, about the middle of the second millennium B.C., a remarkable event occurred. This was the sudden destruction of Crete and elements of the entire culture of the eastern Mediterranean. We know that Egypt had been invaded by a mysterious people, the Hyksos, and that Crete had the greatest sea-power the world had yet known. We have Plato's account of Atlantis which almost certainly refers to Crete and the Ionian civilization of the second millennium. The Cretans are credited with some of the greatest technical achievements of the Epoch, such as the making and casting of bronze, the fast dyeing of textiles and the use of the loadstone for navigation. They probably had weapons that we do not know about, for their striking power far exceeded their number. The Cretan power at its height dominated the whole of the Mediterranean, and probably the Mediterranean coast of Europe, until 1447 B.C. In that year a prodigious submarine volcanic eruption in the Island of Santorini wiped the entire fleet and nearly all the population off the face of the earth, devastated their cities and blotted out their history. Only in the last few years has it been realized that these were probably the famous 'Atlanteans' of Plato's *Timaeus* and *Critias*: We have shown elsewhere,* that this almost certainly coincided with the prodigious events of the Exodus described so vividly in Genesis and in the *Ipuwer* papyrus.

* For a detailed discussion of this identification and its connection with the exodus of the Israelites from Egypt, see J. G. Bennett's *Geophysics and Human History, Systematics*, Vol. I, p. 127, 1963.

The reader may be wondering why these events, remarkable enough, and yet a small part of 2,500 years of history, should be given such prominence here. The reason is that they mark a very significant turning point in the maturing of the mind of man.

Two totally different trends were developing in South-west Asia and the Mediterranean: one was represented by Egypt and Crete and the other by Babylon and Lagash. The first was derived from a combination of the Sun-God and Great Mother cultures and the other from a combination of the Saviour-God and Great Spirit cultures. These were predestined to become reconciled and united in Christianity; but in the second millennium before the time of Christ, they stood in open conflict. The technical advantage lay with Crete: then the main centre of activity of the technical groups that had sprung from the Great Mother culture. This had become so strong as to be a threat to all the other groups, and, if we are to believe Plato's account, and if we identify the hated Hyksos of Egyptian history with the Cretans, they were a materialistic and cruel power intent only upon domination.

The destruction of Crete put an end to this threat and restored the Great Mother culture to its proper role of providing a meeting place for the interaction of the other three.

At this point we meet with the extraordinary role of the Children of Israel. According to their own traditions they had come from Mesopotamia and had spent several centuries as rayas in Egypt where they had acquired a form of the Egyptian tri-literal language. Before the sojourn in Egypt they belonged to the Great Spirit culture as witnessed by their use of the word Elohim for the Deity. In Egypt they had adopted their own form of the Sun-God belief in the name of Jahweh. During the Hyksos rule in Egypt, they had taken up and afterwards rejected the Great Mother cult. They were thus the first people in the world to combine notions derived from three out of the four great sources of culture.

Are we to regard the destruction of the Cretan power and the crippling of Egypt, when her conquests under Thothmes III had reached their greatest extension and were threatening the Mesopotamian city states, as a miraculous intervention as Plato seems to suggest and as the Israelites certainly believed? It is more in accordance with our thesis to suppose than the Santorini eruption belonged to the 'predetermined future' and could therefore be foreseen. Those who could tell what was going to happen could act as seeing men among the blind. We may well believe that Moses was a Prophet who was a member of the Psychoteleios Society of his time and could bring off his tremendous coup under the very nose of the most powerful monarch the world had yet known.

Throughout the civilized world forces were at work changing the whole balance of power and the character of states. The mountain tribes and pastoral peoples which surrounded the areas of civilization on every side began to gather strength. There was a remarkable impact of the Indo-Europeans through infiltration and conquest. The Aryan invasion of India took place at about the same time as the exodus from Egypt. Mahenjo-daro and Harrappa fell to people who brought the Vedic tradition with them. The result was a fusion of cultures when they came into contact with the Great Spirit societies influenced from the East. South of the Caucasus mountains, the Mitanni Kingdom (founded about 1450 B.C.) arose out of infiltration of the same cultural groups; wherever they went they brought with them their symbols of the horse and sun.* The deities Indra, Mitra and Varuna were worshipped among the Mitanni and in India, and their names are to be found in writings from the Kassite rule in Babylon. By about 1200 B.C. Thraco-Phrygian tribes had entered into Asia Minor and founded the Phrygian and Mushki kingdoms. But it was in Iran that the Indo-European infiltration was to prove most significant. At the beginning of the first millennium B.C.—almost simultaneously with the Nordic advances into Italy and parts of western Europe—Iranians began to assume power amongst the dispersed states of the Iran Plateau. This resulted in a transformation which was to lead to the Persian empire, destined to make a major contribution to the human mind and play a major role in the invisible reaches of history.

Nevertheless, wherever we turn, we see a decay of the Hemitheandric ideal. Around the twelfth century B.C. the old great civilizations of Egypt and Mesopotamia were losing their social coherence in the rising battle for power. The end of the Bronze Age in the Near East was a dark period, and traces are few and confused. Rameses III (ca. 1198-1166 B.C.), the last of the great Pharaohs, wasted the strength of a declining Egypt in wars against the Achaeans and other rising barbarian forces who overthrew the Mycaenean civilization in Greece. While science, art and religion continued to be practised in the old ways, Babylon went through a decline with the downfall of the Kassite dynasty (ca. 1171 B.C.).

In the East, the great Chinese civilization which had slowly matured

* The famous treatise by Kikkali of Mitanni on the training of horses, which probably dates from the fourteenth century, was written in a language akin to Sanskrit.

Undoubtedly, it was from the Indo-Europeans that the art of horse-breeding was brought to western Asia and eventually spread to Egypt and Babylonia. In northern Europe, the horse-cult —associated, for example, with Freya — persisted into the Christian Era. The sun became the symbol of Mitra the 'god of co-operation'.

over two thousand years in the Yellow River valley was also poisoned. Its association with a single culture had enabled it to build up a social order of extraordinary diversity and yet stability. For millennia, China had maintained its basic confidence in the Spirit Power and the family structure of society. The seizure of power from the Shang dynasty by the barbarian Chous marked the disintegration of the old social and cultural harmony. The collapse was accelerated within the next few centuries by the influx of new agricultural techniques and expansion into the Yangtse valley.

Exoteric history had lost its coherence. Throughout the *oikoumene* the merchant-classes had established their claim to an independent status, but the expansion of commerce was motivated only by the search for gain. The guided exchange of cultural influences was replaced by collisions due to political forces. The contact between the visible priesthood and the hidden groups had become weakened and had everywhere lost its power to revitalize society.

The Iron Age brought about a dramatic revolution in the civilized world. Within a few centuries, techniques were shared from Spain to China. The Celts of western Europe and the Scythians of the Eurasian Steppes were soon to be stimulated by the penetration of material progress. Other events more than offset this advance.

War, revolution, the misery of enslaved and deported populations were the last fruits of an Epoch that had seen the awakening of man to a destiny beyond his present life. Man had begun to see that with his creative mind he could master the material world and even the world of life. He had acquired a new sense of his own value: but all seemed to be threatened by the breakdown of moral values. The sense of sin was vivid enough—and not only among the Israelites—but the power to put things right was lacking.

Yet noble attempts were made to restore man's sense of relationship to the Divine Power. Prophets and sages sought to restore the true relationship between the three levels of society and to base it again upon the sacredness of food and hence agriculture. In the early Hebrew scriptures and the Avestan Gathas, we find allegorical presentations of the secrets of human destiny of incomparable aptness and beauty, but they breathe the spirit of reform rather than that of regeneration. The heroic Epoch was ending and there was nothing to show where or how a new start could be made. The profound piety that had built the temples of Karnak and Luxor in Egypt had given place to the shameless simony of the last dynasties. In India, the sacred rites by which the different Varnas—castes or levels of society—were able to share in the

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experience of creative mind had degenerated into an empty ritualism that had become the prerogative of a professional priesthood. Babylon, the most pious of cities in the second millennium, had yielded its authority to Nineveh, capital of the ruthless Assyrian Empire, whose wickedness still reverberates in the denunciations of the Hebrew prophets. The Prophets of the Captivity addressed themselves ostensibly to Israel, but they were preaching the lesson of the whole of their contemporary world. The exoteric levels of society had let slip the slender thread linking them to the spiritual groups of the esoteric level and were living without purpose and without hope. In the terrible seventh century B.C. the divorce of the mind of man from the soul was almost complete. Not the Jews only, but all mankind was in captivity.

For us, who can look back over the perspective of a hundred generations, the significant events were not those of the political history of cities and empires nor even the technical achievements of the Age of Iron. The enforced transportation of whole populations under the Assyrians and the spread of colonization in the Mediterranean brought about a mutual impact of cultures in which the patterns of the future were to be realized. We approach the dawn of a new Epoch. Cut off from the guidance of the psychoteleios groups, suffering under cruel and power-hungry kings, men were ready to respond to a fresh presentation of human destiny. But the new understanding of human responsibility did not come easily.

We must pass on to the next chapter of our study of the History of Mind, well aware that the immensity of the subject must make our treatment appear ridiculously inadequate. It will appear more so as we enter a period the history of which is contained in a million books and innumerable traces of which meet us at every turn.

Chapter Forty-eight
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17.48.I. The Great Work

We have emphasized the reality of evolutionary progress and even of accelerated progress; but we must not forget that acceleration depends upon the way time is measured. The task to be accomplished has its own time for which acceleration has no meaning. The goal to be attained is in the hyparchic future. The event is in the hyparchic present and it reverberates within the total harmony. These various aspects of the Epoch are united in the Master Idea. In the early stages, awareness of a total Plan for life on the earth was confined to the Demiurgic Intelligences and perhaps was not known to all of these. As we approach nearer to our present moment and as we look towards the

future; we can see a progressive unveiling of the significance of history. As Epoch has succeeded Epoch, each Master Idea has been a little more recognizable to contemporary humanity than the preceding. The Mind of Man grows towards maturity and can respond to new demands and opportunities. Each phase of human history has only a definite duration for its realization. All transformations must take place within that present moment.

Man in his activity, commitment and understanding is not alone on the earthly stage. The pattern of history is created by Intelligences far beyond his own. Man has the special role of coming to understand the part he has to play. He is not to be forever a puppet in the hands of superior forces. It is by human understanding that the higher Intelligences can become effective. By his activity, man provides the field of transformation wherein the realization of the Pattern may be achieved. But it is through his commitment to the Event, that man makes possible the coalescence which establishes it in the Timeless Present. That remains: as one Epoch succeeds another, the reality of man's commitment does not vanish. So, too, the taint of egoism remains in our history—for it is in our very acts of commitment. That is why, as we shall see later, the Redemption of man included an action in the hyparchic past.

Every cycle holds out a promise. On the visible levels there is always failure: the Master Idea is misunderstood and distorted. The Present Moment must continually change; at every stage something new is made

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possible by what man has lived through. He learns responsibility by having to exercise it—however badly. Throughout, he is accompanied—and anticipated in the hyparchic future—by superior Intelligences. The task accomplished is the contribution made by each cycle to the advance of the Great Work.

We must make more explicit the hypothesis of Intelligent Guidance as it applies to the historical period. The Great Work means the creative activity by which the evolution of life on the earth is helped towards the foreordained Plan. When translated into terms of events and history, the goal appears as Destiny and when Destiny is understood as the form of the future, it is to be accepted as a Goal. The pattern for mankind is not wholly beyond our conception, for we can see its traces in the history of the past and its operations in the nature of man and human societies.

We can attempt, at this point, to give an outline of the plan as it would have appeared to an Intelligence that surveyed it at the end of the

the Hemitheandric Epoch. We have seen the slow, but accelerating, evolution of life towards Mind, and recognized that this evolution is inexplicable except upon the hypothesis of Intelligent Guidance; which we expressed in terms of the Demiurgic Powers. We traced the development of mind and saw the evidence that responsibility for human affairs is being transferred by degrees from the Demiurgic Intelligences to man himself. Turning back from history to our excursion into the notion of the Hyparchic Future, we can see that much that is strange and unaccountable in human life, begins to make sense if we suppose that some great Cosmic Purpose requires the development of intelligent, but free, Individualized Beings united in the structure of a total Human Society capable of entertaining purposes and accomplishing tasks, measured not in years, but in millennia. Such Beings require to be endowed with consciousness and creativity, but they cannot form a structured intelligent organization—such as our ideal human society—without the cooperation of the Unitive Energy (E 2) which alone can generate Impartial, Objective Love.

Creativity could be transmitted by the Demiurgic Power because it is inherent in the Demiurgic Nature. Love may operate within the Demiurgic Essence, but not as an inherent attribute that can be transmitted by the kind of fusion that we postulated as having occurred some 35,000 years ago.* The necessity for impartial love has increased progressively through human history and the manner of its transmission is probably the most wonderful episode of all. Without Love, the

* Cf. Chapter 46, Section 17.46.5.

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Foreordained Plan for humanity could not be realized, for Love alone enables man to subordinate his personal creativity to the service of a higher purpose not of his own choosing.

The normal evolution of humanity would no doubt have provided for the contact, at an opportune moment, between the human soul and the Cosmic Individuality, enabling an infusion of Unitive Energy (E 2) to transform the whole race. The 'normal' situation did not and could not arise on account of the taint of egoism. We came earlier to the very important conclusion that egoism is not a private defect to which some or most men are prone by accidents of birth or environmental influences; but a condition in which all men necessarily share by participating in the common Soul-Stuff Pool. By the end of the Hemitheandric Epoch, the Soul-Stuff Pool was already charged with the traces of a thousand generations of experience all having the taint of self-centred egoism foreign to the true nature of man.

This atavistic taint is not an abstract idea that expresses a quality observed in human behaviour; but a substantial condition. If food is poisonous and we discover that this is due to polluted water used in cooking, we do not say that the condition of the food is a matter of

personal taste, but a substantial condition due to the pollution of the water. We must remember that, on our interpretation, all existence is material. Matter is a form of energy, or aggregation of the prime substance hyle. This can be in one of three states: actual, potential or virtual.* According to this view, the very existence of mind and soul of man is drawn from a vast and growing reservoir of energies in the state of virtuality. These energies are complex, ranging from the vital energy (E 7) to the creative energy (E 3) and so spanning the region between living and cosmic states of hyle. The Soul-Stuff Pool is certainly not homogeneous. It varies according to the traces of past experience; but all of it is affected by the tendency towards egoism. This tendency is, however, confined to the soul-stuff: the Personal Individuality is not touched by it. Nevertheless, the Will, residing in the Personal Individuality, depends upon the mind for the exercise of the powers associated with the body. Man's will is not free and egoism intervenes even when the mind wishes to put it aside. The normal evolution of mankind has

* We have somewhat modified the terminology of Vol. I where the three states were described as actual, virtual and sensitive. This is partly to avoid confusion due to the use of 'sensitive' with two meanings, and partly to draw attention to the special property of the hyparchic state which allows acts of freedom by means of the uncommitted state of virtuality. This agrees, moreover, with the use of the concept of virtuality in Chapter 42 in connection with the hyparchic future.

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been obstructed by this disability and the Great Work must take this into account.

The central task of the Great Work is to enable humanity to fulfil its destiny as a creative agent in the Cosmos. The Great Work, during the period we are studying, had to take into account the two-fold problem of assuring the evolutionary progress of the human mind and of liberating the soul-stuff from the taint of egoism. The primary task was fore-ordained for the Demiurgic Intelligences, associated as we may surmise with the Solar System. The secondary task was made necessary by the failure—in part at least willful—of some of the Demiurgic Powers to do what was required of them.* The Demiurgic Intelligences are required, but not compelled, to serve the Great Work. They are not compelled because they are free beings—freedom being a necessary condition of creativity. They were tempted to depart from the plan because they are conscious and consciousness must bring awareness of the imperfection of the world, without necessarily the ability to see its total significance and hence its Tightness.

These powers and these limitations reappear in men whose Demiurgic Nature has been awakened—that is in the two lower groups of Psychoteleios Humanity. These groups when organized for the service of the Great Work are able to/cooperate with the Demiurgic Intelligences and to receive direction from the higher Psychoteleios sub-groups of Prophets and Messengers who are in direct communication with the Hyparchic Future, ** The human intelligences engaged in the Great Work have seldom been known to men and women of the Psychostatic Order except through the results of their intervention. Although their presence in the world is not deliberately disguised, they are not recognized because their activity differs from that of other people only in Hyparchic Regions, which ordinary man cannot perceive. They have appeared as magicians

and soothsayers, as heroes and hemitheandric rulers, as prophets and priests: but, their true nature never becoming apparent, they have soon been transformed into legendary images. In our present day, they are regarded as either wholly mythical, or as ordinary men and women superstitiously endowed by their admirers with super-human attributes.

We shall hold firmly to the hypothesis that, since man was endowed with creativity, there have always been people who could see into the Hyparchic Future and discern the destiny of mankind; and that these people have intervened in history to avert dangers and to make possible

* Cf. Chapter 47 where the notion of 'rebel angels' was re-stated in terms of our conceptual scheme.

** These notions are explained in Chapters 41 and 42.

advances towards the goal of human evolution. These people belong to the Psychoteleios order of society, but they must have a link with the generality of mankind by way of the Psychokinetic groups.

We shall use the term Hidden Directors to designate those who are aware of the purposes pursued in the evolution of mankind and know the action that has to be taken.* We assume that there is some kind of organized structure by which the Hidden Guides cooperate and transmit their influence. We shall call this structure the Hidden Directorate.

The task of the Hidden Directorate is to help mankind to develop both individually and socially to the point at which man can assume responsibility for his destiny and the fulfilment of his mission on the earth. The Hidden Directorate is presumed to have developed out of the groups of Guides and Initiates who took charge of the diffusion from the Four Centres. These in their turn were the descendants of those who established these centres at the beginning of the Great Cycle that started 12,500 years ago and of which about one half has now been completed.

If we postulate the reality of the Great Work, we must allow that it is directed by Intelligences whose time-scale is measured in thousands if not tens of thousands of years. We are to assume, then, that the Hidden Directorate can see ahead and make plans that will take a long time to mature; but we are not to assume that they are supernatural beings able to interfere with the operation of natural laws. This does not mean that they have no powers beyond those of ordinary people. Modern man knows very little about energies finer than the material tetrad, ** and therefore powers that are natural and subject to natural laws can well appear to him as supernatural or perhaps magical. The Hidden Directorate, possessing knowledge of a high order, would be a centre for the transformation and concentration of energies. That such centres have existed and do exist is verifiable by anyone who is willing to undergo the training necessary to recognize the working of 'higher energies'.

We, therefore, regard the reality of Hidden Guides and of the Hidden

* The choice of a non-committal descriptive title is dictated by the need to avoid any preconceived notions as to the structure of the agency that is responsible for directing the Great Work. Terms like 'Inner Circle of Humanity' (P. D. Ouspensky, *In Search of the Miraculous*, p. 310), 'Mystery Centres' (Rudolf Steiner), 'The Hierarchy' (Alice Bailey), 'The Masters' (H. P. Blavatsky, *Secret Doctrine*), have been misunderstood and misused. This is almost tragic as nearly all serious students of History and Of the Origin of Religions have come to regard such notions with suspicion and usually have come to disregard them entirely as the equivalent of space fiction. This makes it more hazardous than it should be, to put forward an interpretation of history that postulates the work of Hidden Guides.

** I.e. The four energies associated with the existence and transformations of non-living entities: heat, directed, cohesive and plastic states of hyle.

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Directorate as more than a conjecture. The reality of the Great Work is another matter. It is not perceived as such by any external marks, but must be inferred from the character of observed events. There is nothing surprising in this. We do not perceive the working of another man's mind, but we infer its presence from two lines of evidence: one is analogy with our own experience of mental processes and the other is comparison of his behaviour with our own. If we could see no evidence of a hidden intelligence working in history, we could dismiss the hypothesis of Hidden Direction as superfluous. But if we see evidences of foresight, purpose and coordinated action, analogous to similar processes in ourselves, and if we find that this action could not originate with, and is not directed by, the visible leaders of mankind, then it is reasonable to draw the conclusion that there are Great Minds at work behind the scene of human history.

These considerations acquire an ever greater significance as we approach our own time. It is by no means easy to recognize the working of Demiurgic Intelligence in contemporary history. The humanistic revolt against providential interpretations of history has been so successful that even religious people have come to accept the view that belief in Providence is no longer permissible in the light—the blinding light! — of scientific discovery. There is a deeper reason why belief in Hidden Direction now seems implausible and out of date. This comes from the very character of the Epoch recently ended. We call it the Megalan-

thropic Epoch because it has been a period dominated by the sense of human greatness.* The idea that mankind is still in need of direction and guidance by a Higher Intelligence seems to be an affront to the grandeur of human nature attested by man's achievements in gaining mastery of the earth. These achievements are, at least in part, attributable to the liberation of man from superstitious fears of nature and nature powers, personified as gods and demons.

According to the concept of history that we have developed in this book, the Demiurgic Intelligences are concerned in human affairs only to the extent that is necessary to ensure progress towards eventual assumption by humanity of complete responsibility for the destiny of all life on the earth. The great progress made during the Hemitheandric Epoch towards the externalization of the Psychokinetic Group made it possible to transfer to Specialists known to the generality of mankind, activities previously undertaken by the Hidden Groups. These included

* We can distinguish the Meganthropic or Great Man notion that dominated the Hemitheandric Epoch from Megalanthropy or belief in the greatness of mankind as a

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technical and economic undertakings which have led to the scientific society of our time. The consequent withdrawal of the hidden groups meant a considerable change; but not their dissolution. We indicate this by adopting the modified terminology of Hidden Directors and the Hidden Directorate. We are now to study the moment of transition to the Megalanthropic Epoch which occurred about 600 B.C.

17.48.2. The Megalanthropic Master Idea

The time was one of great confusion and uncertainty about human destiny. The grand sweep of events with which the Hemitheandric Epoch brought about a sense of total interaction in human life, by the intervention of the Hero or Demigod, had drawn humanity into a complex social structure. The four cultures had not only met, but merged, so that there was an immense variety of beliefs and practices. At the end of the Hemitheandric Epoch, intercourse between peoples was easier than it had ever been. The Assyrians, for all their faults, had opened trade routes by land and sea that brought China and India, Bactria and Arabia, Europe and Africa into economic contact, as is proved by the diffusion of industries and products.

Economic and technical progress were in contrast with political and social degeneration. There was not one political history in the Far East, in India, Central and South-west Asia, in Egypt and the Mediterranean, or in Europe, but many unrelated cycles. Traces have also been left of this time of disintegration in South and Central America. Some cycles were of quite short duration, as in the Far East where China was passing through a time of disintegration. The common pattern of human

existence was the thirst for conquest of the degenerated Hemitheandroi—now demigods only in name—and the sufferings of the common people. We meet the note of disillusionment as we pass from the Hebrew Chronicles inspired by the sense of the Jewish mission, to Homer and Hesiod, or from the Zoroastrian themes of the Avesta to the Mahabharata.

Such were the consequences of confronting mankind with the doctrine of the Superman. Was the Epoch to be accounted a failure, because heroes failed to be heroes? Not at all. The human mind was not ready to grasp the very difficult notion of a Supernatural Reality that is Individual and yet not a self. The Hemitheandric doctrine was a step towards religion. It prepared men to approach ideas that, even today, twenty-five centuries later, are too subtle for the logical mind.

We have, at this point, to distinguish between two major influences that entered human experience after the Hemitheandric Epoch had

ended its cycle. One was the idea of human greatness or Megalanthropy and the other was that of Divine Love manifesting through the Cosmic Individuality. The first was the Master Idea of the New Epoch and the second can best be understood as the counterpart of the events that occurred some twenty-five thousand years ago and involved humanity in the taint of egoism.

The coincidence of two very different actions was no doubt a part of the Great Plan and was foreseen many thousands of years earlier by those who could read the hyparchic future. It complicates our task of interpretation because of the different time-scales involved. It is very obvious in mid-twentieth century that man has responded more rapidly and more successfully to the Megalanthropic Master Idea than to the revelation of Divine Love. We may be inclined—as so many at the present time are—to account for this by accepting the reality of human greatness and denying the reality of Divine Love. The events of the past two thousand years point grimly towards such a conclusion. But if we pause to reflect that a fundamental change in the condition of the human soul-stuff is likely to require many hundreds of generations of men, we shall not be surprised to find that the progress of Mind appears to have outstripped the development of Soul.

The Doctrine of Human Greatness—Megalanthropy—is by no means incompatible with belief in a Great Work to be served. It can be interpreted in two opposing ways. One can be called the existential view for it looks at man only in terms of what he actually is. The other can be called the essential view of Human Destiny, for it refers to man's higher nature and his potential for transformation. The first

way emphasizes the importance of the Mind and the second that of the Soul. Since mind and soul merge in the complete man and become the instrument and vehicle of the Individuality there is a third way of looking at human greatness which is to see man as the bearer of an Individual Will. The first interpretation leads to Humanism, the second to Religion and the third to Synergism or the doctrine that man is destined to cooperate in the Cosmic Plan. Humanism sets human significance in the Domain of Fact. Religion looks towards the Domain of Value. Synergism is equivalent to asserting that man's significance lies in his ability to work and to serve the cosmic purpose in the Domain of Harmony. Yet again, we could say that humanism is interested in time, religion in eternity and synergism in hyparxis: though in each case this would be an over-simplification. Evidently, for a complete understanding, humanism, religion and synergism should be one indivisible structure,

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Historically, both humanism and religion made their appearance at the beginning of the Megalanthropic Epoch. These two trends have developed side by side for two thousand five hundred years; sometimes independently and even in opposition, sometimes in such close agreement that the distinction has been lost to view. Synergism too was openly proclaimed in regions as far apart as Persia and Mexico,* but its implications were beyond the understanding of men accustomed to suppose that only kings could cooperate with the gods.

17.48.3. The Birth of Religion

In its social aspect, religion is a revolt against Hemitheandry. By the seventh century B.C., men had grown sick of their dependence upon Divine Rulers and Priests claiming sole access to the Supernatural World. The great religions of the world appeared and developed—in nearly every case—in a proletariat avid for the assurance of its own significance that religion alone could offer.

By the sixth century, social and cultural conditions in nearly every part of the oikoumene had grown favourable to a new dispensation. The profound unrest that had overtaken the world in the preceding centuries, gave place to a new kind of activity. This was particularly observable in South-West Asia, the central region of the new tradition. Even the Assyrian kings turned to the arts of peace. We owe to Ashur-bani-pal the preservation of priceless records that are still our chief link with the early centuries of the Hemitheandric Epoch. We can detect evidences of intervention by the Hidden Directorate in preparing men's minds for the new dispensation that was soon to come.

When we look at the situation in terms of the change of Epoch, much that would otherwise be incomprehensible begins to fall into place in the total structure of events. At such moments, communication between

previously separated communities is very necessary. The Assyrians played their part in opening new channels of commercial and cultural exchange between East and West and then disappeared from the scene.

By the end of the seventh century the Assyrian Empire had collapsed, and among the scattered communities from China to western Europe during the next four hundred years, we can recognize a subtle new alignment of national histories which halted the reckless, destructive wars that had swept over the whole oikoumene like a plague. Human history, on the political and social levels, was moving into quieter waters than it had known for centuries. By the end of the third century in the Far East, the Ch'in rulers had integrated an empire which under the

* We refer to Zoroaster and the Zapotecan culture of Oaxaca.

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Han was to spread its influence westward to reach the outposts of Persia. In India, kingdoms such as that of Magadha, were bringing about a stability that would lead to the age of the Mauryas.

The core of the oikoumene was dominated for two hundred years by the newly triumphant Persian Empire—which was genuinely theocratic*. The Achaemenidae had a very different attitude towards conquered lands from that of the Assyrian rulers whom amongst others they had displaced. We may well believe that they sought to establish a relationship between the levels of society corresponding to the true Hemitheandric ideal. The establishment of the new Persian Empire and the rise of Greece and Rome were the great events of the West: because we see for the first time rulers who made no Hemitheandric claim. The Great King was the protector of religion and not its head. The same can be said of Servius Tullius (578-534 B.C.), one of the founders of the social structure of the New Epoch.

The transition from the Heroic to the Humanistic Age was made in most parts of the world simultaneously. For the most part the significance of the change was unnoticed. During the sixth century B.C., new voices were heard throughout the inhabited world proclaiming the significance and even the sanctity of the human individual. The announcement took many external forms; but the inner content was unmistakably one and the same. We can understand what happened only in the context of the Great Work. The time had come to open the path of Individualization to all who could take it. But the human soul was

tainted and could not achieve true Individualization unless this obstacle was removed. In the past, this had been done for selected men and women who came into direct contact with the Hidden Directorate. This is called the Way of Initiation and this way was the only one open to men of the Hemitheandric Epoch. The new way was to be freely open to all, and therefore it would have to be revealed. The 'new voices' of the Epoch were the voices of Revelation. But this alone would not accomplish the intended purpose, for knowledge alone will not remove egoism. Therefore, Revelation had to be supplemented by Redemption. For this, again, human understanding had to be prepared, and to this task were allotted the five centuries before the Coming of Christ. Without preparation, there could have been no response to the intervention of the

* Cf. The inscription of Darius (521-486 B.C.). 'This kingship that I hold, from Scythia, which is beyond Soghdiana, to Kush, from India to Sardis, was bestowed on me by Ahura Mazda, the greatest of the Gods.' The Persian Empire was genuinely theocratic only under Cyrus the Great. After Darius, it rapidly degenerated, until Cambyses attempted to restore the Hemitheandric image.

Cosmic Individuality in human history; for no less an Event was already foreseen from the time that the human soul-stuff was first tainted with the ineradicable taint of egoism, the root of which is pride.

The first public utterance of the new theme occurred almost simultaneously in many parts of the world. But there is no doubt that it was foreseen and prepared thousands of years earlier when the four cultures were created. Each of the four cultures made its own necessary and distinctive contribution to the Revelation. A new idea of God had to enter human understanding and it was a conception so profound that the half-matured mind of man could not grasp it in its entirety.*

The Idea of God that begins to emerge from the combination of the four cultures is that of a Cosmic Action proceeding from an Ineffable Source represented figuratively as the Sun which the eye of man cannot look straight into without going blind. The action takes place within the Creation represented by the Great Mother, without whom nothing can be born. The two-fold Instruments of the action are the Word and the Spirit. The Word is represented by the Saviour or Dying God of the Hyperborean culture and the Spirit by the Great Spirit of the Far Eastern culture.

Only by the combination of these four terms in the Unity of the Tetrad do we reach the Cosmic Action which is the Idea of God. The Great Work is a reflection or projection of this Cosmic Action in the sub-totality that we call the History of Mankind.

We shall suppose, then, that the Hidden Directorate, aware of what was to come, brought about a world-wide operation that we may call the 'Opening Chord' of the Revelation. This was accomplished through the simultaneous appearance of Prophets and Messengers who announced

various combinations of the four basic Notions. We shall give a brief summary under each head.

17.48.3.1. THE GREAT MOTHER

The Great Mother cult was associated with the mysteries in Greece, Syria and Egypt; but its chief centre was still in Asia Minor where it came to be associated with the Phrygian Cybele, and underwent a

* We should remind ourselves here of the progression of the systems. Man has not progressed beyond the dyad in his power of thought and expression. The triad and tetrad seem to be comprehensible, but our grasp of them is never wholly concrete. The Reconciling Cosmic Impulse in the triad seems easy to understand, but Gurdjieff was perfectly right in saying that man is still 'Third-force blind!' The Tetrad as a cosmic reality eludes us, although we may very usefully project our notion of the tetrad into situations and by doing so understand them better. This does not mean that we understand the tetrad as it really is.

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profound transformation about 600 B.C. The mystical formula of Union with the Great Mother, repeated in human marriage, was then put into Greek as the tetralogon or four-word symbol *ἔρρηται κακὸν εὖρον ἀμείνων* 'I foreswore the bad and found the better.' The Great Mother culture did not make its active contribution to the Revelation until much later. We may include Pythagoras (560-480 B.C.) among those affiliated to the Great Mother culture, although he was less influenced by it than the Ionian philosophers of his time.

17.48.3.2. THE GREAT SPIRIT

Two great prophets of China, Lao Tzu and Confucius represent two extreme forms of the Great Spirit Culture. Lao Tzu (ca. 604-510 B.C.) taught the pure doctrine of the Spirit Tao as the source and end of all. Confucius (551-479 B.C.) emphasized the social responsibility of those who possess the Spirit Jen or goodness. According to a Taoist legend the two are said to have met in 517 B.C., when the Old Master, then aged 86, gazed upon the young teacher aged 35 and burst into inextinguishable laughter.

In India, the mutual impact of the Great Spirit and Hyperborean Cultures was given form by a number of remarkable teachers. The best known is Gautama Buddha (560-480 B.C.), but the earliest was certainly Kapila the founder of the Sankhya school, the first exponent of the triad.* Mahavira Jain and Makkali Gosala were both reformers whose reactions against the orthodox Hyperborean priesthood were influenced by Great Spirit notions.

All these Prophets and Reformers had, in common, the proclamation of the Open Way. All men could follow Tao or Jen, or enter the Noble Eight-fold path that leads to Buddhahood.

17.48.3.3. THE CREATOR GOD

The Egyptian Hemitheandric Sun-God had been taken over by Horus and played little part in the new dispensation. But the Semitic belief in the One Supreme Lord is wonderfully expressed in passages of the Prophets before the Babylonian Captivity. Thus, Isaiah (45.6 and 7): 'I am Jahweh and there is none else. I form the light and I create darkness. I make peace and I create evil. I am Jahweh that doeth all these things.' But the same Isaiah (40) could proclaim the new message of hope to the human person: 'Ho, everyone that thirsteth come ye to the waters, and he that hath no money come ye buy and eat' The
* Cf. Vol. II, Chapter 27, pp. 87-9.

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Creator God was no longer personified in the Sun-King, but was now the Supreme Being, the Father of all men.

17.48.3.4. THE SAVIOUR GOD

We come last to the earliest and, in many ways, the greatest of the Messengers of the sixth century B.C. This was Zoroaster, or Zarathushtra, whose very existence was uncertain until recently; but who now, largely thanks to the researches of Professor Zaehner, is established as an historical figure who probably lived from 628 to 551 B.C.

It seems that a distinctive addition was made to the tradition by Zoroaster himself in the doctrine of Vohu Manah* or the Good Mind. This is the first statement of the Logos or Word-God belief that associates the Saviour with the Wisdom by which God overcomes the evil spirit Angra Mainyu. Later, this developed into the doctrine of the Saoshyant or Saviour who was to appear at 'the end of time' and complete the work of deliverance. Thus, from the start, Zoroaster gave to the world the first expression of the Salvation Creed, that is the belief that man has failed God by sinning and is in need of redemption. The theme of the Vedic hymns is made into a definite theology for the first time with the perennial struggle between Ahura Mazda the good God and Ahriman the Adversary who seeks to mar His Creation. In the Zoroastrian teaching, man is heeded in the struggle which cannot be won without his help. This notion, so entirely at variance with all Creator-God and Great Spirit beliefs, was evidently the direct precursor of the Christian doctrine.

At a time roughly contemporary with Zarathushtra, a new religion was founded in Mexico by the Zapotec Prophet. So far as this creed has been reconstructed, it attaches primary importance to cycles of 260 years each of which ends with the world in peril of destruction. The Zapotec religion resembles that of Zoroaster in the insistence upon the obligation under which man is placed to help the God in the struggle with the powers of evil.

As with all the other Prophets, Zoroaster proclaimed the right of all men to participate in the Great Work by which salvation is secured. Nevertheless, we must emphasize the eschatological character of Zoroastrian belief. It is not here and now, nor simply at some future time, but 'beyond time' that all will be fulfilled. It is hard to resist the conclusion that Zoroaster and those who understood his teaching had

• Cf. R. C. Zaehner *The Dawn and Twilight of Zoroastrianism*, London, 1961, pp. 40-9, and for the Saviour doctrine, pp. 58-9 and 317-8.

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grasped what we mean by the 'Hyparchic Future' but could find no language to express their intuitions.*

17.48.4. The Drama of Revelation

Such, very briefly, was the astonishing wave of new ideas that spread over the world within one short century and changed the course of human history. Until that time, the ordinary men of the world had no rights. Justice was a gift freely conferred, but also freely withheld, by the semi-divine beings who stood between him and the Supernatural Power: whether Sun-God, King or Priest, whether Chieftain or Shaman. With the new dispensation, justice became a right, and this right was never wholly disregarded, even by the worst tyrants of the Megalanthropic Epoch. There was also a deep but subtle change in the sense of personal destiny. Men had longed for immortality before, but they did not expect to find it except under the protection of the Hero or Priest-King—and he looked for it by way of an action that he could not perform himself. Now, all the prophets, in more or less clear language, repeated the last message of Gautama Buddha: 'Work out your own salvation with diligence.'

Who and what kind of men were these who appeared from nowhere to transform and renew the world? We have called them 'Prophets', without special reference to our eleventh social category. However, there is no doubt that some were not only Prophets, but even Messengers in the sense of being men of the Universal Individuality who were the

bearers of a Message sent out of the Hyparchic Future to create a new Force in the world. But it would be invidious, or require a very detailed examination, to attempt any assessment of the rank of these Messengers and Prophets. The most significant feature of the entire event—apart from its suddenness, contemporaneity and universality—was the unanimity of the central message: the value of the human person. The doctrine of the universal perfectibility of man was new and it was by no means grasped in its full significance. This is the Master Idea of the Megalanthropic Epoch in its original and pure form. From the working out of this idea the modern world has come. It is the foundation of our religions, our societies and politics: even for those who repudiate religion and indeed the very existence of the soul, it still remains as the central dogma of evolutionary progress.

Was the unanimity fortuitous or planned? Tradition tells us that more than one of these Messengers met, but it also usually records disagree-

* Cf. Zaehner, *loc. cit.*, p. 28, 'the Zurvanites raised the principle of Infinite Time above the two principles thereby imposing some kind of unity.'

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ment and the triumph of one over the other. We have here one of the enigmas of the Great Work. The unity and universality of the Work was affirmed by all—though in very different terms—and yet each expression of its nature and operation claimed exclusive validity. We are bound to ask ourselves if such narrowness and prejudice are compatible with our concept of a truly great Being—especially one whom we regard as a Messenger whose Will is united with that of the Universal Individuality. Here we must take account of the special character of the human mind. This wonderful instrument—of all created things that we can study intimately, the most extraordinary, both in its powers and in its potentialities—is nevertheless a limited instrument that works by selecting a very small part of the total presentation in order to form its 'present moment'. Not even the most powerful mind can be aware of enough of the world process to see things as they really are. Above and beyond the mind are the energies of Creativity and Love, and these energies penetrate where mind cannot follow. The great Prophets and Messengers entered the Supernal Realm, not with their minds, but with their higher faculties. They themselves assure us that the 'mind cannot know and the tongue cannot utter' the mysteries of the world beyond. The mind is held within its limitations and for the purpose of action this is not merely unavoidable but a positive advantage. The tragedy of Hamlet is to see too much and so to lose the power to act. The Prophets frequently trembled on the verge of this paralysing vision: but their very greatness consisted in the ability to reject all that did not directly concern their own Message. This rejection was bound to

include rejection— on the mental level—of any Message formulated in terms different from their own.

If once this is grasped; the engima proves to be the key to a deeper understanding. The communicating of the Message is a vital part of the Great Work, but it is not the whole of it. One may, without irreverence, compare the great Sages, Prophets, Messengers of the sixth century B.C. to actors whose task it is to present a dramatic episode to the public. Each must know his own part and express, with all his skill and force, the character he represents: in doing so he may say and do things that are in conflict with the other actors. The very nature of Drama is the experience of hazard and hazard arises out of separation. And yet the unity of the drama must be preserved and this is the work of those who remain behind the scene: the director, the scene shifters, the prompter and even the wardrobe-keepers. These correspond to what we have called the Hidden Directors and their cooperation to the Hidden Directorate.

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The extraordinary Drama was no less than the Birth of Religion.

We may refer to the 'religion of ancient man' or to the 'religions of Egypt under the great Pharaohs' but these were not religions in the true sense of the word: that is the Bond between Man and God. In the Hemitheandric Epoch, there was a link, but not a bond* The message of the New Epoch was the assurance that all men in this visible world are joined by a bond to the invisible Reality and that this bond is personal.

In order to make the message effectual, much had to be done behind the scenes. We can look at the best-known example of this hidden work in the history of the Israelites. Before the captivity in Babylon, the people of Israel were more or less loyal to Jahweh their God and their own Prophets had taught them to believe in the Unique and Supreme status of Jahweh as the Lord of all the worlds. They had no idea of sin except as disobedience to the commandments of Jahweh, and consequently they had no conception of the doctrine of salvation. Jahweh could arbitrarily forgive or punish and, if he chose to forgive, man was washed 'whiter than snow'.** We have cited Isaiah as a Prophet of the Creator God who bestows religion upon His people in his mercy and so 'binds' all the chosen people to himself. But religion so conceived remains Hemitheandric. Jahweh is still pictured as the Sun of Righteousness. The Jews of the Captivity were brought into contact with the Hyperborean culture and the teaching of Zoroaster. The Prophets of the Captivity and especially Ezekiel are aware of the need for a redemp-

tive act: they have learned that man has a part to play in the Divine Plan and that he is not merely the slave of Jahweh from whom nothing is expected but obedience. It may even be argued that the Jews drained the spiritual content of the Zoroastrian and hence of the Hyperborean culture, which then started to decline and never recovered its independent significance.***

And so, we find, written after the captivity, the amazing story of Adam and Eve, and the promise of Redemption. From that time on, the Israelites were expecting the Redeemer and by their expectation made His coming possible. The Redeemer was to be born of a Virgin. This

- No one is sure of the origin of the word religion but it certainly is connected with the idea of a tie or a bond that restores a contact between man and God that has been broken and must be renewed.

** Psalm 51; 7.

*** Cf. Zaehner, loc. cit., p. 171, 'One is tempted to say that all that was vital in Zoroaster's message passed into Christianity through the Jewish exiles, whereas all that was less essential was codified and pigeon-holed by the Sassanian theologians, so that it died of sheer inanition.'

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was already hinted in the prophetic writings, but its full significance belonged to the Great Mother cult and did not enter the Christian tradition through the Jews at all, but by way of the Phrygians in Antioch.

In writing this, we anticipate events by nearly half a millennium: but this is not anachronistic. The whole point is that the Future and its needs were foreseen and prepared for. This was the work of the Hidden Directorate. To demonstrate that this is how it all came about is impossible; but if we can succeed in holding before our attention the extraordinary pattern of events that prepared the world for the Coming of Christ, we cannot escape the conviction that a High Intelligence must have been at work.

This conviction runs counter to the 'causal' interpretation of history which would explain it all as a set of coincidences. It also conflicts with the 'providential' interpretation that postulates a supernatural intervention outside the laws of nature. At first, no one likes the idea of a Hidden Directorate: it is an affront to our sense of human dignity that requires that if anything important is going on we should know about it. Or if not 'we', at least 'they', that is those 'in the know': the leaders of thought, the high priests of religion and all the great ones of the world.

And yet, if one is prepared to look intently and without prejudice at the marvellous coordination of the events that brought the Israelites into contact with each of the four great cultures in turn, one can scarcely avoid the conclusion that they were indeed a chosen people; chosen, perhaps, because they were strong-minded enough to stand up to the tremendous strains and stresses involved in being the crucible in which the four cultures were fused. Unfortunately for the crucible, it could not get itself melted and incorporated in the ingot when it was cast.

We have dwelt at length upon the history of the Jews. But those of the Greeks, the Persians, the Phrygians, the Indians and the Chinese were not less extraordinary. For instance, the concatenation of circumstances that made Buddhism a world religion through the conversion of two powerful monarchs—the grandson of Chandragupta, King Asoka (270 B.C.) and the Greek King, Menander of Sagala (180 B.C.)—and enabled its missionaries to convey some very much needed concepts of man and his nature to all parts of Asia just a century before the time of Christ, is a dramatic story not less amazing than that of the Jews.

The long arm of coincidence will not reach far enough to explain all this and the hypothesis of a Hidden Directorate begins to appear the more plausible the more we look at events from the total perspective

implied in the very notion of the Epoch. Recognition of structure always depends upon seeing things on the right scale. We should not recognize the structure of the human body from a single bone or an isolated organ. We should not recognize the structure of a symphony from the part of a single instrument or from a single bar of the whole score. So both duration and size must be right if we are to see the structure of history. The birth of religion was neither an isolated note nor a moment of time. It was a long-sustained symphonic utterance and its structure cannot be grasped except in its eternal and hyparchic entirety.

The essential character of religion is a personal relationship between the individual human soul and a Divine Person. This type of relationship was unknown to mankind in earlier periods. It is a valid and necessary stage in the evolution of man towards Individuality, but it is only to be understood in the perspective of the Hyparchic Future where human destiny is prepared. Personality is a mode of existence that must be transcended, but not destroyed. It is the state of relatedness that emerges from the dyad and leads into activity. When mankind began to be aware of relatedness as universal, religion was born. This awareness is personal and is associated with the sense of the significance of the human person that characterized the Megalanthropic Epoch. Man in this state must worship a Personal God. Such worship is, however,

liable to turn into the self-worship of the Human Person. We shall have later to return to the Megalanthropic Master Idea and see how it appears when viewed from the side of man's existential nature. Meanwhile we must continue our quest for an understanding of the problem of evil and sin and its resolution in history. This leads us to the moment rightly called 'The Time of Christ'.

17.48.5. The Time of Christ

We have now to interpret in historical terms the suggestion made at the end of Volume II, that the Cosmic Individuality is the Logos or Word of God, the Son of the Father incarnated as Jesus Christ.* We have seen three ways in which the Master Word of the Megalanthropic Epoch can be understood: humanist, religious and synergic. We shall endeavour to show that the irreconcilable conflict between humanist

* Vol. II, p. 339, 'It is hard to resist the conviction that the Incarnation of God in Jesus Christ is a manifestation, on the infinitesimal scale of earthly life, of the total descent of the Cosmic Individuality into the Existing Universe.' Again *ibid.*, 'Upon every planet in every age, the Cosmic Individuality enters life, and so makes it possible for the Self-hood that pervades existence to carry the burden that is beyond its own strength to bear.'

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and religious views is due to the rigidity of both; and ceases when we place the events in their historical setting as a phase in the evolution of humanity necessitated by the sinful taint of the Soul-Stuff Pool.

According to the hypothesis of universal hazard put forward in Vol. II, the Cosmic Individuality alone is able to redeem Existence from the consequences of sin. This redemptive act, which is a sacrifice of Being by involvement in Existence, is not restricted to any time or place. We must, however, suppose that there have been and are what may be called local concentrations of sinfulness. Otherwise, all Existence would be equally and indifferently committed to revolt against the Cosmic Purpose and there would be no reason for it to be redeemed. Our own experience shows that sinfulness is unequally distributed and it must be so throughout the cosmos. The fall of man amounted, then, to an undue concentration of sinfulness: not its catastrophic penetration into a previously sinless state. Once the concentration began, it was bound to increase, for every sinful act makes more sin inevitable.

These considerations make it plain to see that a redemptive act by a non-sinful agent within humanity was necessary and that this act had to be directed towards the specific situation of mankind and not to Existence in general. We thus reach the conclusion that our interpretation

is consistent with the Christian doctrine of the Incarnation and Redemptive sacrifice of the Son of God as an event unique in human history. It is free from the geocentric limitation of the mediaeval doctrine as expressed in, say, St. Ambrose's famous treatise *Cur Dens Homo*, which is no longer meaningful in the light of the cosmological revolution of the present century. We can no longer seriously entertain the notion that this earth is of unique significance for the Creator of the Universe. The vast scale of cosmic events obliges us to treat human history as micro-cosmic: that is as the reproduction upon a very small scale of the Drama of All Existence.

The problem of space-scale is different from that of time-scale. The Christian Doctrine of the unique significance of the Incarnation cannot be sustained unless it can be shown to be reasonable in the light of three thousand million years of earthly history before Christ and two thousand years after. The difficulty is insuperable if we insist upon a religious interpretation—understanding the word 'religion' in the sense of the last section as the personal relationship between man and God of which mankind first became aware only a few centuries before the time Of Christ. The difficulty grows greater with every advance in our knowledge of the Natural Order and is the principal reason why modern Christians have felt obliged to disclaim any literal interpretation of the

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doctrine of the Incarnation and of the Redemptive Death and Resurrection and Ascent into Heaven of Jesus Christ, the Son of God. To replace this central dogma of the Christian faith, they rely upon the inward sanctifying Grace of Christ working in the individual soul and the beauty of the Christian ethic. Such interpretations—and many similar schemes have been proposed by sincere Christians—avoid the historical enigma; but, in doing so, they lose the essential content of the Christian faith.

If Christ is present only in the spirit and has never been otherwise present, we part company with the faith of the Apostles who were, above all, certain that the Son of God came in the flesh* and dwelt among men as a man. Nor can we reconcile an exclusively spiritual Christianity with belief in the evidence of the dual nature of Christ.** It is not going too far to say that unless we can satisfy ourselves that Jesus is both Man and God, we must either abandon reason or not call ourselves Christians.

This is a dilemma that the mediaeval philosophers resolved in their own way for their own time and which we must resolve in our own way for our own time. The scholastic solution required too lofty a view of man and too low a view of the Universe to be tenable in the light of twentieth-century psychology and cosmology. It is an historical dilemma and it must be resolved in accordance with our understanding of history—that is, in terms of the synergic doctrine that man was destined to cooperate in his own creation. We shall return to this theme several times before our task is accomplished.

When we turn to the humanistic interpretation of Christian origins, all seems plain sailing. Nothing is to be believed that cannot be verified by sense perception and preferably by repeatable experiments; and nothing is to be accepted that does not conform to human reason and the world picture of modern science. The Christian doctrine fails to pass either test and is to be relegated to a mere episode in man's progress from nature-worship to nature-mastery. This progress was until recently believed to be the inevitable consequence of natural selection: but now it appears that man may himself have eliminated, by his increasing power of survival, the very instrument of his own evolution. Humanism finds itself confronted with its own dilemma of cause and purpose. Denying the reality of a Creative Purpose, or any aim in existence other than that entertained by man himself, there can be no question of 'sin'. Man may

* John, 1st Epistle 4.3. 'And every spirit that confesseth not that Jesus Christ is come in the flesh is not of God: and this is the spirit of antichrist . . .'

** Ibid., 1.5.9 and 10. 'For this is the witness of God which He hath testified of His Son. He that believeth on the Son of God hath the witness in himself: he that believeth not God, hath made him a liar, because he believeth not the record that God gave of His Son.'

make mistakes from ignorance, immaturity or psychological disturbance, but he cannot sin—for there is no Higher Law by which sin can be recognized. And yet humanists invariably speak as if sin were a reality, treating their own prejudices as the Higher Law that must be obeyed. The truth is that the sinfulness of man is such an unmistakable element in all human experience that, even when it is rejected as illusory, it remains as an unnoticed attitude that colours all our behaviour. This inescapableness of sin makes the Christian doctrine of atonement a necessity and, as we have seen, the need for salvation was realized long before the start of the Megalanthropic Epoch.

The humanistic dilemma has recently been aggravated by the realization that progress is not inevitable. The Marxist doctrine of dialectical materialism is no longer seriously regarded as a guarantee of the limitless perfectibility of human society. The Darwinian doctrine of natural selection even in its modern forms is seen to break down when man is able to prevent the elimination of the unfit. The standstill in human evolution is regarded by humanistic scientists as unavoidable unless man

himself can assume responsibility for his own transformation. But there is no evidence that it is possible for man to do this nor even any clear idea of what it means. Mankind is to make 'progress' towards a goal which man himself does not know, yet which, according to the humanistic view, cannot be known to anyone but man.

The full weight of the fallacy of atheistic humanism is by no means appreciated; but there is, at the present time, a widespread uneasy feeling that the blind are leading the blind. This feeling has led many to ask themselves if it may not be wise to turn back to Christianity and see what the Doctrine of Divine Providence has to offer. This tendency would certainly be much stronger if it could be shown that the anachronisms of Christian teaching are unnecessary to the essential Gospel. But for this, the message must not be watered down and its supernatural character denied. This is why we must carefully re-examine the situation in the light of our theory of Consciously Guided Evolution. We shall have not only to study the origins of Christianity but also the far more delicate problem of Christology: that is the meaning to be given to the statement that the only-begotten Son of God was incarnate as Jesus Christ and died for the salvation of all mankind. We must not forget that this question touches not only the meaning of the 'Will of God', but even more intimately the way we are to understand the 'Person' of Jesus.

Not many people have the gift of religious faith that accepts without doubting the reality of man's relationship to the Unseen God. Nor are

there many who can entirely convince themselves that there is no Wisdom greater than that of man. Those who are neither truly religious nor convinced humanists may ask themselves questions that are not far from the synergic hypothesis that man exists to work for a High Purpose and that he can do so only in cooperation with a Wisdom and a Love infinitely greater than his own. We are concerned in this work with such questions and at this particular stage of our enquiry with their bearing upon the origin of Christianity.

There are two errors that we must try to avoid. We shall call them false hypostatization and naive anthropomorphism. The vice of false hypostatization is the bane of much scientific reasoning. While denying a personal God, a scientist will refer to 'Nature' or 'Time' or 'Life' as if they were all-powerful, omniscient Beings with most of the attributes—except Love—that a theist would ascribe to God. Auguste Comte and others before and after him have tried to create a humanist religion without God; but they invariably hypostatize some 'Principle' that makes the world work and they do so without recognizing or perhaps without acknowledging that the 'Principle' is being

treated as a non-human Intelligence. Such terms as the Vital Urge, Creative Evolution or the Entelechy have gone out of fashion; but the use of other words like 'orthogenesis', or the apparently harmless 'trends' and 'tendencies', are disguised forms of the same fallacy. If any principle of directedness is to be admitted, then we imply purpose and a purpose implies a Person to entertain it. If we deny directedness and purpose as realities, then we must resign ourselves to the alternative of total anarchy and refuse to admit that there is any intelligence anywhere and this rejection must apply to man himself. Thus it turns out that hypostatization cannot be avoided if we wish to make sense of the world: but that the false hypostatization, which asserts that a principle is impersonal and then treats it as a person, has been the cause of a wholly unnecessary alienation of science from religion.

The corresponding theological vice is the naive anthropomorphism which consists in describing the nature and actions of Deity in human terms while at the same time ascribing to God attributes such as infinity, omniscience and omnipotence which cannot possibly be associated with man. For Islamic theologians, whose source is the Qur'an with its passionate rejection of anthropomorphism and its insistence upon the otherness of Allah, the problem should not arise. Yet so strong is the tendency to identify the notion of person with that of human self-hood, that we constantly meet with literal acceptance of the passages of the Qur'an that attribute face, eyes, hands, the seat upon a throne and

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human mental processes to Allah. Even those theologians like Al Ghazali who deny that God has a body, still compare the spiritual nature of God with the spiritual soul of man and retain for God all the attributes of a Being.

We have enlarged upon the difficulties of avoiding anthropomorphism in Islam, as a starting point for our enquiry, because it becomes far harder in Christian theology on account of the doctrine of the Incarnation with which we are immediately concerned. The incarnation of God in the human person of Jesus is significant precisely, and only, if it is not interpreted in anthropomorphic terms. This seems to conflict with passages like John 14 where Jesus assures his disciples that seeing Him, they also see the Father and knowing Him they know the Father. These passages, however, make no sense if we take 'Father' to refer to a Being: but they are quite clear if we understand the Father as Will, e.g., 'I speak not of Myself: but the Father, that dwelleth in Me, he doeth the works'. And even more cogently: 'If a man love me, he will hear my words: and my Father will love him, and we will come unto him and make our abode with him.' This promise can be understood as a transformation of the Will—the union of the Personal Individuality

with the Supreme Will—but not as human deification by fusion of Being.

We have not space for a full discussion of the Christology of God as Will, but will simply state the doctrine as it follows from our investigations in Volume II. Every man has a Personal Individuality and every man born on earth has a Body-Mind complex. The two are incompatible in nature and can be united only if mind is transformed into soul and Self-hood into Individuality. The need for transformation comes partly from the atavistic taint of sin; but even if man were sinless, he would still be subject to the limitation of existence and perfect Union of Will and Being would be impossible. If, however, the Will is not personal but that of the Cosmic Individuality the situation is totally different. The Incarnation of the Cosmic Individuality is possible only in an already perfected body-mind and therefore transformation is unnecessary. The very incompatibility of God-head and Man-hood precludes any process of change. Therefore any doctrine that suggests a development or growth in Jesus misses the essential point.*

* This doctrine is common in theosophical and similar writings. A special form of the doctrine is to treat the Incarnation as having taken place at the Baptism of Jesus and to identify his Divine Nature with the Holy Spirit. All these notions have some element of value but they miss the essential point that the Cosmic Individuality could not Incarnate by stages. The Cosmic Individuality corresponds to our intuition that there must be a Supreme and yet Individual Will beyond all possible existence. There D.U. iv—13*

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The thesis that God Incarnates as Pure Will is open to the objection that the Will of God must be present everywhere and in everything. The Supreme Affirmative Will is beyond all determination and such terms as 'present' or 'absent' have no kind of meaning as applied to it. The same is true for all the Cosmic Impulses and is equivalent to the proposition that World III is outside history. It is not only outside history; but free from every other limitation of existence.

This suggests a key to the theological interpretation of the Cosmic Individuality. To enter existence the Supreme Will must individualize. This corresponds to the Christian dogma that the Son was 'begotten before all worlds'. The Son is the Cosmic Individuality and does indeed enter all Existence to redeem it; but does not in general do so historic-

ally. The historical Incarnation is necessitated only by the special circumstances of man's sinfulness. The distinction between the three conditions of the Cosmic Individuality: firstly, the Unbegotten Cosmic Impulse, secondly, the Begotten Son of God, and thirdly, the Incarnated Christ, is totally necessary for our understanding of the historical event we are about to study.

The situation that confronts us with the awakening of man to the value of the human person was the inevitable consequence of man's original sin. Man could not escape from temptation because the rebel Demiurgic Will had become the slave of its own revolt and had—and still has—no power to do otherwise than will the downfall of mankind. Secondly, the human mind-stuff, now become soul-stuff and therefore impregnated with Self-hood, was tainted—though not equally—with sin. This condition is a state of being and can be represented as a tetrad. The activity could not change its own nature. In other words, there was no way for man to be freed from sin except by ceasing to exist. This explains why the doctrine of Liberation preached by the Buddhist missionaries of the first century B.C. appealed to a world burdened with the dawning realization that man's weakness lay within himself and not in the power of Nature outside him. The doctrine that all existence is suffering was echoed in Stoic philosophy of the same period and even communicated itself to the writers of the prophetic Wisdom literature of the Hebrews.

The time was ripe for an Intervention that would not have been possible at any earlier moment. If we accept the theory of cycles, we

cannot be a period of time when such a will is partly present and partly absent for this would imply division of the supremely indivisible. Therefore, if we are to accept the Incarnation at all, it must coincide with the moment of conception in the womb of the Blessed Virgin Mary.

note that 12-13,000 years had passed since the last major action that had inaugurated the Four Cultures. These had now met and their mutual action had led to the expectation of a new Dispensation. We may suppose that the Hidden Directorate was well aware of the times and seasons and also knew that the Event that was being prepared was beyond the power of human or even Demiurgic Intelligence to understand. Not even the highest concentration of Creative Energy could restore to humanity the essence nature that had been forfeited.

The Event was beyond understanding, chiefly because it belongs to the Realm of Impossibility that lies outside Existence itself. To unmake what had been made and to redeem mankind, an act of Will was needed that would not destroy Existence or even the smallest part of it.* Within the empty places of Existence a new power was to work and this was to be the Unitive Energy (E 2) or the Power of Love concentrated within a living man. The Unitive Energy is not concentrated by the Demiurgic Power and did not enter the human soul-stuff together with creativity.

It has been said that Love entered the soul-stuff of humanity with the Incarnation. This is a very profound truth and when it is better understood we can grasp the character of the Event. It is not to say that there was no love before the time of Christ: the Incarnation being hyparchic, its effect would be felt in all history. Nevertheless, it is very noticeable that the significance of love did not penetrate into the human mind-stuff until the time of Christ. This can be noticed in non-Christian traditions such as Buddhism. All Buddhist texts earlier than the first century a.d. emphasize the ideas of causality and liberation, but not of compassion and redemption.** The same is true of the Hebrew Scriptures which, with one notable exception, never ascribe love to God, but do require it of man.*** Nevertheless, the prophets foresee the coming Redemption and in this they differ from their Buddhist and Hindu contemporaries.

The concentration of the Energy of Love is not the same as the

* Thus Jesus (Matt. 5. 17), 'I am not come to destroy but to fulfill.'

** Late pre-Christian texts such as the Nine Sanskrit Dharmas never refer to Love or even compassion. The Saddharma-pundarika is a good illustration. Cf. Chapter 14, describing the Bodhisattvas of the future: it refers only to docility, obedience and libera-

tion. There is no sign that they were moved by love of humanity. In Mahayana texts of post-Christian date the compassion of the Buddhas is strongly emphasized.

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commentators are probably wrong in ascribing this to external imitation. The reality is deeper and far more significant.

} The exception is, of course, Hosea, the 'prophet of love'. But the love of Jahweh for Israel is by no means the universal love of God for all His Creation: 'I will love them freely for mine' (14: 4).

Incarnation, nor could it be effectual without the Redemptive Sacrifice.*

We should, therefore, distinguish between the preparatory activity and the Incarnation. The first was the work of the Hidden Directorate and the second an Act of Will whereby the Cosmic Individuality in an unique manner entered Existence in time and place.

The preparatory work can be seen in the historical traces and it was totally necessary. Without preparation, it would not be possible to bring enormous energies into play without disturbing the natural order. A very remarkable feature of the Origin of Christianity is that it is placed firmly within an historical context by those who recorded it in the Gospels. The insistence upon the Event being the fulfilment of prophecy is not, as usually thought, in the hope of overcoming Jewish scruples,**

but to reassure those who were aware that the Event could not be authentic, unless it had been foreseen and prepared long in advance.***

We have abundant evidence of preparation: though never complete in any one place. The Hebrew scriptures point to the Messiah and even to the Virgin birth, but less clearly to the death and resurrection of the Chosen One. The God who dies to save mankind and rises again in glory is a common theme of the mysteries in the centuries before Christ. The Perfected Man rejected and done to death was prefigured in Socrates and others. We have seen how these themes can be traced back to the origins of the Four Cultures; but it was not until the second and first centuries that they began to create a climate of thought that would make possible the acceptance of the incredible doctrine of the Incarnation and the foundation of Christianity.

The complex pattern of ideas and actions can scarcely have emerged fortuitously as a result of unconnected lines of causal actualization; but bears rather clear signs that High Intelligences were at work behind the scenes.

We should distinguish these fields of action that also determine three phases of the Event. The first is that which we have just been considering. This was the creation in the minds of people in S.W. Asia, N.E. Africa and S.E. Europe of a pre-disposition to accept the Christian faith. This was a complex action, for it had to combine the very ancient tradition of the Saviour God, which we have traced back to the Hyper-

* Cf. Hosea 14, where the love of God can return to Israel only after the chosen people have been humbled and repented.

** This is evident in Romans 15: 8-12, where St. Paul is at pains to convince the Gentiles that the prophecies concerning Christ included them also.

*** It was: *propter veritatem Dei ad confirmandum promissiones patrum* — 'because the Truthfulness of God requires that the promise made to the first men must needs be fulfilled.'

borean Culture, with the new notions of the value of the human person. It was also necessary to change, in a very fundamental way, men's attitude to time. The expectation of a better future was almost wholly absent from men's minds in the first millennium B.C.; with the one exception of the people of Israel. The promised Messiah was to inaugurate a new world. This expectation was the most important exoteric notion connected with the Event and it was no doubt for this reason that it was implanted in the people among whom and of whose race Christ

was to be born. They alone of the contemporary cultures were able to see beyond their present moment to the significance of the future.

On the other hand, the notion that the Messiah was to be God Himself was unthinkable. Nothing in the Jewish scriptures had prepared their minds for such a revolutionary doctrine and when Christ came they could accept Him as Prophet or Messiah, but not as the Son of God.

For the Greeks, the Incarnation presented no special problem. Nor was the Dying God unfamiliar in Syria, Egypt, Greece or Rome. The fundamental doctrine of Redemption by the Saviour God was already the heritage of the Indo-Europeans.

The doctrine of the birth from a Virgin had been foreshadowed in the Great Mother Culture and played a vital part in fixing the literal truth of the Incarnation of God as Man in the minds of the Eastern Christians. Similarly, the Great Spirit Culture predisposed men's minds to accept the miraculous gifts of the Holy Spirit and to accept Its role in the Incarnation.

Thus, in a marvellous manner, all the elements of the Christian faith were already present in the human soul-stuff, but they could not coalesce until the Event itself was realized. Christ must come in the flesh, God and Man, and thereby confound all who clung to one of the elements and rejected the others.

The coalescence required the working of the Unitive Energy. The concentration of this energy was the second or mesoteric field of action. This work by its very nature does not leave traces in the historical record. We have no direct evidence of its operations during the pre-Christian Era. There is the slenderest of indications in the strange story of Matthew 2 of the Wise Men who came from the East after the birth of Jesus. The suggestion that the Hidden Directorate was concerned to make a direct contact with Jesus on the physical plane has often been put forward and it fits our general thesis that the concentration of higher energies had to be undertaken by specially prepared people. The one certainty is that from this time, men began to connect Love with God and with the Divine Purpose for mankind as a whole. The unitive energy

once liberated brought about the coalescence of the diverse and seemingly incompatible doctrines out of which the Christian faith was forged.

The third field of action was entered with the Annunciation and the dialogue between Mary and Gabriel. This was the esoteric element that runs through the Gospel story. We must pay special attention at this point, to the eschatology of the gospels. It cannot be doubted that Jesus

preached the Gospel of the Kingdom and that He assured his followers the Kingdom was 'at hand'. The difficulty of reconciling this teaching with the actual course of events is well known.* It cannot be ignored and it cannot be explained away. This should not occasion any surprise to us who have seen that the temporal future and the hyparchic future are distinct modes of transcending the present moment. Reading the Gospel narrative in the light of this distinction, everything falls into place. Jesus in all his references to the Kingdom of God is concerned with the Hyparchic Future and not with the temporal or predetermined future.

The distinction is important for the entire Gospel and not for the eschatology alone. The Annunciation refers to the Hyparchic Present that unifies the entire Event and connects it with the past and future of the human race. The fiat mihi spoken by Mary at that moment is rightly taken to have made possible the transformation of human nature. The doctrine of the Immaculate Conception is not to be interpreted as implying that the soul of Mary by its purity was non-human, but that it was drawn from the hyparchic past before sin entered. Thus the Immaculate Conception connects with the first human soul as the Annunciation connects with the final purpose of the creation of man.

There is one act of Will that is unrestricted by the condition of temporal succession. This act is manifested in time as complex, uncertain and dramatic. In hyparxis, it is single and complete—the Divine Decree that mankind should be redeemed.

When the Act is transferred into time, misunderstanding is inevitable and the Gospel narrative emphasizes the inability of even the nearest disciples to understand. Jesus warns His disciples that He must go into the future and prepare a place for them. His utterance makes perfect sense in terms of the hyparchic future and none at all in terms of the temporal, predetermined future. His kingdom is 'not of this world' of

* Cf. Albert Schweitzer's *The Quest of the Historical Jesus*, 2nd Edn., 1911, and *The Mystery of the Kingdom of God*, London, 1925. It is weakly treated by many Christian theologians. Cf. Abbot Anscar Vonier in *The Teaching of the Catholic Church*, London, 1952, p. 1138. 'There is in all these passages ... a blending of the near future and the mysteriously remote future which is truly unparalleled.' The author fails to explain what this blending could possibly signify.

time and temporal actualization. Where then is it? All are bewildered, from Pilate to Peter—from worldling to the rock on which the Church

is to be built—all are equally at sea until Pentecost, when the hyparchic barrier is to be removed and the providential design launched in time and space.

The Kingdom of God was not to materialize in time and space. It is the scene of an action. Not only is the Risen Lord to prepare a place; but the disciples have roles to play. They are to 'sit on twelve thrones judging the tribes of Israel'. The apparent dilemma of the early parousia, promised by God and yet unrealized, comes from confusing future time with the Hyparchic Future. The parousia cannot be realized in the predetermined future, which will never be ready for it; but in the Creative Future from which it has, does and always will act upon every Present Moment.

We could go so far as to say that the interpretation of the Christian faith in terms of the four determining conditions seems to be the only way in which it can be reconciled with experience. The three domains or phases of the Event—the exoteric or functional, the mesoteric or transformational and the esoteric or volitional correspond to the three orders of society. They represent, therefore, a very significant stage in human evolution when the Unitive Energy first began to link the social orders in a relationship of mutual love. This is very strikingly illustrated in the Acts of the Apostles. When the Christian faith spread, it reached all strata of society, but especially the lowest and the highest. The Unitive Energy was manifested over a period of three centuries in the incredible feats of the Christian saints and martyrs.

We can touch only briefly upon the Life and Passion of Jesus. The Incarnation was accompanied by an unprecedented concentration of Unitive Energy. This makes it impossible to apply ordinary rules of energy transformation to the Event. The miracles of Jesus as recorded in the Gospels are all such as would be possible without violating the laws of existence. The parables of the Kingdom all make sense in terms of the Hyparchic Present and Future. The Last Supper can be seen as the concentration of Love and its transmission to the disciples to enable them to participate in the Resurrection.

By the Crucifixion Christ disappears from the temporal present moment and re-enters the Hyparchic State. The descent into Hell, though of doubtful scriptural authority, was accepted by the early Church as can be seen from the Didaskalia Apostolorum which declares that Christ descendit in infernos in order to give the good news to Abraham, Isaac and the prophets and so ensure their resurrection. This

doctrine, which makes little sense in terms of any view that places Hell in the present moment, fits very well with that of the Hyparchic Past that can be changed. We should even regard it as necessary that the Redemptive Act should include an intervention in the past as well as in the present and future.

The New Testament books and the patristic writings leave us in no doubt that in the exoteric domain, that is visible history, the Resurrection of Jesus was the decisive factor in establishing the faith. All agree in insisting upon the bodily appearance of Jesus to the women and to the disciples, but not to the people of Jerusalem at large. We must see if the accounts can be reconciled with our interpretation. Since this is a crucial matter, we must examine it carefully.

The accounts in the four gospels agree upon several points.

1. The women saw Him first but did not recognize Him.
2. The disciples—e.g., on the road to Emmaus—did not recognize Him until He showed by a gesture who He was.
3. The presence of the material body of Jesus impressed the disciples above all else.
4. None saw Him but those who loved Him.
5. He ascended into heaven and was seen no more.

Acceptance of the main elements of the narrative as historical truth has always been regarded as necessary for a believing Christian. Since it seems to contradict the laws of physics and biology; its literal truth is denied by non-believers and also by many who claim to remain Christians.

It is not hard to see how the literal interpretation can be retained and even strengthened. The Resurrection takes place in the Hyparchic Present shared by Jesus and those united with him in Love. The Hyparchic Present varies in extent and duration according to the degree of integration of the Beings present. Since that of Jesus was incomparably greater than those of the women and the disciples, his comings and goings would be incomprehensible to them. They could Perceive Him to the extent that He chose that they should.* The Presence was fully substantial, the body was a physical body, and it was in that place and at that time. Nevertheless, only those able to perceive the hyparchic depth could participate. The final transition into the Hyparchic Future would seem like a movement in space.**

The interpretation here given is significant only if we agree to accept the Gospel narratives as factual accounts of events reported by those who

- The gospels tell us that the power to be seen or not seen was with him during his ministry and particularly in the last period.

** We saw in Vol. I that action in the sixth dimension appears as rotation in space.

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were actually present. Subject to this proviso, it can be said that in removing the objection to a literal acceptance of the Christian dogma of the Resurrection, the concept of Hyparchic Present and Future has shown itself to have an extraordinary integrative power.

We leave the story with the final Event at Pentecost. This is to be understood as an influx of the Unitive Energy that transformed the disciples into men of Love, Authority and Power. The Christian doctrine tells us that the Holy Spirit is the manifestation of God as Love. We have, then, once again a consistent interpretation of what appears to be a mystery or a myth.

The final point concerns the Redemption of Mankind. It was left to Witnesses and Initiates such as St. Paul and St. John to proclaim the deeper significance of the Mission of Jesus. The first reaction of the disciples was to act as we are shown in the Acts of the Apostles. Only when their action had brought the new force of Christian faith into contact with the Syrian and Grecian traditions were all the elements integrated into the supreme doctrine of the Incarnation. The ancient hope of salvation that had taken so many forms over the preceding Epochs was at length to be broadened and deepened to include the souls of all mankind. This must refer to the Soul-Stuff Pool which is the common destination of all selves not integrated with their own Personal Individuality.

We must now go forward passing rapidly through the three centuries up to the adoption of Christianity as the State religion of the Roman Empire in a.d. 323.

17.48.6. The Missing Elements

It has been said that Christianity teaches us that we are saved, and by what means we are saved and it calls upon us to live the life of salvation; but it does not teach us how to do it. We are taught that salvation is by faith and that the works of faith are not ordinary works, but we are not shown how to perform them. Again, and more bitterly, it is said that Christianity is the religion of Love: but it has not taught men how to love.

Almost from the first, the Christian Church has looked for help outside itself. It looked to Judaism for its past, to Rome for its institutions, to Greece for its ethic, to the Arabs for its metaphysics and to the

Persians for its spiritual techniques. It never discovered an adequate anthropology and its teachings about man and his nature have been inadequate and misleading.* Its ethic is based upon a false psychology

* For example, no one can be sure if Christianity holds that man is a two-natured being compounded of body and soul; or a three-natured being body, soul and spirit.

according to which man is at all times responsible for his actions. And yet it also holds that man can do no good thing of himself. It has never decided between Augustine and Pelagius. The consequences of inadequate anthropology and ignorance of spiritual techniques have come near to being disastrous for mankind.

Christian theology is the most daring and wonderful attempt man has ever made to express to himself the Nature of God and His works; but even this suffers from serious defects. There has been an excessive emphasis upon the Second Person of the Trinity with the result that the Fatherhood of God is treated lightly and with a distressing anthropomorphism. Most serious of all, perhaps, is the inadequacy of the theology of the Holy Spirit. And yet it is precisely the Holy Spirit whose Mission was and is concerned with the how of the Christian life.

How did these deficiencies creep into a religion founded by God Himself and derived from the greatest Event in the history of man? It seems that the connection between the Church and the Hidden Directorate was broken at the time of Constantine the Great. The Council of Ephesus rejected advances from those of the East Syrian Church who were in touch with the Hidden Directors. This is not to say that Nestorius was right and Cyril wrong—at least not the 'Nestorius' in which the Church would have us believe. The events that occurred at the beginning of the fifth century are seen today in a distorted perspective and to understand them we should need to delve into the early history of the Assyrian and Armenian Churches. It might then appear that practical knowledge of great importance was lost to the Church at the very moment when its political triumph made it most necessary to strengthen its spiritual armoury.

Where was this practical knowledge? It was certainly available in Buddhism as we can see from the profound anthropology and psychology of the Pali Pitakas and the early Sanskrit texts. It was also available in the authentic Zoroastrian tradition—though not in the debased Mithraism of the Roman Empire. It was known in China and Turkestan as we can see from Mencius and Chuang Tzu.

In a word, practical knowledge of the working of the Spirit was available in those regions where the Great Spirit Culture had been

developed. The religions of the East have been, as a whole, far stronger in their anthropology and psychology than the religions of the West.*

* An important exception is the Sufi psychology developed by the Arabs in Spain and by the Persian schools in Baghdad. These schools are certainly Western in our sense, and they influenced European metaphysics and natural science: strangely enough, their psychology was ignored.

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It is also possible that some link was broken at the time of the destruction of Jerusalem in a.d. 70. The mother church of Jerusalem disappeared so suddenly and completely that the massacres alone cannot account for it. Many Jews escaped to Alexandria and it seems that some early Christians were Zealots who elected to fight to the death in the hills. It is more probable that they obeyed the warning of Jesus that when the abomination of desolation was seen, the elect were to disappear from view. It is even likely that many migrated to the East; less to escape from the sacrilegious Roman legions, than to find the Hidden Directors they knew of in the East.

We must remember that at the time of the diaspora, the Synoptic Gospels were already being prepared and that they were constructed to project a definite Image of Jesus, of His Ministry and of His Teaching that would make it possible for Christianity to establish itself in the West. Once this was done, the profounder message of the Johannine gospel and the Apocalypse was sent out into the world. None of this was accidental. They are evidence that the origins of Christianity were beyond human understanding and had to be brought by stages within reach of those whose eyes had not been opened.

When Christ was resurrected in the flesh, only a handful of people—the Virgin Mary, the twelve Apostles and two or three women—knew what was really happening. They were enabled to see into the Hyparchic Future and understand the 'mysteries of the Kingdom of Heaven'. The puzzling eschatology of the Gospels was no puzzle to them, for they could see that they were assured of a totally different state of existence. The Resurrection and the Ascension were direct evidence to them of the reality of the Kingdom of God that we have assigned to the Hyparchic Future. But this could not be proclaimed to the world for there were no modes of thought, no language, no symbolism, by which it could be grasped by the mind or communicated to others.

Only those who were the intimate and loving companions of Jesus could know who He was and where He had gone. They had to 'bear witness', but only to what they had 'seen or heard'—the resurrection and the preaching of the Kingdom—they could not bear witness to what transcended sight and hearing and even understanding. They had

been made aware of a Reality beyond Existence itself, and this was unspeakable.

This confronted those who knew with a special task, which was to create an Image of Christ and His Mission that the world could picture and take hold of. The image was, therefore, of necessity both anthropomorphic and eschatological. The 'Second Coming' was to be the

Son of Man in Glory at a moment of future time. Those who had seen knew that He had already come again and that the Hyparchic Future was near at hand. Because they saw, as Stephen saw, Martyrdom was a welcome, because an early, entry into that State. But martyrdom is an action and it creates a new element in Existence. The confessors and martyrs of the first seven generations not only created but gave substance to the Image that is communicated in the Gospels and other documents of the New Testament. We can see them at work through the Epistles of St. Paul and St. Clement.

Those who had direct experience were not concerned in knowing how they had come to it. So they ignored the psychological questions: 'What in man can see and know the Truth?' and, 'How is it to be awakened?' They had been awakened by direct contact and did not sufficiently realize that future generations would have to be brought to that state by some other means.

If we compare this with the experience of the early Buddhists, we can see how for them the need for techniques was paramount. There was no contact comparable to that of the early Christians and if they were to be transformed, they had to work. All early Buddhist texts agree on this point; insisting on it perhaps more than did the Buddha himself.

Nevertheless, even after the Church's compromise with the Empire, the need for personal transformation was not forgotten; but techniques of transformation were developed, not in Rome or Byzantium but in North Africa and Syria among those extraordinary men we call the Desert Fathers. It is likely that the renewal came from the Hidden Directors, but was manifested in the personal experience of men inspired by the Holy Spirit. An exception was St. Benedict (a.d. 480-547) whose life and teaching show that he was directly conscious of the Hyparchic Future and aware of the immediate Presence of God. In the next generation, the necessity for spiritual techniques was again brought home to the Church by one of his monks, Saint Gregory the Great (a.d. 540-604): but the techniques available were still not psychologically adequate.

If we turn our attention for a moment to the Far East we see Buddhism lost in metaphysical speculation and the practice of techniques that had lost their transforming power. Then came a new action attributed to Hui Neng (a.d. 638-713). A verse attributed to the Patriarch Bodhidharma, the Apostle to China, sums up the new dispensation, which through the Mahayana was to give rise to Zen Buddhism that attracts so much interest in our time.

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'A special transmission outside the scriptures;

No dependence upon words and letters;

Direct pointing at the soul of man;

Seeing into one's own nature and the attainment of Buddhahood.'

Within the Sassanian Empire, a new voice had been heard. Mani, a Persian from Babylon, came forward in a.d. 241 to announce a creed and a way of life designed to reconcile the opposing forces of zealous Christianity and the rigid Zoroastrianism of the Persian state. Though the founder was soon to be executed, Manichaeism continued in Babylon—to influence Rome—in Khurasan, and in Samarkand, whence it reached into eastern Turkestan and China.

During these centuries, the world was in confusion. It seems as if the Hidden Directorate was withdrawing its guidance to test man's capacity for understanding and responsibility. Then, in the seventh century came the remarkable and unforeseeable transformation brought about by the rise of Islam. This was one of the innumerable unexpectednesses that characterize true history. It was so unforeseeable that even after the Event had occurred and the Prophet had returned in triumph to Mecca (a.d. 630), the surrounding world—Christian, Mithraic, Zoroastrian, Buddhist and Vedic—had no inkling of the immense force that had been released which was soon to transform the world scene.

It is sometimes said that there is no mystery in Islam. We have detailed 'lives' of the prophet and we have the Qur'an preserved, reputedly verbatim as it was first uttered. There are, however, no Islamic documents older than a century after the death of Muhammad. The Sirah of ibn Ishaq was composed in Baghdad for the Abbasid Caliph al Mansur, at least a hundred and twenty-five years after the death of the Prophet—and much of it has been lost or tampered with. The commonly cited works of ibn Hisham and Tabari were written two and three hundred years after the events they chronicle.

All these accounts have a political bias and depict Muhammad as an astute politician albeit a deeply religious man. The subsequent spread of Islam became an Arab war of conquest quite opposed to the teaching of the Qur'an. The transcendental, and indeed sublime, character of the new world religion only became apparent when it had conquered Persia and was taken captive by the Persian mystical genius.

How did it all happen? According to ibn Ishaq, Muhammad was born in a.d. 570 the son of an Arab notable of Mecca, Qasim al Tihami who died before his birth. His mother-dying in his sixth year, his uncle Abu Talib became his guardian and eventually his protector. Muham-

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mad was in early youth a shepherd, and later became a caravan leader who performed his duties so scrupulously as to win for him the title of Muhammad-al-Amin; that is, the Faithful. His first marriage at the age of twenty-seven was with a wealthy widow, Khadidja, fifteen years his senior, who bore him two sons and four daughters. Traditions agree that, until the age of forty Muhammad was known as an honest trader who frequently went alone into the hills surrounding Mecca to pray and to meditate, and that he was influenced by the Harrifs—a group of Arabs who are claimed to have returned to the pure monotheism of Abraham.

His first mystical experience occurred on Mount Hira about the year a.d. 610, five hundred and eighty years after Jesus began to preach and almost exactly twice that length of time after the illumination of Gautama Buddha. He was terrified by the experience, but being comforted and encouraged by Khadidja to believe that he had indeed received the Divine Afflatus and the mission of Prophet, he began to preach the simple message 'God is One and He alone is to be worshipped'. After several years, he had succeeded in converting only a handful of men, mostly slaves or intimate friends. The Meccans, jealous for the reputation of the Kaaba as a centre of pilgrimage for all the Hedjaz, were at first contemptuous and later openly hostile. Soon after the revelation on Mount Hira, Muhammad began to receive trance communications which he uttered aloud. A doubtful tradition, based on a phrase in the Qur'an, holds that he wrapped himself in a blanket before each revelation. The entire Qur'an was revealed in this way over a period of some twenty years.

The later history is better known—repeated failures to win support in Mecca; bitter persecution of his followers, some of whom fled to

Abyssinia; an abortive visit to Taif from which he barely escaped with his life; and, finally, an invitation to go to Yathrib to mediate between opposing factions. The Hedjira in September a.d. 622 has been taken as dating the Islamic Era. Yathrib was renamed Medina-al-Muneverra, the Enlightened City. After driving out or exterminating the Jews of Medina, and creating an army of his own followers and Arab tribes hostile to Mecca, he finally returned in triumph to his native city and began the military operations that made him, by the time of his death on June 8th, a.d. 632—the thirteenth day of the third month in the eleventh year of the Hedjira—the recognized chief power in Northern Arabia.

We may well ask how, from such a sequence of events, a new world religion has arisen and spread more rapidly than any in human history.

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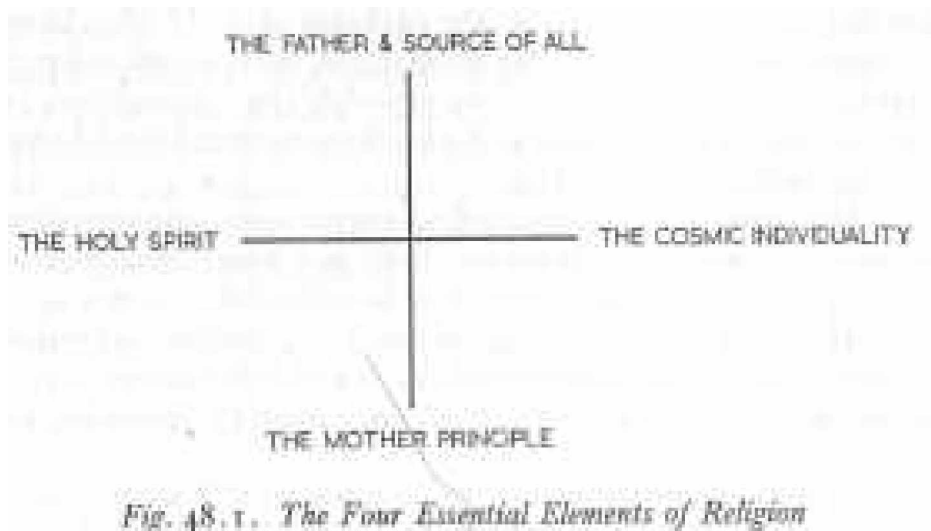
Within a few generations after the death of Muhammad, the Shahada or declaration of faith; 'I bear witness that none is to be obeyed but Allah. I bear witness that Muhammad is His servant and His prophet', would be heard from Spain and North Africa to India and China.

The exoteric situation is plain for all to see. Muhammad showed a rare genius in his choice of 'Companions'. These able men were also wholly convinced that the sole purpose of their existence was to serve Allah by spreading the faith. Abu Bakr and Omar his successors in authority, Khalid the military leader, Othman and Ali his sons-in-law were men of great ability whose qualities exactly suited the roles they were called upon to fill. They continued the tradition of social reform so successfully that, even today, the observer who first encounters a true Islamic society is impressed by its freedom from the conflicts of sects, classes and races that have been such distressing features of Christian communities.

For his followers, Muhammad is the supreme example of the Perfect Individual whose will is wholly surrendered to the Will of God. His religion is closer to the Creator God Tradition than to any other. He tried to adjust himself to both Judaism and Christianity and even to the Great Mother Culture which was dominant in Mecca.*

It seems that Islam was inspired by the need to redress the balance between the four essential elements of religion:

* The original of Surat liii, 19—23, is believed to have approved the veneration of at-Lat al-Uzza and Manat. In any case, Surat xvii, 75: 'Verily, they had well nigh beguiled thee from what We revealed to thee . . . ' makes it clear that he had been tempted to compromise over the Meccan Mother Goddesses.



which had been distorted by the almost exclusive emphasis of Christendom in the seventh century upon the role of Christ and the insistence upon the equality of the Persons of the Blessed Trinity.*

We may surmise, but certainly cannot prove, that the rise and spread of Islam was no accident, but a necessary completion of the Era of Revelation that had been inaugurated 1,200 years earlier by Zoroaster and Gautama.

As we look back over this wonderful period we can see how its significance centres upon the Energy of Love. Just as creativity had entered thirty-five thousand years earlier to raise mind into soul, so now the intervention of the Cosmic Individuality which brought the human soul-stuff into direct contact with the Power of Love or the Unitive Energy (E 2) was producing its results slowly and indeed imperceptibly. So far from being released from Egoism, the atavistic taint found new and more powerful expression in the doctrine that man exists to serve himself alone.

By the end of the eighth century of the Christian Era, the Moment of Revelation had been completed. Mankind as a whole had learned to look beyond the limited Present Moment and to see salvation and destiny in a wider context. With the establishment of the great centre of Islamic culture in Baghdad, a new influence radiated into nearly all parts of the world: Europe, North and East Africa, India, the Far East and Central Asia were brought into trading and cultural relations with a centre that was, in its turn, under the guidance of the Hidden Directorate. The remarkable family of the Barmecides, the spiritual and political advisers of the Caliphate, were very probably the link with the centre situated already at the crossing of the trade routes that joined Europe to China and India to Central Asia.

The development of responsibility comes with opportunities for exercising it. These were presented both to Christendom and to the Hindu world by the appearance on their boundaries of the new dynamic faith which proved to have an unusual power to assimilate and transform the cultures into which it penetrated. So we find that before very long, Islam began to exercise a powerful influence upon Christendom, bring-

* This has little scriptural authority. The interpretation of 'I and My Father are One' as implying equality cannot be sustained on any ground. The Union of Will is not the same as equality of Being. And yet 'subordinationism' was condemned as heretical. We may agree that Muhammad was misinformed about the true beliefs of the Christian Church and still hold that it was necessary to reaffirm the Infinite Transcendence of the Source in which the Trinity has its Ground. In the last chapter of this volume, we show how the notion of will can reconcile the conflicting assertions of all religions.

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ing new life to its philosophy, psychology and even its theology. The cultural explosion that made Baghdad, Balkh and Bokhara centres of science, art and literature was no ephemeral flower, for, as we are becoming increasingly aware, European science and industry owe more than they realize to the Arab culture. The revival of Christian spirituality among the palamite, hesychast and other movements in the Eastern church was due to contact with Islamic spirituality in Asia Minor. Various explanations have been proposed for the amazing transformation of some of the most backward peoples of the inhabited world into leadership in almost every field. Nothing comparable happened when Rome under the Antonines was mistress of the world, nor later when Spain, France and England successively were at the height of their power. Each of these four was evidently dependent upon antecedent cultures and foreign importations; but the Islamic science, art and spirituality of Baghdad and Spain also drew very much from Jewish and Christian sources. There was a very fruitful interaction between the four streams of Hinduism, Judaism, Christianity and Islam that, until the end of the first millennium, mainly showed itself in the Islamic world: but soon afterwards spread widely throughout the oikoumene.

We have insisted upon these peculiar characteristics because it seems here that we can detect the action of the Hidden Directors and even form some idea of its geographical location. There must have been a centre of diffusion not far from the place where Zoroaster had first given mankind religion such as we know it today. This is the ancient Chorasmia which after many centuries had regained its importance under the Samanid rulers of Balkh and Bokhara (a.d. 874-999). This little-known centre was certainly a meeting place of the four traditions and it is very probable that the Hidden Centre was established near Balkh.

We have now to trace the course of events after the withdrawal of the Higher Spiritualizing Influence.

Chapter Forty-nine MIND AND SOUL

17.49.1. The Rise of Humanism

In this chapter, we shall trace the course of the two great Actions initiated two thousand five hundred years ago and observe the way in which their combined operation has produced the situation in which we live today. The first action, whose time-scale is measured on our interpretation in millennia, was the direct contact between humanity and the Unitive Energy through the Incarnation of the Cosmic Individuality. The second, measured in centuries, was the impact of the Master Idea of the Megalanthropic Epoch proclaiming the unique significance of the human person.

According to the virtual pattern of human evolution, predestined in the Hyparchic Future, the two actions should have developed harmoniously to bring man to understand and accept the task of serving the Great Work of integrating all life on the earth towards creative Unity of Function, Being and Will. The apparent failure of the task as we survey our short present moment should not dishearten us if we take account of the difference of time scales and the inevitability that the penetration of Unitive Energy (E 2) should be a far slower process than the development of Mind. The hazard of the situation comes from the continued taint of sin in the Soul-Stuff Pool and the still immature stage of development of the human mind. Mankind as a whole is manifestly unready for the responsibility that is implied in the Megalanthropic valuation of human greatness. Under these circumstances, we should expect to find evidences of intervention by the Hidden Directorate to redress the balance between fate and destiny.

Added to these sources of complication, we have the consequences of the progress of mind which has enabled the human race to exercise its creative power in a thousand ways not necessarily connected with true human destiny. Among other consequences has been the rapidly growing interpenetration of cultures, and increase in scale of the events of history, so that at the present time all mankind can be involved in events in any part of the world.

We cannot hope to show the functional structure of so large and so

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complex an event as the history of the past two thousand years; and we shall, therefore, direct our attention mainly to the progress and activity

of Mind. This is a legitimate simplification inasmuch as mind is the primary characteristic of Man; but we must also look deeper into the human situation and search for the less evident and certainly more tardy development of Soul. Indeed, the period we are about to study can best be understood as the parallel development of mind and soul, a development often divided and even conflicting in the visible levels of history; but, for a more penetrating insight, converging towards the awakening of man to the true significance of his existence on earth.

In the last chapter, we carried the story to the end of the Age of Revelation of the Working of Divine Love; that is, to the seventh century of the Christian Era. We must, however, retrace our steps to the start of the Megalanthropic Epoch in order to find the origin, and trace the development of, the second main stream in the progress of mind that we have referred to as Humanism.

In the sixth century B.C., the four cultures had not as yet merged so completely as to lose their distinctive character. The Great Spirit and the Great Mother Cultures were the remotest from the notion of a Personal God, loving, and concerned in, the welfare of mankind and we should expect the regions still influenced by these cultures to respond rather to the Megalanthropic Master Idea than to the doctrine of Redemption. We do indeed find China and the Eastern Mediterranean the two foci of nascent humanism. Confucius in the Far East and Solon in the West are the types of philosopher-reformer responding wholeheartedly to the Megalanthropic message and establishing humanistic systems in which little place was left for belief in the Love of God.

We shall understand by 'humanism' all theories of man that exalt the mind at the expense of the soul. Since mind is the seat of our conscious experience, humanism tends to empiricism and confidence in the delivery of the senses. It interprets man's social life in terms of the opportunities it affords for extending and deepening his experience and strengthening his power to act successfully in the material world.

We can trace these tendencies in the rise of Greek philosophy and political theory. From Anaxagoras (500-425 B.C.), who drew his inspiration from Persian sources, to Aristotle (384-322 B.C.) and from Aristotle to Archimedes (287-212 B.C.) we see the flowering of practical humanism. With Plato, we see the traces of the soul-tradition probably

Similarly, we can recognize the humanistic trend in China. In the sixth century B.C. China was technically far in advance of every part of the world except the Near East. The new Epoch gave a fresh stimulus to the creative powers in the human mind. India under the Mauryas (322-184 B.C.) was not behind Greece and China in philosophy, techniques and social organization. It is in character with the presiding genius of the new Epoch, that, throughout the world, men's minds were turning from conquest to trade. Solon was a true prophet of humanism in his policy of *Seisachtheia*, or the 'shaking off of burdens', that enabled Athens to become a focus of material prosperity. The Assyrians under Sargon and Sennacherib, the Lydians under Gyges, Alyattes and Croesus, the Phoenicians and the Carthaginians were opening the great trade routes by sea and by land that were also to become channels for the diffusion of cultures.

It was not until the fourth century that humanism established itself as an independent stream within the great current of human progress. Its birth in the West can be identified with the Periclean age of Athens. In thirty-four years (462-428 B.C.) the foundations were laid of a man-made tradition that was to dominate the European mind for the rest of the Epoch. In the same period, a humanistic tradition was being created in China under the Chou dynasty and in India under the Mauryas. Only in South-West Asia from Persia to Egypt was the religious tradition maintained. We may see in this situation the preparation for the coming of Christ and the long-term action that was to persist far beyond the Epoch.

In the regions where humanism gained the upper hand, a very great advance was made in man's grasp of the power of the human mind. Whereas the Egyptian, Chaldean and early Chinese cultures had seen human creativity in terms of useful discovery, the new humanism realized that man could speculate upon the very nature of Reality and the destiny of man and do so without the help of the traditional wisdom, ** This discovery marks the distinction, to cite the best documented example, between Plato and Aristotle. The exhilaration of the discovery of creative power in the human mind was shared in many places; and,

* Greek philosophy was, as a whole, inspired by Persian wisdom. Zoroaster was the predising genius. Cf. *Review of Metaphysics*, No. 71, A. H. Chroust, *Aristotle and the Philosophies of the East* and R. Afnan *Zoroaster's Influence on Greek Thought*. We will return to the 'Zoroastrian tradition' when dealing with modern Europe.

** Cf. Chapter 47, p. 315.

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in most, it led men into the idolatry of mind-worship. When mind and soul are confused—as they were for example by Aristotle—mind appears

to be the highest principle of man's nature and a personal relationship to a Higher Power ceases to appeal.

The weakness of humanism lies not only in disregarding man's continuing dependence upon an Intelligence higher than that of the mind, but also in ignoring, and so failing to come to terms with, the taint of sin. Humanism can acknowledge man's immaturity and yet regard him as supremely important, by refusing to contemplate the existence of any higher state of being. Thus it was inevitable that a disagreement should arise between those whose minds were wholly turned to the Megalanthropic Idea and those who were aware of the reality of human sin.

This is not to suggest that aberration occurs only in the one direction. Almost contemporary with humanism was the arising of gnosticism which looks for Reality wholly outside the senses and beyond the mind. Gnosticism fails to appreciate the significance of evolutionary progress and the intimate connection between sensation, mind and soul. It draws upon the traditional wisdom, but distorts it by a faulty use of the creative power of the mind.

We shall notice similar situations arising again and again through the Epoch. The Hidden Directorate injects ideas into the mind of the Psychokinetic Specialists. These are then transmitted into the prevailing mental atmosphere to prepare for a new step in human progress or to restore the course of events to its right direction when some danger threatens. The new ideas, by their nature and origin, exert a powerful influence upon all who can respond. The results vary according to the understanding—that is the disposition of will—of those who receive them. This is why we observe exaggerated, distorted and sometimes even contrary manifestations originating from a stimulus that, often quite unnoticed, is acting to produce a most important positive action.

As an example, we can take the messianic expectations of the Jews in the Centuries surrounding the time of Christ. It was most necessary that the human mind-stuff should be prepared for the coming of the Redeemer, for without this preparation the Event could not have penetrated into human consciousness. The idea itself almost certainly originated in the Babylonian captivity where it was introduced by the adherents of the Great Work. It was misinterpreted by the Jews; but it produced the required state of mind. Moreover, in other forms, the idea of the Dying God who saves his people was independently introduced among the Great Mother people of Asia Minor, and the Creator

God people of Egypt. Apollonius of Tyana exemplifies a wrong interpretation of the idea in history, as do the various dying gods of Egypt,

Syria and Greece in the religious consciousness. Here again, the required result was secured: the gentiles were prepared to accept the Christ that most of the Israelites had rejected.

Such interpretations would, of course, have no meaning unless we could postulate a source from which the seminal notions could be injected into the human mind-stuff at the right time and place. Even postulating a centre of high wisdom, we could not give a rational account of the Great Work without the idea of the Hyparchic Future or its equivalent in some other form of language. It is, therefore, scarcely surprising that peculiar patterns of events exemplified in the Messianic expectation and the Dying God myths have received so many unconvincing interpretations from both believers and sceptics.

According to our understanding, we should regard the rise and progress of humanism as an indispensable factor in the evolution of Mind and ascribe it to the intentional action of the Hidden Directorate, and this notwithstanding the historical fact that humanism has been in the last few centuries the main obstacle to the recognition of man's true place in the Great Work. Our own study of Systematics has shown us that a specific aim can only be achieved either by accident or by the cooperation of three independent processes.* We may regard the humanistic stream of thought that continues throughout the Epoch as the 'natural' process which provides the denying factor in the soul-creation of Mankind.

17.49.2. The Stage of Confusion

We shall pass over the centuries from the time of Christ to the rise of Islam which we have already studied in the last chapter. By a.d. 700, the Megalanthropic Epoch had run half its course. The current of humanism was running feebly, while that of religion had acquired a fictitious ascendancy, the weakness of which was soon to become apparent. The situation corresponds to that of the mid-point of the Enneagram where only two processes are operative and there is the maximum divergence from the original direction. Looked at in humanistic, European terms, the period a.d. 600-900 deserves the name of the Dark Ages given to it by classical historians. It also corresponds to the

* Cf. especially, the nine-term symbol of the Enneagram discussed in Chapter 37, Section 14.37.11.

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penetration of humanistic values into Islam, Hinduism and the religions of China.*

Baghdad was the scene of one of the great cultural explosions of history, becoming in the space of three generations the centre for the whole world of art, science, literature as well as of commerce and

exploration of distant lands. Baghdad was also the main centre, for a time, of the rise within Islam of Sufism, a movement with greater affinity to Christian mysticism on the one hand and Buddhist self-perfectionism on the other, than to the main stream of orthodox Islam.

We can detect here the beginning of a third stream of activity that was to complete the triad whose affirming and receptive impulses were Religion and Humanism. The third impulse, as we concluded in the last chapter, was to come from the Great Work. It remained hidden until the first two streams were fully established. According to this view, the Megalanthropic Epoch had three distinct phases:

1st Phase. The Announcement of the Master idea ca. 550 B.C. This is the stream of the progress of the human mind-stuff.

2nd Phase. The Incarnation and the Rise of Islam. The Revelation of Divine Love a.d. 0 - a.d. 630. This, as we have seen, was an action the outcome of which requires a Great Cycle for its manifestation. It remains, therefore, as a more or less stationary factor over shorter periods of time.

■ 3rd Phase. The Great Work. The development in man of the capacity for a non-egoistic responsibility. This began to manifest about a.d. 1000 and differs from the first two phases in its more specific action as befits a manifestation of the Reconciling Impulse.

According to the structure of the Enneagram—the symbol associated with the harmonization of diverging trends—the third action is mainly directed towards the completion of the undertaking initiated by the first. We have, therefore, an exceptional opportunity of testing the hypothesis of the Hidden Directorate. We shall devote an otherwise disproportionate space to the remarkable period that connects the end of the Era of Revelation with the start of modern times.

On the levels of visible history, the Dark Ages were marked by the disruption of existing institutions, like the Byzantine and Persian Empires, by hordes coming from desert regions and regarded by the settled populations as barbarians and destroyers. It is probable that ancient

* The change from the fanatical Ommayad Caliphate of Damascus to the humanistic Abbasid Caliphate of Baghdad is one of the strangest transformations in history, coming so soon, as it did, after the founding of Islam as an 'other-worldly' religion which denied the reality of any Value except in Allah alone.

cultures in East Africa were destroyed by the Arab invaders and slave-traders. Many visible links with the Hemitheandric Epoch were destroyed with the last vestiges of the Hero-King. As we look back from the

perspective of fifty generations, we can see that the destruction of well-established societies and cultures made possible the extraordinary achievements of the second millennium.

But this was not the whole story. There was certainly also an unseen action that emanated from the central region of the oikoumene. We have already referred to the probability that the main centre of the Hidden Directorate was originally situated in the ancient kingdom of Bactria on the banks of the River Oxus where Zoroaster established the first religion in the sixth century B.C.* Bakdi, the fourth sojourn of the elect according to the Vendidad, later became Balkh, which though for most Europeans an almost unknown city destroyed long ago by Genghis Khan, was for more than two thousand years the nerve centre of the trade of China, India, Central and South-west Asia. After the Muslim conquest of Persia, Balkh became a point of contact between the principal religions of the world. It had well-established Eastern Christian, Buddhist, Jewish and Hindu communities in addition to the 'official' religion of Islam and the 'popular' cult of the ancient Shamans.** Trans-oxanian commercial enterprise was the greatest economic factor in the opening up of communications; but it may safely be concluded that the religious and spiritual attractions of Balkh also made it a centre of pilgrimage and therefore a particularly suitable centre from which new ideas and techniques could be spread throughout the world. We have the evidence of Buddhist and Muslim pilgrims to show the intensity of spiritual activity in this region when the religious life in most regions of the world was passing through periods of crisis or stagnation.

We shall find evidence as we reach later centuries that the course of all human history has been profoundly influenced by the traditional wisdom associated with a Source believed to have existed from the earliest times in Central Asia, but never exactly located. This is not to deny the importance of Egypt as a source of wisdom. According to tradition, Islam drew upon Egyptian influences through Dhul Nun, one of the Followers of the Prophet. Nevertheless, it does seem that the

* Cf. Chapter 48, pp. 78-79.

** Cf. Arnold Toynbee, *A Study of History*, Vol. II, p. 383, for a description of the extraordinary position occupied by Balkh in the period a.d. 700-1000 when it was the principal centre of exchange for the caravan traffic between China, India, Turkestan, Arabia and Europe.

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practical wisdom was concentrated and preserved in the central region.*

17.49.3. The New Influences a.d. 1000-1500

We have already referred to the appearance of a spiritual, mystical movement known as Sufism in the Islamic world. Scholars are not agreed as to how and where Sufism arose. According to Islamic tradition it goes back to the companions of the Prophet either Abu Bakr or Ali according to the Sunni or Shiah leanings of the authority concerned. It is improbable that there was a psychokinetic society in early Islam and we are on fairly safe ground in connecting Sufi origins with Persia and Turkestan.

Similar difficulties surround the origins of Zen Buddhism and the Tantric schools of North India and Tibet. Chinese authorities are agreed that Zen did not originate in China. Its connection with Bodhi-dharma is more traditional than historical; but all are agreed that it arrived from the south-west. The assumption that it came from India is contradicted by what is known of Indian religious life at the end of the first millennium. It seems most plausible that Zen came to China by the trade route from Balkh and that it has a common origin with Sufism and the Tantra.

All these movements have two significant common features: first, they offer no new dogma but accept the religious beliefs of the community to which they are addressed; and, second, they are mainly concerned with psychological techniques for the awakening of the consciousness of the True Self. These features are still more strongly in evidence when the same notions, by gradual diffusion, reached the Christian world by way of Asia Minor and led to the extraordinary revival of monasticism based upon the psychological exercises later known as 'hesychast', or 'palamite' after their great exponent St. Gregory Palamas.

One little noticed feature of all these movements is their common tendency to establish a chain of personal responsibility. The exercises themselves are intimately personal; but they cannot be practised successfully, or even safely, without the guidance of a spiritual director.

The location of the Centre of Wisdom cannot be identified with our present knowledge. Indeed, there were probably several such centres,

* Cf. Gurdjieff's remark that schools of wisdom were different in the three regions: 'In India philosophy, in Egypt theory and in what is now Turkestan and Afghanistan practice.'

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There is ample evidence that special powers were attributed to wise men in this part of the world and these powers were described in almost identical terms among the Lamaists of Tibet, the Muslim Sufis and the Eastern Christians. One of the centres was certainly in Balkh, the 'mother of cities' for two thousand years and more. Situated at the crossing of some of the chief trade routes of Asia, Balkh had been in early days the meeting place of Great Spirit (Shamanist) and Saviour God (Zoroastrian) cultures. Later it brought together Eastern Christians, Jews, Lamaists, Buddhists and Muslims. Not only the religious but also the scientific life of this region was marked by the interaction of streams from many sources. The mobility of individuals at that time was remarkable and there were many routes leading to the central regions.

Between a.d. 874 and 999 the Samanid dynasty ruled on both banks of the Oxus (then simply called 'The River' en Nehir and now the Amou Darya), and had contacts with China, India, Central Asia, Arabia and Byzantium. Mathematicians, Astronomers and Physicians from Trans-oxiana and Khorasan, such as Al Khwarazimi (780-c. 850), made notable contributions to the progress of science. They became known and translated as far away as Sicily and Toledo and even England by men such as Adelard of Bath and Peter Alfonso. These achievements were made possible by a combination of creative genius and access to many sources: Greek, Syrian, Indian and Chinese as well as Arabic. Scholars from all over Asia travelled to Balkh and Samarkand and they were almost certainly attracted by the knowledge that the Masters of Wisdom had their schools in this region.

Here we have some historical material to help us in the extensive records in Persian and Turkish of the Masters of the Sufis tradition. The term Khwaja (plural Khwajagan) or Master was first used in the tenth century to designate men of extraordinary powers whose influence on the social and political life of Central Asia was no less than their contribution to science and medicine. The first man to be known by the title of Master was Yusuf of Hamadan (born a.d. 1048 died a.d. 1140) in the early period of the Seljuk power which was spreading from the Himalayas to the Mediterranean.

The Masters had their chief centres in Balkh and Bokhara until the Mongol invasion of Trans-oxiana in 1220. The Masters played a great part in preserving the structure of Asiatic society during this devastating period. Some remained at the centre and others emigrated to India, Turkey and probably also Tibet and China. Hadji Bektash and Jellalud-

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din Rumi, both of Balkh, set up their schools in Asia Minor. The great Naqshbandi order, which has spread throughout the Muslim world remained in Transoxania where Khwdja Bahauddin Naqshband lived and taught. Behind these well-known names were the secret Masters who were visited and consulted both by rulers and by the spiritual

leaders of the time. The Masters remained active until the fifteenth century when the fall of Constantinople and the Mogul conquest of India created a new situation and started a new phase in the history of the Epoch. Their work was accomplished partly through the creative power of ideas and partly through the unitive action of the energy of Love. All descriptions of the men themselves agree upon these points. They also established the principle of Group Activity long before the need for this became apparent in the rest of the world. We must now turn our attention back to Europe, remembering that the events of the Middle Ages were powerfully influenced by what had happened in Asia in the preceding centuries.

Historians of European culture acknowledge the influence of Eastern sources on the revival of learning, art and science in the Middle Ages. Formerly, the sources were identified with the Greek culture of Byzantium. The debt that European thought owes to the Jewish tradition has also been recognized by scholars. More recently, the contribution of Islamic culture through Spain and as an indirect result of the Crusades has been given prominence.* Although the influence of Eastern sources is acknowledged, few historians are prepared to recognize a definite tradition and moreover a tradition in the custody of men who released and transmitted ideas and methods for the purpose of guiding the course of events towards the aim of human responsibility. One reason for this reluctance is that the emphasis has always been placed upon knowing rather than doing. Knowledge could evidently be preserved in books and transmitted by scholars. But practical doing requires a personal action that is possible only within an organized structure; that is, a group or society.

If we examine some of the outstanding events of the thousand years from a.d. 600 to a.d. 1600, we can convince ourselves that more than the transmission of knowledge was involved. The Carolingian Renaissance of the ninth century and the contemporary flowering of classical culture in Saxon England, did not change men's relationships either to the natural order or to one another. When, three hundred years later, Roger Bacon (a.d. 1214-1292) known as the father of modern science, tried

* Cf. Sayed Idries Shah, *The Sufis*, London, 1964, and numerous works on Persian and Moorish Sufism that have appeared since 1950.

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to awaken his contemporaries to the practical significance of the traditional wisdom, his counsel fell upon ears which could listen only to the Aristotelian idiom and could not detect, even in that, the practical undertones.

The unrealistic attitude to learning was not confined to Europe. The Rajputs in India looked back to their Vedic heritage much in the same way as the Carolingians to their Greek origins. Al Biruni, a Muslim pilgrim of the eleventh century, was deeply impressed by the flowering of culture and the social conditions of the Rajput empire. The T'ang dynasty in China reached the highest pinnacle of culture in the eighth and ninth centuries. Art, literature and technology made unprecedented progress. The T'ang capital city Ch'ang-an, was more magnificent, more diversified in its culture even than contemporary Baghdad. Yet no stable society emerged and after the great persecution of a.d. 843, all had to start afresh. When the Sung dynasty restored peace and unity to China, another period of magnificence was opened; but it was more restricted than the T'ang and made no real progress. With the Tartar invasions of the thirteenth century, new exchanges with the West became possible; but there was still no advance in understanding the creative potential of the human mind.

Men capable of gaining and exercising power did so—as always. Men capable of creative activity found scope for achievement in art, literature, medicine, science and even technology. Nevertheless, the ancient sense of human impotence in the face of nature and of man's consequent dependence upon a higher protective Power remained almost unaffected. Even when able men, professed humanists, such as Han Hu (a.d. 786-824) or Caesar Bardas (floruit a.d. 857-67) tried to establish cultures free from supernatural beliefs, in communities as far apart as Ch'ang-an and Byzantium, they only succeeded in reviving interest in the forgotten ethos of an earlier culture.

The conclusion to be drawn from such examples—which are of course little more than random samples—is that the evolution of the human mind is conditioned by the historical cycle. Except at the right time and place, a step forward cannot be taken, even by those who recognize its value and possibility. For the deeper understanding and longer vision that we ascribe the Hidden Directorate, there can be no haste, just as there can be no use of force. When the time was ripe, the appropriate moves were made and, as if by a miracle, the world was transformed.

17.49.4. The Birth of the Modern World

For a long time, it was wrongly supposed that the main factor in the transformations that occurred between 1450 and 1550 was the revival

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of Greek learning through the agency of scholars exiled from Byzantium by the Turkish conquest of Constantinople in 1453. This explanation would, at most, account for the Italian Renaissance. It is irrelevant for the extraordinary wave of new ideas that swept from end to end of

Asia at the same time. India in the same century saw the rise of the Moghul Empire and an explosion of culture no less remarkable than that of Europe. An even more striking example is the development of the Osmanli Turkish power in Asia Minor. There are strong grounds for believing that a centre of wisdom was established at the time of Timur Lenk in Bursa, the capital of the Osmanli Sultans until 1453. The Osmanli sultans before the conquest of Constantinople had developed a most remarkable culture which was to explode into magnificence in the following century on the banks of the Bosphorus. No less remarkable were the transformations in China under the Ming dynasty (a.d. 1368-1644).

In every case, the change was in the direction of increased confidence in man's ability to solve his own problems. This confidence was linked with the belief that a High Wisdom had been preserved in Asia and conferred upon its fortunate possessors the secrets of life and of dominion over nature. It is noteworthy that in the fifteenth century these beliefs were widely held to be fully compatible with the Christian faith and practice.

Whereas in Europe the High Wisdom was traced back through Pythagoras and the Babylonian magi to Zoroaster and other still unidentified personages such as Hermes Trismegistus and Orpheus, in India the Source was believed to be in the North-west, and by the Chinese Wisdom was regarded as coming from the West. All the directions point to the region bounded by the cities of Balkh, Bokhara and Mosul within which we have situated the headquarters of the Hidden Directorate.

In attempting to test our hypothesis, we must remember that we are not concerned only with learning, but with action. We should apply this criterion to the Italian Renaissance commonly regarded as the revival of learning followed by the explosion of culture. The Platonic Academy founded by Cosimo dei Medici in Florence in 1450, was Platonic only in name. The real interest was in the advancement of a realistic culture foreign to the Platonic ideal. Now, according to Marsilio Ficino, the impulse which launched the Medici on their extraordinary undertakings came from Georgios Gemistos, nick-named Pletho, who played an enigmatic but decisive role in the Reunion Council of the Churches of 1439 in Florence. Pletho had spent some years in Bursa at

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the school of Wisdom already referred to as advisory to the Osmanli Sultans. We have here a direct link both with the Sufi emigres from Balkh and with a centre in Bokhara. Many other instances could be given

of intimate connections between the little-known teachers of the Renaissance and centres of wisdom in South-west Asia.*

As we move on to the seventeenth century we can observe the consequences of the suggestion, adroitly disseminated throughout the oikoumene, that man through his intellectual powers is stronger than nature. One interesting manifestation was in the art of building. Few things are more satisfying to human self-esteem than to erect great monuments that seem able to extend the Present Moment far into the future. Between the fourteenth and seventeenth centuries, rulers throughout the world left buildings that are among the greatest of the last three thousand years. The Imperial Mausoleum at Nanking, the Taj-i-Mahal, the Mosque of Suleiman the Magnificent in Istanbul, the Church of St. Peter in Rome, the Alhambra in Granada stretch right across the inhabited world as a string of jewels unsurpassed in any age.

As we survey the half dozen or more great centres of culture of the sixteenth and seventeenth century we can see no reason why all of them should not have participated in the great step forward that has created the modern world. In all the arts: painting, literature, architecture, science, medicine, social and political economy, the great civilizations of the seventeenth century were equal in creativity and accomplishment.

17.49.5. The Era of European Pre-eminence

We must seek an explanation for the collapse or stagnation of other cultures and the progress of Europe alone. Only uninformed prejudice could suppose that the European peoples had a higher proportion of men of genius and ability. On the whole, the condition of Europe was less promising than that of other regions—especially in respect of political and social coherence and stability. We have no space for the detailed enquiry that the question requires and deserves and shall simply state our own conclusion that Europe was selected for a special role and provided with the instruments for fulfilling it. In other words, we postulate a special intervention from the Hidden Directorate to inject into the stream of European thought the seminal ideas that would lead

* Cf. A most valuable study has been made by Desiree Hirst, *Hidden Riches*, London, 1964, from which many of the details given in this section have been taken. Also Sayed Idries Shah's *The Sufis*, which draws attention to many unsuspected connections between Europe and South-west Asia in the period A.D. 1200-1600.

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to the science, technology and socio-political organization of the modern world. These ideas made their appearance under the guise of traditional wisdom, usually transmitted through an elaborate symbolism which acted as a safeguard against attempts to trace them back to their origin.

If this suggestion appears to be far-fetched we should point to the extraordinary power exercised upon men's minds from the fourteenth to the eighteenth century by symbolism in art, literature and science. The position is admirably stated by Desiree Hirst*: 'practically every aspect of European civilization was in some way affected by this tradition ; the symbolic language used by the great artists, the efforts towards a syncretism of belief which occupied the minds of many brilliant philosophers and theologians, the practical decisions made by politicians, the art of ballet, new fashions in architecture, a whole apparatus of imagery for the poets, the beginnings of modern astronomy, medicine, chemistry and science in general, and finally the religious enthusiasm of seventeenth and eighteenth century England.' This passage refers specifically to England: but much of it would be true of Europe as a whole. Some parts indeed are applicable to the Ottoman Empire of that age, the India of the Moghuls and to Ming China. One example is the search for religious syncretism of which the most famous instance is Jallaluddin Akbar's conference of the four religions in Delhi in 1592. This example may also serve to remind us of the most important difference between European and Asiatic history in the seventeenth century: namely, the rise of democratic government. The Moghuls failed because they could not produce a succession of rulers fit to exercise absolute power. The same was true of the Ottoman Turks and the Ming dynasty in China. It was also true of Europe; but Europe found a way out of the dilemma in the establishment of the 'Three Estates'.

The key to the transformation was given by the Civil War in England that set the seal upon Parliamentary Government. It is, to say the least of it, remarkable that the course of the Civil War was strongly influenced by men closely connected with the traditional wisdom. The best known is, of course, John Milton, but there were others such as his friend Samuel Hartlib, who, with two other Europeans, John Dury and the Bohemian scholar Comenius, exercised an influence not easily explained, on the policy of Cromwell and the Parliamentary Party during the period of its formation.**

* loc. cit., p. 168.

** Cf. H. R. Trevor-Roper, 'Three Foreigners and the Philosophy of the English Revolution', *Encounter*, 1960 and Marian Kaminski, *Systematics*, Vol. IV, No. 2, June 1965.

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The repercussions of the Civil War in England upon Europe were only temporarily disguised by the triumphs of the Grand Monarque. Louis XIV was the last successful exponent of Absolute Monarchy before the social and political changes that helped to provide the conditions in Europe—rather than China, India and Turkey—for the step forward that the mind of man was due to make. The stability, which for five centuries, had been maintained by the power of the Christian Church had been compromised first by the Crusades and later by the Thirty Years War and the effects of religious schism. We shall, however, in the next section see the all-important role played by Christian, Jewish and Islamic spirituality in sustaining the soul-life of mankind at a time when the triumphs of mind were drawing all attention to the Megalanthropic Master Idea: but doing so under the distorted image of human self-sufficiency.

Notwithstanding distortions and deviations we can see behind the seemingly chaotic strivings of the European rulers for power and behind the prejudices, poverty and disease of the common people, clear evidence of a Pattern that was never made explicit nor understood either by the Church or by seventeenth-century rulers.* We cannot reach positive conclusions from the interest and attention that men like Kepler and Newton, Boyle and Harvey devoted to the traditional sources as represented in the works of Boehme, Fludd and Glanvill. Innumerable though the instances are of an indirect influence coming from a Hidden Source upon the writers, artists, scientists and politicians of the sixteenth and seventeenth centuries—they could all be dismissed as superstitious aberrations.** This rejection of any objective value in the tradition is reinforced by the attitude of some of the great minds of the time. Thus Kepler, though greatly impressed by Dr. Fludd's *Utriusque Cosmi* ended by casting aside the doctrine of spiritual essences and angelic powers in favour of belief in natural laws. Thus in *Harmonices Mundi*, he wrote: 'It is obvious that he derives his main pleasure from unintelligible charades about the real world whereas my purpose is, on the contrary, to draw the obscure facts of nature into the bright light of knowledge.'***

* It should be remembered that in the Middle Ages, the Church was well aware of the obligation to prepare a wider circle of people for responsibility. From the eleventh to the fifteenth century, we can observe a persistent, conscious activity directed to the education and enlightenment of Candidates for the Psychokinetic Order both inside and outside the Church.

** As, of course, most historians of the period have done.

*** Kepler: *Harmonices Mundi*, Appendix to Book 5. Taken from Arthur Koestler's *The Sleepwalkers*, London, 1959, p. 402-3. The thesis of this book is to show that the founders of modern science stumbled upon the laws of nature and that the presiding genius of the creation of the modern world was Blind Chance.

There is nothing unusual and certainly nothing wrong in the sight of the intelligent pupil who believes that his teacher lives in the past

and is no more than a stepping stone to be left behind: but it does not always follow that the pupil is the more farsighted.

Those who see in the rise of the modern world no more than the play of blind chance, do not look at the human situation in its totality.* Why did the great step forward come in Europe? During the period from the publication of Descartes' *Discours de la Methode* in 1637 to the appearance of Darwin's *Origin of Species* in 1859, China was enjoying her longest period of peace and prosperity under the Manchu Emperors, two at least of whom K'ang Hsi (a.d. 1662-1723) and Ch'ien Lung (a.d. 1736-1796) were really great rulers. Early in this period Chinese learned men turned towards natural science and technology unknown to and ignored by their contemporaries in Europe. Yen Yuan (1635-1704) led the attack on Neo-Confucian idealism popularized by Wang Yang-Ming. But this was only a change of emphasis for Wang was one of the first to advocate an educational system based on science and technology. The Manchu Emperors encouraged this trend and brought experts from all parts of the world to enrich the cultural resources of China. It would be absurd to suppose that China did not produce, during the two centuries, men of genius equal to Newton, Lavoisier, Linnaeus, Faraday or Darwin; or to suggest that the Ch'ing dynasty was less interested in scientific technical progress than the Bourbons or the Hanoverians.

There are obvious factors such as the dependence of Europe on maritime trade, the influx of gold from conquest in America and Asia, the decentralization of Government combined with the unity of culture and religion: but none of these conclusively distinguish Europe of the seventeenth century from other regions and periods. The decisive difference seems to lie in the mental atmosphere created by the belief in the principle of sufficient reason** and the related notion of Natural Laws. We are so accustomed to these notions that we overlook their novelty and forget that they have not—even in the twentieth century—reached more than a small part of the human race. Moreover, these

* Cf. H. A. L. Fisher, *A History of Europe*, 1936, p. v. 'I can see only one emergency following upon another as wave follows upon wave; only one great fact with respect to which, since it is unique, there can be no generalizations; only one safe rule for the historian: that he should recognize in the development of human destinies the play of the contingent and the unforeseen.' This play is indeed present and it is that which distinguishes history from science; but the very play of contingency is what makes destiny possible.' Cf. Chapter 42, *supra*, and Vol. III, Chapter 38, Section 14.38.2.1.

** Though mainly associated with Leibniz (1696-1716) and his school, the principle had entered European thought through many channels.
D.U. IV—14.*

ideas which have transformed the entire situation are seen—in the second half of the twentieth century—to be far less certain and far less universal than was supposed a hundred or two hundred years ago. As we have seen in earlier chapters, notions of structure and system are taking the place of the belief in laws and the principle of sufficient reason.

17.49.6. The Age of Science

If we look for the origins of the notions of universal law and sufficient reason, they are found to have arisen from the belief that there is a discoverable secret the possession of which will give man control over nature and his own destiny. Now it is a remarkable fact that this notion had no place in the thinking of the 'ancients' from whom it was popularly supposed to have been handed down. The belief in a Hidden Wisdom, that exerted such a powerful influence on the Renaissance thinkers and their successors in the sixteenth century, was imperceptibly transformed in the seventeenth into belief in the power of man to discover the secret for himself. It is not reasonable to regard this transformation as fortuitous and yet we cannot observe that those concerned were aware of what was happening to them until long after it had happened.

Now, we have seen that this phenomenon of time reversal is characteristic of action emanating from the Hyparchic Future,* which in this context means the Hidden Directorate. We reach the conclusion that the expectation of finding the Secret of Nature was deliberately implanted into European thought at the beginning of the seventeenth century, together with vaguer but equally powerful ideas of man's supremacy in the Natural Order. This explanation seems to be the only one that accounts for all the facts including those relating to the situation in Asia and Africa. It resolves the strange paradox of China, whose rulers and thinkers were wholly devoted to the practical affairs of life and where mystical notions had long ceased to have any hold, proving unable to make the step from random search to scientific method; while Europe infected with mystical, magical and occult notions, in the throes of religious controversy and political experiments, developed science, technology, democratic government and organized industrial production.

We should see something more than the advance of Mind. The Christian faith was still strong enough to protect Europe from falling

* Cf. Chapter 42, Section 16.42.8.

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into the worst excesses of egoistic materialism notwithstanding the temptations and the lapses of the Industrial Revolution. A far more sinister outcome might have resulted had science and industry developed in the Far East where religion had almost ceased to have a spiritual significance.

There is another factor that made Europe the right locus for the new development, resulting from its limited area and resources which have compelled Europe to develop as a maritime community. Side by side with acceptance of the doctrine of Natural Law we find belief in Natural Expansion and the idea of Progress. These doctrines can be seen as the consequences of the Megalanthropic Master Idea of human greatness. Unconnected with a sense of man's dependence upon the Love of God, they could lead to disaster. Indeed, if they were as universally true as the eighteenth century believed them to be, they would leave no place for the Love of God to operate. The far-sighted Wisdom that encouraged the European mind to look for Universal Laws that would bring power and fulfilment, could also foresee that the same search would eventually lead to discoveries that would destroy confidence as to both the laws and the mental attitude that led men to seek for them.

The basic error, that was also the source of the ephemeral triumphs of mechanistic science, was the assertion of the self-sufficiency of human reason. This began to appear in the seventeenth century with men like Grotius (1583-1645) and Hobbes (1588-1679): that is with jurists and philosophers who accepted the mind in static terms inconsistent with the awakening sense of Progress. The *Aufklärung* (Enlightenment) is generally taken to represent the final break with the belief in a traditional Great Wisdom. Its leaders, such as Voltaire and Lessing, claimed to be not so much anti-clerical, as hostile to superstition whether within or outside of Christendom. It was not until Turgot's *Les Progres Successifs de l'Esprit Humain* (1750) that expansion and progress were clearly identified with the evolution of the human mind.* This view of human destiny led to the theory of 'natural rights', and hence to such doctrines as Rousseau's *Contrat Social* (1762): 'that all men are created equal, that they are endowed by their Creator with certain inalienable

* The transition from faith in God to faith in human nature is discussed by A. N. Whitehead in *Science and the Modern World*, Cambridge, 1927. Comparing the Middle

Ages with the eighteenth century, he says: 'The earlier period was the age of faith, based upon reason. In the later period, they let sleeping dogs lie: it was the age of reason based upon faith. To illustrate my meanings: St. Anselm would have been distressed if he had failed to find a convincing argument for the existence of God, and on this argument he based his edifice of faith, whereas Hume based his *Dissertation on the Natural History of Religion* upon his faith in the order of nature' p. 71.

rights, that among these are Life, Liberty and the Pursuit of Happiness. . . .'

Into such an atmosphere of thought came the Industrial Revolution that, starting in England in the mid-eighteenth century, rapidly transformed the material situation of Europe and created new inequalities and new injustices, but only strengthened the belief in Natural Laws and Natural Expansion. Turgot's doctrine of progress developed into Hegel's inevitability of progress and hence to the Marxist doctrine of historical materialism that guarantees man's ultimate conquest of the world and the establishment of a perfect social order.

As we look back from the mid-twentieth century to the period that ended with publication of Darwin's *Origin of Species*, we are astonished to see a mental landscape completely foreign to us. So much so, that a considerable effort is required to grasp the then prevailing modes of thought. There was a conflict between 'authority' and 'reason'. But authority meant the assumption that men could know what God had revealed and reason meant that men could know how Nature works. One attitude implied confidence in our interpretations of past events and the other confidence in our expectations of future events.

Both attitudes were the consequences of a misplaced megalanthropy. We have seen man endowed, perhaps thirty-five thousand years ago, with creative powers and proclaimed the Lord of Creation. He has marked himself out as an extraordinary being, able, by the power of his mind, to dominate many of the natural forces he encounters on the surface of the earth. It is scarcely surprising that, in wonderment at the revelation of his own powers, man has in recent centuries come to overestimate his ability to solve his own problems. He has been led again and again into the fatal mistake of confusing what is only a potential destiny for a present reality. From this mistake, the transition to the glorification and even the deification of human nature is only too easy. The mistake is not absolute, but relative to man's own status in the Scale of Being. In the material world, man has the power to create and to legislate. Swinburne was only half wrong when he wrote:

Glory to Man in the Highest
For Man is the Master of Things.

Mind is indeed the highest mode of existence in the natural order, but it is the lowest in the world beyond nature and it even owes its pre-eminence to the 'borrowed' energy of Creativity.

Before we leave the theme of 'mind over matter', we must consider

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the very relevant rise of modern economy.* This goes back to the sixteenth century with the expansion of productive capacity in Europe due to the influx of gold and silver from the Americas and the Orient. Once the lust for gold ceased to be the prerogative of princes to become the passion of the people, Europe, stifling all scruples of conscience, set itself to pillage the world. The dominance of economic motives first became obvious with the Battle of Plassey on June 23rd, 1757. The wealth of India was to provide capital for the mills of Lancashire and the ironworks of the Black Country and to make London the financial centre of the world. These were consequences of conquest very different from those of the Spaniards, Portuguese or even the French of the seventeenth century.

The wheels of the Industrial Revolution turned with energy derived from English coal: but its trade was made possible by British sea power. Superficially, the whole event appears to be explainable in causal terms alone. From century to century, we can trace the growing influence of material and the decay of edaphic forces. We see in the flight from the land and in the rise of money-power the working out of easily recognizable forces. We tend, however, to overlook the problem of accounting for the advance of science and technology which cannot be explained in the same causal terms. Nor can we say that the pioneers had any well-defined purposes beyond the increase of human knowledge and human power.

The economic element has been, since the sixteenth century, the ground upon which the modern world has grown. The goal of human striving has outwardly and explicitly been freedom from dependence upon natural processes expressed in the formula: 'Freedom from want, freedom from fear.' The unseen aim of the undertaking was to enable the human mind to develop towards the organized cooperation that is the condition of further progress. We can represent the activity as a tetrad as shown on p. 38.

The upper motivational term is connected with the transition to a new Epoch that occurred towards the middle of the nineteenth century. We must not forget that this period witnessed not only the rise of science and the industrial revolution, but also very great efforts towards social reform. For the first time in history the responsibility of power was associated with the needs of the Psychostatic Group of Society. It was a time of maximum opposition between the belief in the greatness of man as he is in his psychostatic or unregenerate state and the realiza-

* Cf. Chapter 43, Section 16.43.5.1 for a description of the characteristics of this level of history.

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tion by a small, obscure minority, of man's potential for transformation ; and hence his dependence upon a spiritual action that he is powerless to initiate. This minority included social reformers like Elizabeth Fry, Wilberforce and Buxton, and religious reformers like John Newman and James Martineau, to mention only a few English names. There were also figures less well understood like Fabre d'Olivet and R. W. Emerson who worked through ideas and were directly influenced by the traditional wisdom. Out of this confused situation, a new Epoch was to emerge unheralded; and, for nearly a century, unrecognized.

17.49.7. The Paths of the Soul

The Great Work is not concerned with mind alone: but with the total evolution of humanity towards unity of Function, Being and Will. The Hidden Directorate, if it has continued to operate in recent centuries, must have been aware of the failure of soul-progress to keep pace with mind-progress. We should here recall the distinction made between the Path of Objective Morality and the Path of Accelerated Transformation.* This distinction has no doubt existed since the Creative Energy (E 3) first entered the human mind-stuff. It was not explicit until the coming of religion at the start of the Megalanthropic Epoch. We can look upon Objective Morality as the primary requirement of the human soul-stuff. Without it, there would be no defence against the canker of Egoism. The distinction made by St. Paul between the law that killeth and the spirit that quickeneth, and his insistence upon the abrogation of the law for those who are saved in Christ, is to be

* Cf. Vol. III, Chapter 41, Section 15 .41.3 .1 on Candidates for the Psychokinetic Group.

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understood in terms of the transformation of the human soul-stuff by contact with the Unitive Energy or Love of God. This transformation penetrates the entire existence of mankind; but in order to benefit by it, we must enter into the Present Moment in which it is operative. This is the purpose of Objective Morality, which appears to fail, owing to human egoism, but nevertheless operates to enable the higher energies to reach the human soul-stuff.

The custodians of the Path of Objective Morality are the 'Chosen People' which, in its full significance means all who are united in the bond of religion.* This has been the situation throughout the Megalanthropic Epoch when organized religion took over the responsibility previously carried by the Divine Rulers and their priesthood. It was not until the nineteenth century that the doctrine of an exclusively

humanistic Objective Morality was proposed by Auguste Comte and his followers.

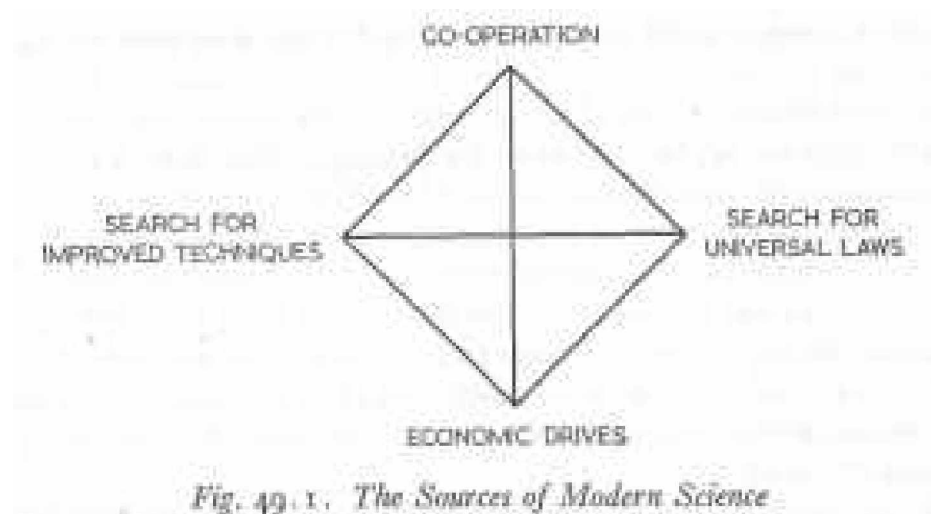
As we saw in Chapter 41, the Path of Objective Morality leads into the Psychokinetic Group where selves are transformed into souls; but it does not often produce souls capable of creative activity during their middle life. In other words, it does not bring forward men and women who can enter the sub-group of Initiates** capable of direct communication with the Hidden Directorate. Since this communication is an indispensable element in the guidance of human destiny, means must always be provided to ensure that it is maintained. For this there exist the many ways that collectively form the Path of Accelerated Transformation.

We have traced the progress of these 'ways' up to the Middle Ages when there was an outpouring of knowledge and method East, South and West from the centre in or near Balkh. We saw that a sub-centre was probably established in Bursa in the fourteenth century and there was almost certainly another in Moorish Spain. We must now endeavour to follow the course of 'invisible history' through the centuries, remembering that its very nature is to leave no direct traces in our present moment.

Asia Minor and Spain were the two principal centres of diffusion of the traditional wisdom for the West. Bokhara in Turkestan was for centuries the centre of Sufi spirituality. There were centres in North and South India which have retained their spiritual preeminence to the present day. The easterly diffusion produced two points of concentration in China and Japan and possibly a third at Angkor.

* Accepting the etymological meaning of religion as the link with the Source.

** Cf. Chapter 41, Section 15.41.4.4.



We cannot hope to trace the operations of these various concentrations of Creative Energy that were, no doubt, associated with Schools of Wisdom, that is, with groups under the direction of men of the Psychoteleios Group. We shall, therefore, restrict our enquiry to South-West Asia and Europe, since the first continued to be the source of the action and the second its locus.

One of the rare outward manifestations of the traditional wisdom is the Divine Comedy of Dante Alighieri (1265-1321), a symbolical and psychological compendium of many of the principles that have guided us in our study of the Dramatic Universe. The tradition reappeared with Georgios Gemistos to whom we have already referred as a known link with the centre in Asia Minor. Many Italian painters of the fifteenth century, especially Botticelli, were Specialists of the Psychokinetic Group. Pico della Mirandola may have been a Candidate prevented by his early death from developing into the Initiate for which he seemed destined from childhood. Side by side with the schools of art, literature and learning, we must recognize the Franciscan Order as a probable link with the Great Work. St. Francis himself made two visits to Muslim countries during the Crusade and may be regarded as one of the rare Psychoteleios men to play a prominent part in visible history. From Italy, there was a diffusion northward which led to the movements in Germany and the Netherlands, some of which, like the Brethren of the Common Life, were outside organized religion and others, such as the great German mystical movement known as the Friends of God of the Oberland and associated with men like Meister Eckhart, were of dubious orthodoxy.

These movements were primarily spiritual and practical. We must also note the cabbalistic schools of Germany and the Netherlands with human representatives such as Cornelius Agrippa (1486-1535) and Jacob Boehme (1575-1624) and should probably also include Benedict Spinoza(1632-1677).

The names and movements we have cited cannot convey the true extent of these spiritual activity, nor its influence upon events. For one person known to be associated with such activity, ten are indirectly but decisively influenced. The influence is by no means confined to the impact of ideas or techniques. There is an even more important action in the concentration of energies. Since this is usually disregarded in assessing the significance of the spiritual movements connected with the Path of Accelerated Transformation, we must give special attention to its place in the Great Work.

The four 'Cosmic' energies, Conscious (E 4) Creative (E 3) Unitive

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(E 2) and Transcendent (E 1), are taken as being 'omnipresent' which means that they are not confined to any particular 'present moment' but

pervade all Existence. The two 'lower' energies of Consciousness and Creativity can be concentrated in individuals and groups, whereas the two 'supernatural' energies which can be called Divine Love and the Power of God are beyond the reach of any existential will. We cannot discuss the supreme energy by which the Being of the Universe is sustained—that is the Transcendental Energy E 1—because it is the Instrument of the Divinely Foreordained Cosmic Purpose that we can know only in its operations as Universal Law. The Transcendental Energy can be regarded as the vehicle of the Logos and also in Islamic terms as the Amr or Commanding Power of God. At this point, Islam offers a bridge to the doctrine of the Incarnation that is central for the Christian faith. The Unitive Energy has, according to our interpretation, been brought into a concentrated action with the human soul-stuff through the Incarnation and Passion of Jesus Christ—the Cosmic Individuality.

There are, thus, three great actions possible for mankind in the sphere of Cosmic Energies.

1. The Action of Divine Love for the perfecting of the soul and its union with the Cosmic Individuality.
2. The Action of Creative Energy for the completion of the soul and its union with the Universal Individuality.
3. The Action of Conscious Energy for the awakening of the soul and its union with the Personal Individuality.

All three actions are sought after in the Path of Accelerated Transformation. We can recognize them in the alchemical and theosophical symbolism of the Renaissance tradition and this indicates that among those who followed the tradition there must have been Psychokinetic Schools of Accelerated Transformation.

This is not the most important conclusion. The real significance of the traces left in art, literature, architecture and the beginnings of modern science is that they show men understood the need to transform and concentrate energies for the purposes of the Great Work. This understanding is one of the principal reasons for the contemplative life whether solitary or in monastic communities. It is expressed in the doctrine of the 'Transfer of Merits', according to which energy concentrated beyond the needs of a given community becomes available for the redemption of sinful souls.

This aspect of the Path of Accelerated Transformation was most

changes. An immense inertia binds the great majority of people, of the psychostatic orders of society, to their prevailing conditions of existence. Nevertheless, the influx of a new and immensely powerful influence can be recognized as having reached its maximum intensity in the year a.d. 1848.* In the midst of a tense and uncertain political and economic climate a new Master Idea began to find expression in ways that the contemporary world almost totally failed to recognize. Only those whose attention is directed to the total human situation are likely to discern the Message of the Age. For others, the Master Idea takes many different forms and may be expressed in ways so different as to appear contradictory. We use the term Synergy to express the notion of structural cooperation and we shall refer to the Synergic Epoch as that which began in the middle of the nineteenth century and will probably continue to dominate history for the next two or three thousand years.

The term structural cooperation should not require much explanation. It represents a stage of integration in which the parts of a whole surrender some of their independent existence, in order to participate in a higher gradation of being. The ideal marriage in which husband and wife are merged in a common soul exemplifies structural cooperation. The healthy organism is another example where we can see that more than functional unity is involved. The mind of humanity conditioned by a hundred generations of Megalanthropic individualism, and still dominated by the taint of Egoism in the soul-stuff, was far from prepared for the change. The premature explosion of the French Revolution, with the slogan Liberty, Fraternity, Equality, demonstrated the inability of people, however well-intentioned, to live by the principle of Structural Cooperation. Nevertheless, once the moment arrived, the new Master Idea began to influence the minds of men in new and unexpected ways.

As we look back over the short period of one hundred and twenty years since the change of Epoch, we can recognize several forms in which the Idea has already found expression. These include the doctrine of Universal Evolution and the Unity of Life, the theory of Relativity and the rejection of Absolutism, the belief in Cooperation and the need for large-scale organization and the gradual and so far scarcely perceptible transition from emphasis upon man's individual greatness to emphasis upon the greatness of man's collective destiny.

* This was the year in which a wave of revolution overcame nearly the whole of Europe. Within a year the revolutionaries—urging the destruction of the old class society and the implementation of democratic reforms — found themselves defeated after an enthusiastic triumph.

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The Synergic Epoch is a stage in the evolution of Mankind marked by a new kind of cooperation between levels, requiring and made possible by, new forms of communication and organization of human

societies. The responsibility for human destiny should in future be rather a matter of cooperation between the Orders of society than of the intervention by the Hidden Directorate. For this to be achieved great changes are required.

The Megalanthropic Master Idea had lent itself to absolutist doctrines in politics, philosophy, religion and even natural science.* The new Master Idea tends to encourage the synthetic search for structure rather than for analysis of situations in terms of things and laws. The belief in Natural Law gives place to confidence in the structural unity of the Universe, Life and Matter. This, in its turn, leads to relativistic doctrines and practices in all domains of human thought and action. The Megalanthropic quest of the Absolute led to contradictions and absurdities in thought and to monarchy, dictatorship and revolution in society. It was a passing phase in the development of the human mind and it is now giving place to a new phase made possible by the enhanced powers of communication and concerted action that are among our legacies from the Megalanthropic Epoch.

The synergic impulse began to make itself felt in the middle of the nineteenth century and it did this in so many different forms that no contemporary observer could possibly have recognized their common relevance. The difficulty of seeing what was happening and about to happen was enhanced by the inertia of the old ideas. Although the Doctrine of the Absolute may be said to have died with Hegel (1770—1831), it continued to haunt philosophy like a ghost until well into the twentieth century. Though untenable from the moment that translations of the Sacred Books of the East demonstrated to impartial European students the profound significance of all the religious traditions, and from the time that the literal truth of revealed scriptures could no longer be sustained in face of the progress of science from Copernicus to Darwin, absolute and exclusive claims continued to be made by nearly all the world's religions, including the most insignificant sects and cults. Although belief in the possibility of establishing an ideal social order could scarcely survive the collapse of monarchic rule and the social disasters of the Industrial Revolution, the realization that no functional reform could yield anything but relative and transient benefits to mankind did not come in spite of the accumulated evidence yielded by historical research and by current events alike.

* Cf. Newton's, 'Absolute Time flows uniformly on.'

The Master Idea did not take root by intentional action on the part of rulers or ruled, of scientists and philosophers, of reformers and religious people, most of whom, on the contrary, resisted it tooth and nail. Many were aware of the need for change, but this was so grievously

misunderstood as to produce results quite contrary to the synergic principle. This is strikingly exemplified in the Tai P'ing Movement in China, initiated in 1850 by a member of the Triad Brotherhood,* Hung Hsiu-ch'uan, who claimed revelations that were to found a new religion and a new society derived from Christianity and Taoism. The Tai P'ing rebellion cost China 20,000,000 lives and untold suffering until suppressed—chiefly by Gordon's 'ever-victorious army'. It would indeed have been a discerning eye that could see in these events the germs of a synergic structure; and yet, after a hundred years, we can see that the intellectual climate of the Far East was already moving away from the absolute and isolationist principles that had for so many centuries cut the region away from the rest of the world.

Another movement—on the face of it, a disastrous failure—was initiated in the Middle Eastern region that we have associated with the presence of the Hidden Directorate. This movement, now known as the Bahai Faith, was founded in 1844 by Mirza Ali Muhammad of Shiraz who was given the title of the Bab or Portal of Paradise. The martyrdom of the Bab in 1850, the cruel persecution of his followers and the remarkable teachings of his successors Abdul Baha and Bahaullah concentrated a force that has led hundreds of thousands in all parts of the world to believe that in the Bahai Faith all the religions of the world have found their consummation and their unity. The Bahai teachings are eminently synergic and may be destined to contribute an important element to the New Epoch. It cannot be said that Bahaism has made any considerable impression on those outside the faith. The same is true for a third movement which originated at the same time as T'ai P'ing and Bahaism; this was the Indian Brahmo Samaj, founded in 1828, which gathered momentum in the 1850's and 1860's, as a syncretistic fusion of Hinduism and Christianity. The greatest exponent of the synergic doctrine was the outstanding Indian Saint Ramakrishna (1834-86). Ramakrishna can be recognized as a forerunner of the New Epoch in his declaration that, having penetrated to the heart of Hinduism, Islam and Christianity, he found them to be one in their essence and their origin. His ecstatic

* The Triad was the Taoist Trinity of Heaven, Earth and Man, and it developed into a fanatical combination of starving peasants and scholars seeking the salvation of China in a dream-state part religious, part communist.

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love of the Divine Mother can be interpreted as a foretaste of an age in which the unifying role of the Mother of God will become apparent.

In Europe, a younger contemporary of Hung, the Bab and Ramakrishna preached to an unresponsive world the doctrine of existential relativity and the necessity of hazard. This was Soren Kierkegaard (1813-1855) who unexpectedly has come to be known as the founder

of the existentialist philosophies and the 'dialectical theology' of Karl Barth.* The significance of Kierkegaard lies not so much in his break with Megalanthropic notions of art, ethics and religion; as in his insistence upon human responsibility as a necessary and yet impossible contribution to the 'Stages on Life's Way'.** He saw that man is obliged to accept a responsibility for which he is not fitted, and this led him to reject Hegelianism together with all easy-going interpretations of the Christian message. The full significance of existentialism in all its forms is not yet apparent, but it can already be seen to be far more in keeping with twentieth-century modes of thought than with those of the 1840's.

This brings us back to another premature document: the Communist Manifesto of 1848, which, because of its association with the revolutionary movement, turned out to be a programme-statement of the Communist League founded in London in 1847. The Manifesto was on the visible level a reaction to the Industrial Revolution and the rejection of nearly all the attitudes of the Megalanthropic Epoch; but it was also an expression of a new and essentially synergic mode of thought. The responsibility of man for his own future and the necessity for stages in the realization of the communist society, though expressed in revolutionary terms, are ideas that correspond to the conditions of human progress towards the New Epoch. *** In so far as the Communist Manifesto was a declaration of the Synergic Principle, its contents have

* Cf. S. Kierkegaard, especially *Either/Or* (1843), *The Concept of Dread* (1847) and *Sickness unto Death* (1849). The characteristic feature of existentialism, whether philosophical (Husserl), protestant (Barth), orthodox (Berdyayev), or Semitic (Buber), that connects it with the change of Epoch, consists in (a) the emphasis upon Existence as the only starting-point in the search for real values and (b) the realization that reliance upon Existence alone must lead to despair. It is a revolt against the megalanthropy of the preceding Epoch and cannot be likened to the earlier subjectivism (e.g. of Descartes).

** The demands of the Infinite being irreconcilable with the conditions of finite existence we experience: 'the edification of the thought that before God we are always in the wrong'. Cf. *Stages on Life's Way*, Appendix: 'What it Means to Seek after God,' trs. W. Lowrie, 1940, pp. 462-3.

*** Cf. Karl Marx in *The Critique of the Gotha Programme* (1875) condemned the demand for suddenness and put forward the famous definitions of the two stages of socialism as 'to each according to his work' and of true and ultimate communism 'from each according to his ability, to each according to his needs'.

been widely accepted in the modern world. Its incidental character of revolutionary materialism is losing ground even in communist countries.

The synergic trend leads to the recognition of organization and structure as elements of Reality. It makes itself felt in the growing sense of human responsibility. The provision of conditions for synergic activity developed with amazing rapidity after the critical period of 1844-51. The latter year was that of the great Hyde Park Exhibition, when Britain threw open to the world her new discoveries in science, technology and industry. Progress in science and technology was accelerating under the influence of bodies such as the Royal Institution (Fd. 1801). The middle of the nineteenth century saw the founding of the London Mechanics' Institution (1823) and the Government School of Mines and of Science Applied to the Arts, university laboratories such as the Cavendish (1872) and specialist societies. The new spirit was strong in Germany—as in the great chemical centre at Gressen. In France the new Ecole Pratique des Hautes Etudes was devoted entirely to scientific research. Switzerland and Scandinavia were not far behind in the new wave of organization and reform. Under leaders inspired with the new synergic spirit such as Davy, Faraday, Liebig and Pasteur, nineteenth-century science was transformed from megalanthropic isolation to a synergic cooperation. The solitary men of genius of the eighteenth century, who conducted their experiments either in strict privacy like Henry Cavendish (1731-1810), or with the help of unskilled assistants like A. L. Lavoisier (1743—94), gave way to the activity of organized teams or schools. The resulting transformation was the principal factor in the immense acceleration of scientific progress since 1850.

In industry and commerce, the private manufacturer or trader was losing ground to the limited liability company.* The Age of Adventure reluctantly gave way to the Age of Management. With these changes, came the increasing assumption of organized responsibility by the State for services which in previous centuries had been provided for by individuals or guilds.

So much for the indications that a new Master Idea was taking possession of the human mind in the spheres of practical life. We can detect a similar movement in the development of new basic concepts of which Evolution, Relativity and Probability are the most important. The History of Mind shows that such powerful notions arise within two or

* The joint stock company was given legal recognition with the Limited Liability Act of 1855 a few years after the start of the New Epoch. The Companies Act of 1862 established the synergic principle as a permanent feature of Industrial, commercial and banking operations and was copied in all parts of the world.

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three generations only at a change of Epoch. The impact of the Scientific Revolution of the twentieth century upon the entire life of humanity has been emphasized so often and in so many ways that we need not elaborate it here.

The change of climate was certainly not confined to science and technology. It was, indeed, most clearly apparent in Art. During the preceding Epoch, there were great periods of creative art followed by periods of decadence and renewal; but it was generally possible to regard the cycles as alternations of romantic and classical influences with the common search for the Absolute. In the second half of the nineteenth century, the Master Idea of the Synergic Epoch began to influence painting, music and literature. The Impressionist School of painters broke away from both the conventions of romantic and classical art to show the essential unity of the artist and his subject matter.

The outstanding characteristic of the aesthetic revolution of the twentieth century has been the discovery that the artist, the work of art and the spectator can be brought into such an intimate unity, that creation and enjoyment are made one whole. The separation of the three elements was typical of the Megalanthropic attitude that separated man from nature and from his fellow-men. In earlier Epochs the separation had not yet occurred; but this is not the same as the synergic reunion of the separated. In much modern art, the work of art in isolation from the artistic experience is nothing at all. The same is true of the best modern poetry and prose writing. Modern music is in process of breaking away from the megalanthropic exaltation of the composer and virtuoso to search for the shared experience in which personalities cease to dominate the situation.

This is not to say that modern art has achieved the goal, or even that the goal is recognized by those who seek it. The action of the Master Idea of the Epoch is for the most part without the cooperation of the mind that gives it external form. The work is in the Intellect where Consciousness and Creativity coalesce to produce the Pattern or Zeitgeist of the Moment. From this pattern, the aesthetic expression draws its inspiration.

There have been other, less noticed, but very significant developments outside the fields of economics, politics, science, art, philosophy and religion. One example is the rise of Spiritualism which, in its simplest form, is the belief that two-way communication is possible between the living and the dead. By a remarkable coincidence—or perhaps it is evidence of the pattern of human destiny—modern spiritualism dates from 1848, the very year to which we assign the transition of Epoch.

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The Fox family in Hydesville in up-state New York began in that year to receive spirit communications by the strange technique of 'table rapping'. From this unlikely beginning, the spiritualist movement has grown, until, according to a recent unbiased estimate, it has more than fifty million followers throughout the world. Derivatives of spiritualism have led to the establishment of 'Psychical Research' and 'Parapsychology' which are regarded by many authorities as border-line sciences deserving of serious investigation. The significance of these developments is two-fold. In the first place, they are synergic in character. Spiritualism claims to make a contribution not only to all religions, but to all human experience and to be a bond that will eventually unite all men, not only those living on the earth but also those in discarnate states of existence. The second point to be noted is the evidence of the emergence of new powers hitherto latent or developed in a few, rare Specialists, of overcoming the limitations of space and time and of communicating with the 'future'. Mediumistic and other parapsychological phenomena, if established as authentic, would compel us to abandon notions of space, time and matter that have been held almost without criticism for centuries. They would also strengthen our confidence that the hopes of the Synergic Epoch may be fulfilled, for it must be evident that the structural cooperation of all mankind cannot come by the development of Function alone, and that the transformation of Being must include the power of direct communication between minds. We should here note the change in understanding of the Present Moment that is implicit in the doctrine of structural cooperation. The belief in the essential separateness of human selves or 'monads', united only in God, dominated the Megalanthropic Mentality. With loss of religious faith, the separateness became complete. The Epoch was thus peculiarly sensitive to the impermanence of existence in time and space. It is not hard to see that the fear of dissolution and the consequent emphasis upon the destructive rather than the creative character of time were shared by thinkers, poets and artists of the Megalanthropic Epoch. The promise of religion, to show man the way to immortality or the liberation from time and change, continued to exert a hold on men until the Master Idea itself had spent its force. In the New Epoch, it is evident that religion must offer a different hope more in keeping with the Synergic Ideal.*

* It is noteworthy that this hope has always been included in the Christian profession of faith in the dogma of the Communion of Saints. This dogma was largely incomprehensible to theologians and laymen alike so long as the human soul was regarded as a self-contained entity capable only of external communications.

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In a very remarkable manner, the Synergic Epoch has transformed our notions of time. Geology and Cosmology have taught us to think in millions and even thousands of millions of years. Relativity requires us to see time no longer as an independent entity containing and controlling events, but as an integral part of the framework of existence inseparable from space, energy and fields of force. This could not remove man's fear of death nor has it noticeably changed our ways of thinking about time as independent of our experience. As the great majority of people had lost the religious belief that Time is subject to the Power of God, the need to find some other guarantee of permanence gave spiritualism its peculiar hold upon the minds of so many people. Another and quite different way of escape was offered by the Doctrine of Universal Progress. Men have been taught to think and even to believe that the impermanence of private existence can be compensated by the permanence of the race; and obvious present ills, by the guarantee of future goods. These and other searchings for a new kind of hope can be seen in perspective as a new stirring of the human spirit and a preparation for a further stage in the development of the human mind.

17.49.9. The Present

The assignment of the transition to the Synergic Epoch to the seven years from 1844 to 1851 is somewhat of a convention. There was no sudden or spectacular 'End of the Age' confidently predicted in so many quarters during the preceding half-century. The history of the end of the nineteenth century was visibly the outcome of trends already established long before. The domination of Europe over the rest of the world was complete, economically and politically, with the sole exception of North America which was already gathering its strength to take its turn of leadership. Culturally, the dominance was not less marked than upon the material and social levels. The whole world was abandoning its own traditions to copy or to emulate those of Europe. It was, above all, European science that was transforming the world scene. At this time, it first began to be suggested that science was destined to supplant religion as the final arbiter of human destiny. The impact of the visible achievements of Natural Science had much the force of the miracles of the Age of Revelation. Men saw happening before them incredible things: vast sources of power released, new means of locomotion and communication, a prodigious expansion of productive capacity, the conquest, or at least the promise of conquest, of infectious disease. All these things opened for the common man opportunities previously reserved for the fewest of the few. With it all, there was an

intoxicating sense of opening the casements of infinity to gaze upon worlds both minute and vast, the very existence of which had lain unsuspected by our grandfathers. Small wonder that men began to 'believe in' science without any clear understanding of what their faith amounted to, beyond the expectation of more and more marvels some at least of which would make life more secure, more comfortable and spread its benefits more widely.

The First World War 1914-18 was a shattering disillusionment: especially for those who were looking forward to an indefinite period of European domination of the inhabited world. The war was, for Europe, an internecine suicide pact that in four years destroyed the supremacy slowly built up through the preceding centuries. The destruction of eight million lives, mostly in early manhood, should have brought home to the survivors the helplessness of man before his own folly. The immaturity of the human mind stood revealed for all to see, but such was the inertia of the Megalanthropic idea of human greatness that few were able to learn the lesson. The Second World War went some way towards completing the destruction of the vestiges of the illusion that man is ready to assume responsibility for his destiny. It certainly gave a powerful impetus to synergic developments of which the United Nations (founded with the signature of the charter in San Francisco on June 26th, 1945) is the most spectacular if not the most successful. Great organizations, little known to the general public, such as the Universal Postal Union, the World Health Organization, the International Telecommunications Union and the International Monetary Fund, which have made possible extremely complex operations involving the welfare of the entire world population, have come into existence during the twentieth century. They are the tangible evidence that human history has entered upon the Synergic Epoch.

The changes that have taken place in this period have been so contrary to what was expected in the nineteenth century that their significance is still not grasped. Two world wars and a succession of economic crises, the sudden conversion of the colonial empires into clusters of independent states and the prodigious transformation in the speed of communication and transport have combined to create an entirely new world picture. The conclusion plainly to be drawn is that we must abandon the Megalanthropic image of individual man as an end unto himself. We see our dependence upon a complex network of highly organized societies, that can exist only at the price of surrendering many of the claims of personal identity.

The change of climate has been very evident in the religious life.

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Throughout the nineteenth century, intolerance, sectarianism and isolationism were the outstanding vices of nearly all religious communities and institutions throughout the world. These defects came from a false interpretation of the Master Idea of the Megalanthropic Epoch, which encouraged an egocentric attitude towards every kind of situation. We have seen that egoism is far deeper than the Epochal ruling concept and goes back to the time when the human mind was endowed with creativity and man misled into believing that his creative powers were his own private possession. Nevertheless, Egoism certainly manifests differently in different ages. In the Hemitheandric Epoch, it took the form of disregard and even contempt for the weak, resulting in the fiendish cruelties that so deeply shock us as we learn of them from historical documents. This is characteristic of emotional egoism. In the Megalanthropic Epoch, egoism became predominantly intellectual and manifested as arrogance and the conviction of 'being in the right'.

This characteristic of Megalanthropic Egoism has begun to dissolve and we can see in each of the great religions of the world a tendency for sectarianism to give place to a genuine search for common understanding. Intolerance is less violent and certainly less vocal: new and unforeseeable attitudes have begun to arise as between groups that even as late as the first decade of the twentieth century regarded one another as infidels destined for Hell or the endless cycle of hopeless Samsara. It is by no means easy to account for the transformation, which has occurred in spite of the opposition, both active and passive, of the conservative elements that still hold the reins of power in every religious community. Nor can the change be convincingly ascribed to the work of reformers or modernizers. The religious communities of the world are still far from seeing the ultimate extent of the transformation that has started and cannot be reversed. Some of the most firmly established beliefs in theology and anthropology will have to be abandoned and when they go the beauty and the glory of True Religion will begin to manifest as it has never done hitherto. It will become apparent that the conflict between belief and unbelief came, not from an objective dichotomy of truth and falsehood, but from equally erroneous attempts to interpret human experience in Megalanthropic terms.

This can be seen in the conflict between religion and science that has marked the first century of the New Epoch. As religion has everywhere seen God in human terms, so has science seen Man in divine terms. Religion has made God in the image of man and science has made man in the image of God. Modern science grew out of the axiom that there are Laws of Nature that man can understand and use for his own

purposes without limit. The axiom, even if disguised in less arrogant terms, ascribes to man the attributes of Deity. Closely associated with it

is the attempt to avoid the unacceptable notion of a Higher Intelligence by hypostatizing Nature. There is scarcely a philosopher of science or exponent of scientific theories that does not at some point treat 'Nature' as intelligent or purposeful. This is as true for professing atheists as for deists.* It was by no means obvious that scientists were 'creating Nature in their own image', until it was noticed that the 'Laws of Nature' prove to be, in the main, projections of human forms of perception and thought.

The nineteenth century expectation that simple mechanistic explanations of all the phenomena of nature were on the way, collapsed under the impact of new discoveries—especially those that demonstrated the inadequacy of the classical notions of space, time, matter, causality and the very nature of 'explanation' itself. Among the crucial steps were: J. J. Thompson's demonstration that electricity is atomic and that electrons are minute compared with atoms; the Michelson-Morley experiment leading to Einstein's relativity; Planck's quantum hypothesis and the resulting development of quantum mechanics. These and related discoveries have led to the present strange situation in physical science, where man sees that operations are possible that do not fit into any imaginable picture of the physical world. Physical science presents, in 1965, a very different picture from what it offered in 1905 when Einstein published his famous *Zur Elektrodynamik bewegter Körper*. The changes have been invariably, and more and more unmistakably, away from simplicity. Not only is this an era of relativistic physics: but it is one which has seen the end of all expectations that the universe can be reduced to a 'cognizable system'.

What is valid in physics, is no less true of the biological sciences. As more and more detailed evidence of the reality of evolution comes to light; it also becomes more and more apparent that no simple mechanism will account for it. The truly marvellous discoveries of biochemists in the field of protein chemistry and especially the mechanism of biological synthesis and the hereditary transmission by genes and nucleic acid derivatives have only served to demonstrate the uncanny complexity and unexpectedness of the structures. We have discussed the origin of life in an earlier chapter, ** and concluded that all the data

* Of whom the most notable example in recent years has been Father Teilhard de Chardin, S.J. The theory of Evolution by random mutation and natural selection is a survival of the Megalanthropic belief in 'Natural Laws'. We have seen in Chapter 44 that it is no longer tenable.

** Cf. Chapter 44, Section 17.44.2.

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are consistent with the hypothesis of Intelligent Direction. This hypothesis would have been totally repugnant to biologists of the late nineteenth century and it runs counter to the conservatism that still holds us back from facing the complete revolution that must come in all our thinking—scientific as well as religious and social—before we can rightly call ourselves children of the New Epoch. Although scientists are still unwilling to consider the idea of non-human intelligences of a far higher order than our own, the idea is closer at hand than it was sixty years ago. One cogent reason is that the entire structure of life presents all the characteristics of intelligence and creativity that we find in the most brilliant human inventions: but multiplied a hundred- or a thousand-fold in depth, comprehensiveness and coherence. It has become totally implausible to attribute these brilliant achievements to blind, purposeless chance; but it is no solution to hypostatize 'Nature' without admitting that this must lead to the notion of Directive Intelligence.

The revolution against Megalanthropic illusions has already gone far ahead in the third domain to be considered: that of psychology. The undermining of the Megalanthropic fallacy of the independent human personality can be dated from 1819 when Schopenhauer (1788-1860) published *The World as Will and Idea*. Out of the pessimistic philosophy came the professed optimism of Hartmann's (1842-1906) *Unconscious** and then the impact of Sigmund Freud's (1856-1939) doctrine of the 'Unconscious Mind'. By the early years of the twentieth century, it was already clear that anthropological notions that had remained almost unchanged since they were developed by the Greek schools of philosophy would have to be abandoned. The assumption that man, in a normal state of health, is responsible for all his actions, had become an axiom of ethical theory, the foundation of criminal law and the presupposition of the political doctrines of universal suffrage and responsible government. It had been adopted uncritically by Christian theologians in spite of being in evident contradiction to the Pauline doctrine of Grace.** A more spiritual interpretation of the irresponsibility of the human psyche was given by Gurdjieff in his theory of man as 'asleep' and 'mechanical', but nevertheless capable of 'waking up' and acquiring

* *The Philosophie des Unbewussten* was published in 1869 and was followed by a flood of books in which he sought to reconcile philosophy with science by the principle of evolutionary optimism, that being teleological in its very foundation can be regarded as a contribution to the expression of the New Master Idea. Nevertheless, Hartmann refused to admit the notion of non-human Intelligence. Cf. his *Selbstzersetzung des Christentums und die Religion der Zukunft* (1874).

** The doctrine belongs to the Epoch and appears not to have arisen before the fourth century B.C. The older notion of retribution need not imply responsibility as is obvious from Greek drama as exemplified in *Oedipus*.

his own T. Gurdjieff's picture of transformation as coalescence belongs to the New Epoch.

The personal and social consequences of the realization that man is not a simple being with an unique, undivided will and always conscious during his waking hours, have only recently begun to make themselves felt. Though they have scarcely penetrated into religious or philosophical thinking, they have led to profound changes in the treatment of criminals and socially maladjusted people. Their bearing upon the condition of 'normal' human beings has resulted in a very strange situation. It is widely recognized that people can be influenced through their unconscious processes and modern commerce and politics are largely based upon 'brain-washing' procedures of varying thoroughness. And yet ostensibly man continues to be regarded as a conscious being, able to make judgments and act upon them by his own intention.

The Greek humanistic conception of every human psyche as an unique, unalterable entity, has been responsible for theories of the immortality and infinite worth of the soul. These theories, which have played an important part in the development of Christian doctrine, have no sound scriptural authority and they lead to impossible consequences. The new anthropology developed in Volume III may be lacking in coherence and simplicity, but it looks forward to the New Epoch in emphasizing the necessity for structural cooperation both within man's own nature and also in his social organizations. One of the great weaknesses of the anthropology of the past Epoch was its tendency to isolate man from nature. Even that nature which is closest to human life—the Biosphere of our planet—has been treated as something alien, to be conquered and turned to human use. The true situation of the human essence as expressed in the doctrine of the Reflux of the Spirit* has been almost wholly disregarded. Indeed, even at the present time, there are no signs of a general change of attitude. Man regards himself as entitled to exploit, destroy and disfigure nature upon this planet and even entertains the hope of spreading the wings of his space-ships to go and do the same on any other planet that will offer suitable conditions. It seems probable that the sense of Biospheric Responsibility must wait for some later Epoch. It will be a great step forward in the development of the human mind, if our race succeeds in reaching a conviction of global unity and interdependence translated into a total human society on the earth.

* Which is the same as Gurdjieff's 'Reciprocal Maintenance of all that Exists' combined with his Iraniranumange (All and Everything, pp. 759, 774-5). Cf. Vol. II, Chapter 35.

Synergy implies not only co-working within each level of history, but also an interpenetration of different levels. At the present time, there is little cooperation between groups concerned in economic, edaphic and vegetative activity and those active in the fields of science, society and religion.

The interpenetration of histories has been in progress since the middle of the nineteenth century. Before that time, there were sharp divisions between economy and agriculture, between social and political history, between science and philosophy on the one hand and religion on the other.* The human race had no idea of its own antiquity nor of the sources and origins of the human body. We are now as certain as we are of anything that man has existed on the earth for a million years and more and that he arrived by way of an enormously long evolutionary process that began more than a thousand million years ago. This discovery should have made man aware of his solidarity with nature — but it has not even made him feel one with his fellow men. We all realize that we are living in a changed world, but the significance of the change is felt rather than understood. Nearly all attempts to forecast the future of our race are based upon the probable rate of advance of science and technology and the possible achievement of world government. Some thinkers, such as Huxley and de Chardin, have speculated upon the part that man will be able to play in 'directing the course of Evolution'. Others have suggested that man may be developing new powers of perception and thought. But no one seems to take into account the central problem of Egoism and its hold upon the Self-hood of man.

We have seen the very important part that Information Theory is likely to play in reconciling scientists and philosophers to the belief in Demiurgic Intelligences.** The interpretation of order-disorder in thermodynamic terms, when given quantitative expression in terms of information theory, makes it as certain as anything can be that very high degrees of order, such as we find in life on the earth, must have been the work of intelligent agencies. We repeat this argument here although it has been fully developed in Chapter 44, because it is crucial for the next stage in human destiny. Man has reached the limit of the illusion that he is alone in the world of Intellect, and the time is rapidly

* The separation of theology and philosophy reached its height with Hegel who completely ignored the essential elements of the Christian faith and yet claimed to have elucidated the nature of the Holy Trinity and the status of the Christian Church. Cf. *Lectures on the Philosophy of Religion* (Collected Works, Vols. I and II) and the unfinished *Proofs for the Existence of God* (1831).

** Cf. Chapter 44, Section 17.44.2.

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approaching when the need for structural cooperation with the Higher Intelligence will become apparent to all.

This will not come until we can admit the operation of a Structured Intelligence of a higher order than that of the unaided human mind. This will probably be brought about through the realization that mechanistic schemes fail everywhere to explain the observed phenomena. It will be a very significant moment when biologists acknowledge that mechanistic explanations have broken down, both in accounting for the origin of life and the evolution of species, and also in the face of the evidence of intelligence in the construction of every living thing. Once this step is made, it will not be so hard to admit the reality of the Great Work, and with it the existence of Intelligences higher than human with whom we must learn to cooperate.

It is not to be expected that such a total surrender of man's pretensions to self-sufficiency will easily be made. We may expect even more extreme claims if man succeeds in producing living tissue in the laboratory or in exploring the planets and finding there no life comparable in development to our own. But such claims will ultimately fail before the growing realization of their absurdity. Man's inability to control events on any scale is becoming increasingly obvious and there is even a strong tendency towards an unjustified pessimism as to the future of the human race.

This pessimism seems to be most strongly expressed in modern art and literature. But we should be careful to observe that the activity of the artist exerts a salutary and most necessary influence. We can see this in every branch of literature, music, sculpture, drama and painting. We are witnessing in the twentieth century an irreparable shattering of the Megalanthropic image. It is enough to mention J. P. Sartre and Franz Kafka, Salvador Dali and Pablo Picasso, to see that the revolution in art has outstripped that in most other fields. In music, the development of jazz gave expression to the revolt in a way that escaped the neo-classical trend of a Stravinsky or a Hindemith, or the experimental schools such as those of A. Schonberg and the followers of Webern.

Mankind, at the Present Moment, is aware of an immense urge to find totally new forms of expression and new modes of action. The Technological or Managerial Revolution is creating a new society that is unable to speak for itself and takes refuge in the clichés of a past age. This new society sees that the problems of the future are gathering momentum. The situation would be alarming indeed, if the malaise of

the world were dependent solely upon human agencies for its cure. According to our reading of the situation, the time has come for a fresh

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intervention of the Demiurgic Intelligences acting under the Direction of the Cosmic Individuality. This, or its equivalent stated in different terms, is apparent to every discerning eye that surveys the two decades, from 1945-65, that followed the Second World War. The period began inauspiciously. The gruesome end to the war in Germany and the horror of the first atom bombs left the world stunned and dismayed, longing above all that there should not be a third World War. The blunders of the Potsdam Conference of June 1945 and the resulting bitter hostility between the U.S.S.R. and the U.S.A. were a poor start for the United Nations.* The wonderful surge of brotherly love and mutual charity that occurred among all the peoples who suffered worst in the bombing and hardships of war, did not endure beyond the first year of peace. It was succeeded by a scramble for material satisfactions that demonstrated to every impartial observer the persistence and universality of the egoistic taint in the human soul-stuff.

By 1950, a very dangerous world situation had developed. Fear and distrust had led the two most powerful nations of the world into the ominous 'arms race' that in the past has always presaged the outbreak of war. In Washington, the doctrine of early 'preventive' war was openly and vehemently advocated by soldiers and politicians. In Moscow, an immense army was held in readiness to invade western Europe at the first sign of the expected economic and political collapse of France and Italy. The crisis in the Far East was even more desperate. The Korean war of 1950-1 and the French wars in Indo-China postponed disaster, but did nothing to relieve the growing tensions.

The seriousness of the situation was apparent to the best informed observers, many of whom had lost hope that war could be averted. The appalling prospect of atomic warfare was undoubtedly a deterrent factor; but no guarantee against a disastrous accident. Looking back after a mere fifteen years, we tend to forget the sense of doom that hung over the world. Between 1950-1 and 1951-2, the U.S.A. increased its military expenditure from 55.3 to 68.5% of the total budget. The Soviet Union in the same period increased by 35% the proportion of industrial manpower wholly engaged in preparation for war.

Warlike actions and serious errors of judgment such as had precipitated two world wars in 1914 and 1939 occurred also in 1950 and 1951. One such critical moment was the crossing of the 38th parallel in Korea

* The charter of the U.N. drafted by Jan Smuts was signed on June 26th 1945. Smuts himself came away from San Francisco with serious misgivings and declared later (cf. J. G. Bennett, *Witness*, p. 235) that the only hope for the world lay in the restoration of European supremacy for at least a century.

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by American troops. After the disastrous retreat, General MacArthur was advocating open war with China and President Truman issued a statement that looked like a declaration that the atom bomb would be used against Manchuria. The entire world was in disarray. The Chinese invasion of Tibet on October 20th had demonstrated the helplessness of the United Nations in the face of determined aggression. The deepest misunderstandings, based upon almost total ignorance of what was happening, obtained between Truman, Stalin and Mao Tse-Tung.

Out of this perilous situation, the world was led slowly, painfully and uncomprehendingly back to the paths of peace. The next fifteen years have seen crises such as Suez, the Berlin Wall and Cuba; but the risk of war has steadily diminished, until now, in 1966, other dangers to the human race such as widespread economic collapse and revolution in the under-developed countries; are seen to be even more ominous than the likelihood of armed conflict.

How did this transformation come about? The human elements have not changed. No individual of superior wisdom and courage has taken charge of the situation, which in any case could not have been controlled from any one capital or country. The arms race did not slow down until after the worst tensions were released. Indeed, national susceptibilities have grown more acute as the dangers receded and countries not previously in the atom-bomb club began to develop their own weapons.

We have not access to the detailed and mostly secret information required to demonstrate the impossibility of ascribing the detente to the wisdom and courage of the world's rulers. The true course of events may not become apparent until long after the present generation has left the scene. We shall, therefore, simply set down our own conviction that no other explanation is possible except that of intervention by the Hidden Directorate aided by Demiurgic Intelligences. The destiny of mankind did not require a third World War and so, in spite of human foolishness, total war has been averted.

If we had to judge by political history alone, this conviction would be mere guess-work: but we can observe a synergic action in literally all departments of human life. One illustration, already outlined, must suffice: the ecumenical movement in Christendom and the rapprochement between the Christian and non-Christian religions. The spectacular change of heart that has been evident in recent years has occurred in spite of the conservatism and narrowness of outlook of the leaders of all religious communities. It has been convincingly ascribed by these leaders themselves to the working of Divine Grace.

Our conclusion can be carried further to the recognition that the

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twentieth century of the Christian Era has witnessed, and is still in the presence of, an invisible war between the Synergic and the Disruptive forces in human nature. This is by no means the same as the so-called 'cold war' between the capitalist and communist powers. It is a war more intimate even than civil strife or the struggles of conscience by which movements of reform are initiated. It is a war of the mind, in which Time and Hyparxis are the antagonists. It is a war in which human responsibility for human destiny is at stake. We may either literally or figuratively call it a war between opposing Demiurgic Intelligences, the ones seeking to help man forward and the others striving to hold him back. The war is not being waged by man against man upon an external battleground. The battleground is within the human soul-stuff itself.

According to our reckoning, between thirty and forty thousand years have passed since the human mind-stuff was endowed with creativity and became soul-stuff. We have postulated the operation of Great Cycles in each of which mankind undergoes a deeply significant transformation. The postulate is supported by the scantiest evidence and may eventually prove to have no substance. Nevertheless, it is useful as an aid to setting our world-picture in a perspective commensurate with the well-established and now universally accepted antiquity of

man.

According to this supposition, we stand at the conjunction of two transitions. One is the change of Epoch that began, on our interpretation, in the middle of the nineteenth century. The other is the start of the second half of the Great Cycle that began twelve thousand five hundred years ago with the Epoch of Withdrawal Language Creation.* If this supposition is anywhere near the truth, we are passing through one of the most significant moments of human history.

* Cf. Chapter 47, Section 17.47.2.

Chapter Fifty THE NEXT AGE OF MIND

17.50.1. Visible History

The Present Moment of mankind has now started to acquire a coherence upon levels that have hitherto been divided into many partial

presents. We are living, in the second half of the twentieth century, in a present moment that, as regards both extent and content, is beyond the power of any individual mind to grasp and to integrate. The visible, and indeed obvious, consequence of this is that the human situation is out of control. It can be compared to an explosion that cannot be contained or directed. This assessment, though based upon ascertainable facts, is by no means recognized by all, nor is it accepted by those who do recognize it. We must, therefore, consider the visible levels of history with special reference to the question of man's ability to direct the course of events.

Starting with material or economic history, we see that mankind is marvellously well equipped technically to solve almost any kind of material problem that is likely to arise within the next hundred years. Never in known history has mankind disposed so freely of the four material energies. Moreover, progress in science and technology is accelerating so that we now have at our disposal a great excess of techniques over and above what we can use in practical life. In science, engineering, industrial production and distribution, there is no shortage of new discoveries calculated to lighten the burden of labour, to facilitate travel and communication, to provide shelter, clothing, refreshment and entertainment beyond the dreams of earlier generations.

On this showing, man should be free from problems on the level of natural history—which concerns his action in the material world.* In fact, the situation is totally different, looked at in terms of the economic ground. There is an endemic crisis that grows more and more intractable from decade to decade. This is due to the imbalance of economic advance as between the highly industrialized countries of the West and the euphemistically-called 'developing' countries of Asia, Africa and South America, which between them contain four-fifths of the world's population. In spite of the efforts of governments and inter-

* Cf. Chapter 43, Section 16.43.5.1.

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national organizations to advance development in these regions, they continue to lose ground. The annual increase in material wealth per head of population in the United States is ten times greater than it is in India or China, which between them have nearly one third of the people of the world.

Other economic problems, such as those of currencies, the control of cycles, raw materials, energy supply, the redeployment of labour made redundant by technical progress, though serious, are certainly not insoluble. This is because they are not explosive, that is, self-propagating; whereas the problem of imbalance aggravates itself. Imbalance is like a forest fire, that can to some degree be contained but

not controlled until great destruction has reduced the supply of combustible material.

This is not to say that the economic problem is inherently incapable of solution. If the industrial nations were to refuse themselves material advances until all other people had been brought to the same standard of living and if, in addition, the educational resources of the advanced countries were made available equally and without distinction to all people of all parts of the world: the situation could be put right within a generation. But no one could seriously propose such a solution. People in general are unwilling to give even of their surplus to those in need. Only very few would be ready to deny themselves the fruits of their own labour and inventive genius so that others should enjoy them. Thus, the economic explosion is due to the immaturity of the human soul, which cannot do much to overcome the egocentric impulse. This is true of nations even more than of individuals.

When we turn to the ground of political history*—that is the history of man's connection with the soil and the production of food—we find another explosion. The 'rape of the earth' is a theme brought home in many striking books** and the facts are not disputed. The soil is being overworked for food production. Fertile areas are being made barren or used for industrial development. A world shortage of fresh water threatens within two or three generations. This is partly due to deforestation, which also results in irreparable damage to the soil in many tropical areas. The explosion has not reached its maximum violence and much is being done to contain it; but once again there is an inherently intractable element that comes from humanity's demand for more and more food and other vegetable products, especially cellulose.

* Cf. Chapter 43, Section 16.43.5.2.

** Such as : *Silent Spring* by Rachel Carson.

The third level of history is grounded on population history.* Here the explosion is apparent to all and a present source of anxiety: it is nothing less than the growth of the world's population which is proceeding at an accelerated pace. Within the present century the population has more than doubled, and if no catastrophe intervenes, it will reach 6,200,000,000 by the end of the century. Apart from the obvious risk of failure to provide food for so vast a family, there are quite intractable problems of education, social organization and living space.

A very remarkable feature of the population explosion, is that it could obviously and immediately be brought under control if people

were prepared to restrain their sexual impulses. Yet no one in his senses would suggest that such a solution is worth proposing. Even those who do not wish to have more children are unable to regulate their sexual life so as to keep the numbers down. The main difference here between the advanced and the backward nations is that the former have available a variety of contraceptive procedures that enable them to gratify their sexual impulses with relatively small likelihood of increasing the population. Here then we have another instance of a world-wide explosion that is evidently not under human control.

On the vegetative level, there is another significant uncontrolled trend. This is due to the advance of medical science and hygiene that has enabled large numbers of men and women to survive and breed who would, in a natural society, perish from disease or mental incapacity. Under present conditions, human breeding is anti-genetic, tending to perpetuate degenerate forms. Not only could selective breeding remove this condition; but it could within a hundred generations produce a race of super-men, physically, emotionally and intellectually far superior to modern man. Yet no one would dream of suggesting that such a way of life could be introduced anywhere on earth, either voluntarily or by compulsion.

The germinal essence corresponds to the goal of political history. It is the struggle for survival and domination and it is also the response of mankind to the need to change his situation and evolve towards a fuller way of life. The germinal essence is the ground of the history of the mind of man.** Political history is that of heroes and leaders, of dynasties and oligarchies. It is the history of war, conquest and the subjugation of peoples and the forced migrations that result from the struggle for survival. But it is also the history of the unquenchable thirst of mankind

* Cf. Chapter 43, Section 16.43.5.3.

** Cf. Chapter 43. Compare Sections 16.43.5.2. and 16.43.5.4.

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for self-realization, though this is looked for on the level of the mind rather than that of the soul.

Until the present century, political history has always been regional. Even world conquerors, like Genghis Khan, or world traders, like the Arabs and the English, did not influence political life far beyond the regions to which they themselves could penetrate. We are now in a new situation where all political history is fused into world history. Material, edaphic and vegetative influences each make their contribution to this interpenetration. Communications, industrial and commercial techniques, the new weapons of destruction, the shortage of land and water,

growth and population combine to intensify the interaction of political histories. But there is also an inherent political explosion. The germinal essence enters man's mind to give force to the Reactional Self with its tendency to desires and aversions, to exaggerate all dualistic features of man's experience. From this comes the bellicosity that man inherits from his animal forebears, but converts into useless and destructive manifestations under the influence of his human egoism. These tendencies remain in the Soul-Stuff Pool and all men have their part in them. So long as human groups lived in relative isolation, they could be neutralized by local conflicts or feuds controlled by social custom. Only the structuring influence of more advanced cultures, and especially of religion, produced large-scale and prolonged states of war. Even these were confined to manifestations associated with the driving force: as exemplified in the case of religion which usually spared the sources of life.

Now a new kind of situation has arisen. The structuring influence of mass media of communication and the pressures of economic, edaphic and population stresses act upon all people without discrimination. In the present century, mankind has witnessed two world wars and a prolonged state of world tension. Despite the concerted efforts of governments and people, driven by the fear of nuclear war, the political situation grows more complex and difficult to handle from decade to decade. No one dares to claim that it has been brought under human control. This is the more remarkable inasmuch as fear of war and longing for peace are shared by more than three thousand million people and rejected by very few indeed.

We come next to the most remarkable explosion of our time and that is the growth of social organizations. This, according to our scheme of essence classes, corresponds to the animal level. It is remarkable because of its connection with the Master Idea of the Synergic Epoch. Structural cooperation is playing a decisive part in the transition from the Megal-anthropic individualist to the 'organization-man'.

D.U. IV—15*

In every field of human activity, there is a tendency for organizations to grow larger and larger. In spite of restrictive legislation, industrial and financial concerns are constantly growing. Smaller organizations cannot hold their own against the massive strength of the large corporation. Organizations can reach the scale of nations. Governments and International Agencies grow and acquire more and more power. All this would be in keeping with the Synergic spirit, if man were in control of the situation. Closer inspection shows that there is only the illusion of control. Beyond a certain size, an organization either breaks down or becomes an independent entity living its own life: no longer being controlled by, but controlling, those who purport to administer its affairs. Men become the slaves of the organization they appear to control. This

is the more remarkable inasmuch as those who administer the very largest successful organizations are the most highly creative men of the age and the most effective in taking difficult decisions. There is no escape from the situation as the welfare and even the lives of millions may depend upon keeping the large organizations going. All the intelligence and creative energy that is drawn into this activity has no result except to feed the explosion.

In former times, man's inability to control events was either taken for granted or else it seemed to be disproved by the success of 'Great Men' in achieving their aims. Now it is no longer possible to ignore a situation that affects everything and everyone in the world. We may recall H. A. L. Fisher's verdict on History: 'I can see only one emergency following upon another as wave follows upon wave, only one great fact ... in the development of human destiny: the play of the contingent and unforeseen.'*

Next we come to the characteristic human history of the mind. It is the history of culture and of its transmission from generation to generation. In our time, this level of history has been dominated by the explosion of scientific research. The manpower absorbed by science in the most advanced countries constantly outstrips supply. The effectiveness of research under modern conditions is so great that the output of scientific work is doubling every few years. It is already impossible to keep track of it as a whole. The truly remarkable feature of it all is that it is neither controlled nor controllable. Scientific research, as a whole, has no aim, no direction except that determined by new techniques and materials or by the prevailing fashions. No one knows where science will lead us in the next fifty years. The present situation would have been totally unpredictable fifty years ago: and the pace is ac-

* H. A. L. Fisher, *A History of Europe*, 1936, p. 5.

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celerating. This may or may not be dangerous: the point is that here again we have an uncontrolled explosion which man has no intention of even trying to control.

There are several other explosions in human culture. Education illustrates the point. Not only is the demand for education increasing all over the world; but the amount that has to be taught—or rather that educationists suppose to be necessary—is increasing out of all proportion to the ability of the human mind to assimilate. To educate the 500,000,000 children of the world to the standards believed to be necessary, all the men and women in the world capable of teaching would have to be withdrawn from other 'necessary' professions. And yet the education explosion continues unchecked.

A far more sinister cultural explosion is that of mass communication. Within a few decades half the world's population has been brought under the influence of mass media—books, newspapers, radio, television, cinema—all able to exercise a powerful suggestion upon undeveloped minds. Mass communication has come to be the principal instrument of government, commerce and entertainment. Here the explosive character of the process is obvious to all. It is uncontrolled: chiefly because those who could control it find it too useful or profitable and fear the loss of influence that the abandonment of mass suggestion might entail. In this case, the effect upon the human mind-stuff is direct and progressive. From decade to decade the world's population grows more suggestible and less able to make independent acts of judgment.

Closely allied to this explosion is that of psychological strain. People require stimulation, sedation and stronger forms of psychological treatment. There is an explosive growth of people requiring psychiatric treatment—especially in the most advanced countries. More and more people turn to the use of drugs—harmless, harmful and wholly destructive—in the search for relief from the tensions of modern life.

If the two explosions—mass suggestion and drug addiction—continue unchecked we shall indeed reach within, at most, two generations the condition of Huxley's *Brave New World*.

In many instances, we can connect the explosive tendency of the present state of humanity with the powerful idea of the New Epoch. This can be seen in terms of the level of soul-history.* The Demiurgic Essence, according to our interpretation, is the instrument of Cosmic Order. When it enters into human nature it endows man with creative power and also with responsibility for the order of the Biosphere. In the past, the effect has been to produce men of creative ability in

* Cf. Chapter 43, Section 16.43.5.5.

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government, art, learning and religion. Their activities have sometimes been beneficial, sometimes destructive, according to the relative dominance of the forces of spirituality and egoism. In the new Epoch, the demiurgic force in man has led to the domination of the Biosphere to a degree never before contemplated. Man can use, change, destroy life and the materials of the earth's surface and does so on a prodigious scale in consequence of his new-found capacity for large-scale action. Man has become the ruler of the earth: but he has no idea why and how he should use his power. The sense of responsibility that should accompany the demiurgic nature is almost wholly lacking. Here again, there is an uncontrolled explosion. Man is installed upon a demiurgic throne

from which he can issue commands to Nature. Within limits, that man himself does not perceive, Nature obeys.

As the Present Moment of humanity expands in all directions, man's self-importance and pride expand with it. The thirst for power grows with its exercise. This explosion, secret in its source in the higher nature of man, is visible in its action in his animal nature. From decade to decade, man's oppressive domination of the material of the earth's surface, including all forms of life, doubles and doubles again. Man cannot restrain this explosion for he does not even wish to do so. On the contrary this is labelled 'human progress' and many look forward to its indefinite continuation: though possibly not at the present accelerated pace.

17.50.2. A First Assessment

In terms of visible history, the Present Moment of humanity is threatened with hazards that invite pessimism as to the future. No one denies that the present trends, if they continue unchecked, would create within a hundred years an impossible situation. But it is also widely believed that common sense will prevail and human ingenuity will find a way out, as it has done at all critical stages of the past. On the whole, mankind is so intoxicated by the triumphs of science and technology that the voices of despair and even of doubt are drowned in assurances. Those writers who have painted lurid or depressing pictures of the next twenty or hundred years are regarded as warners of what might be, rather than as prophets of what is predetermined by the content of the Present Moment.

We must, therefore, attempt an assessment on the basis of the visible data, before we look more deeply into the possible action of the higher Wisdom of the Hidden Directorate.

Explosions are of two kinds. One comes from a sudden release of

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pressure and the other from a chain reaction that builds up from small beginnings. The first kind may not be destructive: the internal combustion engine that works on this principle is our main source of power for locomotion. It is controllable, providing the necessary 'engine' can be constructed.* If our historical explosions were all of this character, it could rightly be asserted that common sense and ingenuity must find the way to bring them under control. The population explosion is a fair example. It is quite likely that educational and administrative procedures combined with new discoveries in bio-chemistry will lead to the universal regulation of families before an impossible state of affairs is reached.

The same is not true of the cultural explosion. It is difficult to conceive a situation in which mankind will voluntarily abandon research into the secrets of nature or cease to apply new discoveries in technology. So long as human nature remains what it is, man will not cease to lust for power and will seek ever new fields to conquer. The cultural explosion is a true chain reaction. Every new discovery sets in train activities that lead to more discoveries. Only a widespread emotional revulsion against science and technology could arrest the progress of man's domination over material and living essences. As this domination will give him power to destroy all forms of life not useful for human purposes and to use up the reserves of the rarer elements of the earth's crust; there is need for a far-sighted, noble, self-restraint of which, in the Present Moment of visible history, there are few signs. A more ominous possibility is that the control of energies may develop to the point when means of destruction so powerful and so easy to use may be discovered that a few ruthless men could threaten the entire human race. There are many dangers of this kind in the accelerated progress of science. Finally, there is the threat of mental enslavement of the kind pictured in Huxley's *Brave New World*. This picture of the future falls far short of what is actually possible. There will be great advances in the media of mass communication. Insight into the human mind-stuff and the ways in which it can be controlled and moulded will lead into fields so far scarcely imagined. Chemical substances will be discovered that will change the behaviour and even the character not only of individuals but of entire communities. The temptation to use such powers will be almost irresistible both to those who seek power and those who wish to do good.

Our assessment at this stage must be made in terms of man such as

* For a discussion of engines and their part in the transformation of energy see Vol. II, Chapter 32.

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he is. We have seen the structure of the self-hood and the mind. We have seen the condition of the soul-stuff pool from which all human minds are drawn. We cannot, under these conditions, expect that the endemic egoism that accompanies all human beings from their conception will be eradicated by any means known to science, or likely to be discovered by scientific research. The conclusion we are bound to draw, is that sooner or later the growing power that man has over nature will pass into the hands of unscrupulous men. The evidence of history shows that power seldom associates with virtue and that those who condescend to destructive means will find the way to use them. In terms of visible history, it is mere chance that Hitler did not acquire the atom bomb

before the Allies, and in his hands it might have given world domination to a ruthless oligarchy. It is true that no tyranny has ever prevailed for long and that the real danger is from the well-meaning people who seek to control others in the name of good. It is by no means inconceivable that human progress and even human existence on the earth could be brought to a standstill by an activity initiated with the highest motives, but predicated upon qualities that mankind does not possess. This is no idle imagination, for we see before us organizations that cannot work because people cannot work them.

The conclusion to be drawn is that the threats to human progress are not all fatal; but some of them cannot be met upon the levels of visible history. While it is necessary for salvation that man should exercise self-control and sacrifice his personal short-term interests for the sake of a greater future, it is a false optimism that believes that these qualities will be manifested, except by very few men and women; and that, to be effective, these should enter and work in the psychokinetic group.

17.50.3. The Evidence for a Hidden Influence

The central theme of this volume has been the need to postulate a higher wisdom in the evolution of life and the arising and development of mind. Our assessment of the present situation must be decisively influenced by our acceptance or rejection of this postulate.

The problem of evolution turns upon the concept of order. Order is a property of all that exists and it is the simplest and most reliable criterion of level. Biological evolution is the increase of order in the Biosphere. Human evolution is the increase of order in the Mind. The evolution of human society is also a progress of order, from the state in which man could not be responsible even for himself, to one in which the entire human race can regulate its own affairs and accept responsibility for the order of the Biosphere. In every case, the increase of order within the

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system considered is possible only if order enters from without the system. Random exchanges without direction or purpose can become orderly only if there is a source of order available to feed order into the system.

These considerations are applicable not only to material and vital systems; but also to those in which the Cosmic Energies play a part. It follows that no process initiated and continued wholly within any situation can increase the order. Thus we arrive by a priori reasoning at the conclusion that the order we see in human society can increase only if there is a Source of Order outside human society. We identify this Source with the Intelligence at the disposal of the Hidden Directorate.

Approaching the problem from another direction, we can see that the intervention of the Hidden Directorate cannot take the form of overt action, perceptible to all. It must come by way of an Organizing Pattern on a higher level in Eternity than the actualizing, and visible, situation. This pattern works in the realm of mind, where consciousness opens the way to innovation and freedom. Its working depends upon being recognized by mind and hence requires an Evolution of Mind to lift it out of the realm of cognizable and explicable events. This does not mean that every mind that contributes to the increase of order—or to the avoidance of disorder—does so with a clear understanding of what is going on. Only those who have eyes to see can see it. They may not be able to convey to others what they have seen; but it will be apparent in their behaviour.

We shall test out these conclusions in the light of our hypothesis of Intelligent Guidance. They should be applicable upon all levels in which the mind of man is directly involved.

Firstly, upon the level of economic history, it is easy to see that the power of money could be used to control economic progress. It is sometimes suggested that there is a sinister body of international financiers that seeks to dominate the world. So far from this being true, all the evidence shows that economic forces are chiefly used to maintain stability and relieve tensions. Since this is not likely to be due to the actions of men dominated by egoism, we may conclude that there is some benign influence at work. There is no way of connecting this influence with our supposed Hidden Directorate. Indeed, it may be due to a non-human Demiurgic or even higher wisdom. The evidence for a benign and wise influence comes by combining the conclusion reached earlier that the economic situation of the world is out of visible control with the observation that it appears to be moving towards stability and order.

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The edaphic situation is extremely significant. The dangers of soil-erosion, deforestation, failure of water supply and the rest are not under control. Major catastrophes could have occurred through sheer ignorance, as when, in a laudable attempt to produce valuable crops in the African equatorial regions, forests were cut down, and the land became totally and permanently infertile by the hardening of iron oxides. It was not until long after that the nature of the risk was understood. In this and many other instances, it seems that some beneficent power has limited the damage that man does to the soil.

The next striking instance is to be found in the population explosion. On statistical grounds alone, we should expect the indiscriminate preservation of degenerative strains to result in a speedy decline of the human race. The more so, as many degenerates are prolific and sexually unrestrained. Here we have to argue from a negative: but it does seem as if some very general, but unseen, influence inhibits a large proportion of undesirable matings.

We come next to the size-explosion that has produced the immensely complex organizations of government, industry and international co-operation. One might expect that the opportunity afforded by such organizations for the acquisition and exercise of power would have attracted egoistic and dangerous men. It is a remarkable and most hopeful sign of the times that precisely the contrary has occurred. Although, as we have said, the men who nominally control these giants are in fact their servants or even their slaves it remains true that they have great opportunities for evil and for good. To a remarkable degree, this power is exercised for good and this is, perhaps, the most striking evidence of some benign influence reaching from the Hidden Directorate and working within the ranks of Government and big business.

On the level of human culture, we have the hardest assessment of all. Scientific research has no direction nor can fundamental scientists foresee where their work will lead. The flashes of insight that lead to discoveries, great and small, are unpredictable and outside the control even of those to whom they come. If, therefore, we can discern a pattern and evidences of purpose in the progress of science; these must be attributed to some intelligent agency other than the scientist as such.

To establish a pattern, we should have to show what would be happening if scientific discovery were really the random undirected process that it is assumed to be. A whole book would need to be written to do justice to this question: so we can only consider a single illustrative example. The experiment made by Michelson and Morley (1887) to determine the earth's motion through the ether received widespread

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notice and led to Einstein's special relativity and the mass-energy equation: thus, indirectly, to the release of atomic energy at a crucial moment of history. The discovery has been a most powerful factor in restraining action that might have led to a third world war. Some twenty years before the Michelson-Morley experiment, Mendel did his beautiful work on genetic transmission (1858-65). This and other significant discoveries in biology remained unnoticed and, in consequence, biological science failed to make in the first half of the twentieth century the same spectacular progress as physics. One result of this has been to

leave unsolved the problem of nutritional insufficiency throughout the world which has also been a factor in preventing war.

In one direction, spectacular and widely publicized progress has been a factor of stability; and in another, failure to notice the significance of a discovery has had the same effect. Hundreds of such instances could be cited. Taken together, they strongly suggest that the progress of science has not been a random matter due to the accidental idiosyncracies of scientists and stimulated only by short term material and social pressures; but rather that there has been an unseen and very intelligent guidance which has seen to it that the right discoveries are made at the right time and, when made, brought forward or held back according to the needs of human evolution.

Obviously, this suggestion cannot be regarded as established by the evidence we have outlined. It is put forward rather to indicate the way in which the scientific explosion could be contained and directed. If a higher Intelligence working on the level of the creative energy directs the attention of scientists to this feature and diverts it away from that: then evidently that Intelligence is directing the entire process of human development at the present time.

Remembering that, by definition, we are discussing invisible history, we can do no more than suggest ways in which the undirected explosion of the visible process could be converted into directed and useful operational forces for the evolution of mankind. At this point, we must seek to answer the question always put to those who affirm an unseen influence in human history: why does the influence have to remain unseen and would it not be more effective if it came into the open?

The answer to this question is implicit in the distinction we have made between predetermination, predestination and foreordainment. Only transformations of the material energies give results perceptible to the senses. In human terms, we can say that all that can be perceived is behaviour. By recognizing the different levels, we can interpret

behaviour as results applying to one or several of the seven histories we discussed in Chapter 43. What is perceived as behaviour remains in the zone of material energy transformations. As modern science has established, these transformations are never wholly predetermined for there are uncertainties, or 'holes', on every level. As we approach the region of destiny, the uncertainties turn into opportunities and these acquire an increasingly creative and free character. Taking an opportunity is not a visible action: for the very nature of an opportunity is to offer something more than the predetermined future.

There is only one way in which the course of history can be adjusted to the hazards of disorder and the threats of malevolent powers and that is by the unseen actions of those who take their opportunities in the right way. The Zone of Destiny is that part of the Present Moment in which there can be an intervention from the Hyparchic Future. According to the notions developed in the last two chapters, the Hidden Directorate is in contact with that region where the Foreordained Plan of human life is constantly taking shape. Those who serve as channels of transmission of the influences coming from that region can work only in the zone of destiny. If they were to appear and act in the material or behavioural region, they would be as helpless as everyone else to bring about significant changes. Indeed, they would be more helpless, for they would be aware that changes initiated on the material level can only increase disorder.* The only effective intervention is that which touches the minds and not the material natures of men.

That can very simply be illustrated by the working of the human eye. There are a hundred octaves of electro-magnetic radiation from cosmic rays to the longest radio waves. All of these may carry signals: but the eye can pick up signals only over the three octaves of visible light. Those who can see and recognize the signals can act over a wide range: but without their cooperation the signals are useless.

There are at least two ways in which there can be an intervention. One is by the overt behaviour of those who inwardly are awakened to the signals that reach them from higher levels. The second way is by direct action upon minds that are accidentally tuned in to the correct 'wave-length'. It is very probable that the higher powers intervene in both these ways and in others that we do not know.

How often do we observe 'inspired' actions for which the actor

* In more familiar terms, one can say that violence cannot be overcome by violence or that consciousness cannot work by destroying anything whatsoever—even what has gone wrong. In yet other language, we can say that 'good' powers cannot condescend to use means that 'evil' powers can employ, just because the means are evil.

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himself is quite unable to account? How often do we meet with ideas that spread through human thinking like a ferment while no one knows their source, and few see that they have a purpose? It is highly probable that there are more men and women in the world who are serving as channels for the transmission of influences from the hyparchic future than either they themselves or the world is aware of.

Obviously, to demonstrate an action of this kind would be impossible, because demonstration can apply only to that which has already entered into material transformations. Nevertheless, we have one indirect con-

firmation of an invisible action and this is the very great improbability that the situation of mankind, would be as favourable as it is today, if only the visible agents were operative. Great forces have been released, the speed of events has accelerated, yet man remains what he has always been: weak, egoistic, self-indulgent, and quarrelsome. The possible sources of disaster are innumerable and anyone might release a chain of events that would devastate the world. In terms of probability, the likelihood of a breakdown of human order vastly outweighs the likelihood of its progress towards a higher degree of synergic integration. This is a fact that is open to verification, because it concerns visible behaviour. If it cannot be accounted for in terms of visible factors, we are compelled to postulate some unseen influence. All that we have done in this volume is to show how such an unseen influence could have operated from the beginning of history and how it may be operating today.

17.50.4. The Present Need

As the eye is the link between the invisible signal and the visible action, so does humanity require minds and souls capable of responding to the enabling influences that are constantly flowing into the Present Moment from the Hyparchic Future. Two elements of the triad are established: the affirming impulse that is the predestined pattern of history, and the receptive impulse that is humanity in its present moment. The third, reconciling impulse, is what we have called the Great Work.* This is the weak element, because it requires people of whom at the present stage of human evolution too few are being produced. If there were a sufficiency of men and women of the Psycho-kinetic Group,** they could enter as Specialists into all branches of human activity and operate as Counsellors in the direction of all human

* Cf. Chapter 47, Section 17.47.7.6. and elsewhere in Chapters 48 and 49.

** Cf. Chapter 41, Human Societies in Vol. III.



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affairs. The tetrad of activity and order in the Biosphere would be firmly established* and the Psychoteleios Group acting solely as a channel of communication with the Hyparchic Future could enable the fulfilment of the Plan that the Biosphere has been created to serve.

The situation of our present moment is very different. Only a small proportion of people are drawn into the psychokinetic stream. Consequently, so much effort must be devoted to their training and preparation that little remains for the needs of the immediate situation. In this sense, it may be right to say that we must work for the future: but

we must not forget that our future is within the larger Present Moment of all mankind. The difference, once again, is between those who can see and those who cannot see.

For those who still believe that human affairs can be ordered and guided rightly by action solely within the visible level, the suggestion that the greatest need of our time is for awakened men and women, is meaningless. They regard themselves and others like them as already awake. They accept the promptings and guidings that arise within the minds of some people as chance combinations like a lucky sequence of heads-and-tails. When things go wrong they fall into pessimism, for they can see no redemptive action. When things go well or promise well they attribute the event to human wisdom or prudence.

Our concern is not with those who would deny any reality to the notions of transformation and of a Hidden Directorate; but with those who at least accept the possibility of these things and seek to understand what is required.

It is possible to offer something to those who seek in this way. First, it is necessary to grasp the notion of the Great Work and understand why it must act from within people and not from without. Second, it must be realized that all turns upon transmission. Only those minds that have acquired the ability to recognize the working of the cosmic energies and to receive 'signals', can respond directly to the guidance that comes from the Hidden Directorate. For others, it is necessary to receive their guidance indirectly. This is the difference between the upper and lower parts of the Psychokinetic Group, ** and it may be expressed as the distinction between mind-action and soul-action. But we must be careful not to confuse direct mind-action with verbal communication. The latter can operate on all levels, but it cannot serve for

* Cf. Chapter 43 in this volume.

** Candidates and Specialists (sub-groups 5 and 6) believe in the reality of the Great Work but can receive guidance only indirectly from Counsellors and Initiates (sub-groups 7 and 8) who are able to communicate with the Psychoteleios Order.

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the creative act that must be done here and now at the moment of opportunity or opening. The sensitive mind receives its guidance directly: but it does so from another mind. The harmonized soul is guided by the pattern of destiny. It does what is required without an intervening stage of perception and decision.

Returning to the need of the present moment, we can say people must be found and transformed both in mind and in soul. This is happening

in many ways. Some of these ways are explicitly directed towards the psychokinetic transformation and their role does not usually go beyond the stage of preparing Candidates.* Other ways operate within the complex organizations of modern society, unrecognized even by those who respond to their influence. Others again are concerned with the soul-transformation that enables the human self to become the vehicle of the Universal Individuality.**

The actions required range from educational procedures, social betterment and the preservation of peace, to the most hidden working within the Psychoteleios Group who constitute the Hidden Directorate. In the past, these actions have been conducted largely in isolation from one another, by persons and societies bearing quite different labels. Now, in the Synergic Epoch, this kind of separate working must give place to organized cooperation. This is the need of the present moment. But it is still not possible for the Hidden Directorate to 'come into the open' as people demand. Unless this is understood, nothing can be understood. Every kind of action depends upon conditions. Freedom and creativity are impossible in the conditions of material existence and predetermined changes. The transmission of the highest cosmic energies requires more than a sensitive mind: it needs souls strong enough to be the instruments of the Universal Will.

As these things come to be understood better and more widely, the creative energy will play a greater part in human life and prepare the way for a direct contact with the Unitive Energy, that is, with Divine Love.

17.50.5 A Further Assessment

The history of mind takes shape and meaning if we see it as the evolution of man towards responsibility for his own destiny and for that of the Biosphere: possibly of the entire solar system. This evolution

* Cf. Vol. III, Chapter 41. The Candidate may be drawn to the psychokinetic society in many ways: religious, artistic, scientific, social, as well as by a feeling for the hidden and esoteric content of human experience.

** See Vol. II, Chapter 25 and Vol. III, Chapter 41.

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could not have started without a creative impulse and could not have been sustained without a directive pattern. It would have come to grief as a result of the contamination of the soul-stuff with egoism and the consequences of sin, but for the intervention of the Cosmic Individuality made manifest in the Incarnation. At every stage, we have found evidences of guidance, first by non-human Demiurgic Intelligences and later supplemented by men transformed into Individual Souls.

If this guidance played a decisive part in the remote past, and if it can still be recognized in the Epoch recently ended—it must continue in our own day also. We have seen, in this chapter, some evidence of its working and have considered once more the objection that if real, it should be apparent to all. We must now go further and try to lift the veil of the future. We have four groups of elements from which to make our assessment.

1. The trends of Visible History and the search by man for a solution of his problems in visible history alone.
2. The Master Idea of the Synergic Epoch which is drawing men, whether they understand or not, towards organized cooperation in every field.
3. The stage of the Great Cycle of 25,000 years that began 12,000-13,000 years ago with the transition to the modern world.
4. The Destiny of Man and his place in the War with Time. In this group we include our notions of the Present Moment and the pre-determined, the predestined and the foreordained future.

All four elements have come to light in the course of our long enquiry and have been discussed at various stages: we shall not examine them again but set down the conclusions to which they point.

During the past Epoch, man has developed and exploited his intellectual powers and has neglected his powers of inner and outer perception. He has also neglected his emotional nature which remains at a more primitive stage of development than his power of thought. With these trends, has gone that tendency to over-emphasize the value of man as a person which we have called the Megalanthropic Fallacy. These trends continue by momentum in our present culture. Our educational procedures are mainly directed to the intellectual function and neglect the emotional nature and the working of the conscious and creative energies. Our culture is predominantly an intellectual culture: but a revolt against intellectualism in art, literature and social intercourse is in progress. The individualism of the past Epoch is rapidly giving place to the cult of the organization. These trends have only begun to make themselves felt. It is probable that within two or three generations

intellectual powers and skills will be rated no higher than manual skills are today. This probability is disregarded in most attempts to forecast the future and indeed it is hard to see what will take the place of our present mind-worship.

A deeper tendency, so far scarcely perceptible, is towards the awakening of new powers. These will be emotional and intuitive rather than intellectual and analytical. They are necessary for both the visible and the invisible progress of mankind. The work of very large organizations demands a capacity for synthetic grasp of structures and for intuitive communication that is at present rare. The few men who possess it are the key men of the modern world. It is widely recognized that such men are in short supply, that they are born not made, and yet that they can develop their powers only under favourable conditions. We have also seen that the guidance of human destiny depends upon men who can communicate with higher sources of wisdom and 'tune in' to the waves or vibrations of cosmic energy that carry the pattern of human destiny.

We shall conclude that the new powers of which indications appeared more than a century ago* are symptomatic of the New Epoch and that they will appear more frequently as time goes on. It is probable also that techniques for developing and using them will form part of the regular educational procedure of future generations; taking the place of much of the present factual curriculum. Creativity will play a far greater part in human life. At present much of man's creative energy is used in play—because he does not know how to employ it for any constructive purpose. Creative steps are largely made by chance. There is hope that man will soon discover that creative activity is the highest form of enjoyment and will not use his leisure for artificial stimulation of his Reactional and Material Selves, but for the development of his creative powers. New social structures will arise to meet these needs.

Within a few generations, men will look back to our present transitional age with astonishment to see that for all our marvellous technical achievements, we had almost forgotten how to enjoy life. When creative energy is rightly used, the sexual life becomes normal and we may expect that the, at present intractable, population problem will resolve itself. Men will find their keenest enjoyment in creative activity and will wish to restrict their procreative powers to the conception of gifted children endowed with higher perceptions and abilities.

These optimistic forecasts will founder on the rocks of human egoism unless there is a profound change in man's attitude towards his destiny.

* Cf. Chapter 49, pp. 391-2.

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Here we come to the interpretation of the Great Cycle and man's relationship to the Cosmic Individuality. Neither man himself nor the Demiurgic Intelligences can overcome egoism. We believe that man was set free from the consequences of the atavistic taint, by the Incarnation of the Cosmic Individuality, by the death and resurrection of Jesus and by the coming of the Holy Spirit. But the purpose of the Redemption was to make possible the conquest of egoism, not to ensure it. The conquest of egoism must be accomplished within the soul of man, where it has established its mastery. If it were done from without, the very purpose of man's creation—to become a responsible being—would be stultified.

During the past two thousand years, it has been established beyond dispute that humanity cannot accomplish the task unaided. This has foolishly been called the failure of Christianity or indeed the failure of all religion. It was necessary that two things should be understood: first, that though man cannot redeem himself he can be redeemed through the Love of God; and, second, to be effective, man must accept the reality of redemption and that even this is beyond the power of most human minds. It required a thousand years, from St. Paul to St. Anselm, for the first truth to be grasped in the Christian world. It has taken nearly another millennium to make the second obvious. This can be accounted for by the dominant attitude of the Megalanthropic Epoch: it is easier for man to believe that God has Incarnated to offer man the gift of eternal life; than to admit that man himself is incapable of accepting the proffered Gift.

Meanwhile, the Present Moment must continue to change and to evolve. The creative power has flowed into many channels producing schisms and sects, conflicting creeds, churches and societies all claiming a superior validity. This too has been a consequence of human egoism given form by the belief in human greatness. With the coming of the New Epoch, new forces are at work. There are oecumenical movements and dialogues between the great religions. These can be accounted for by the dominant attitude of the Synergic Epoch: they are no evidence of a change in human nature.

The visible consequence of man's inability, during the last thousand years, to accept the implications of the Christian gospel, combined with the overwhelming triumph of science and technology which have arisen within the Christian world, has been a widespread repudiation of belief in Providence, that is, in the working within Nature of a Supernatural Power. There is no sign of any change in this respect as a consequence of the transition from Megalanthropy to Synergy. In place of the deifica-

tion of the human individual, we have passed to the apotheosis of the Greater Society.

Today, fewer people than in the past believe in the Great Work, or take seriously the assertion that human destiny is influenced by a Higher Wisdom. This assertion, which is the central theme of the present volume, is likely to prove the chief obstacle to its acceptance even by those who are aware that it is imperative to search for a total meaning in the existence of man on the earth.

The explanation is to be found in the great time-scale upon which the evolution of the human soul is to be measured. The great Present Moment of the awakening and maturing of the human soul must embrace more than one of the great cycles which began 37,000 years ago. We must look forward at least another 12,000 years for the completion of the cycle of which this Epoch is the mid-point. Even allowing for the accelerated pace of change, the transformation of the human soul-stuff is bound to take a very long time.

It does not follow that there have not been dramatic episodes of short duration: the most intense and extraordinary was the earthly life of Christ. We are once again at a dramatic moment, perhaps no less significant, though not of the same kind. We shall endeavour to state our convictions in the light of the four elements described at the beginning of this section.

We are now in the midst of the Parousia or Second Coming of Christ promised by the Redeemer to his followers. This is taking the form of the envelopment or overshadowing of mankind by the Unitive Energy (E 2) as an act of will of the Cosmic Individuality. The Unitive Energy is universal and omnipresent: but it is not always associated with the Will. When it is so associated it is Personified. To put it in specifically Christian terms: the Love of God, which is the Holy Spirit, has always been present and its operations never cease. The Son of God in heaven—that is in the Hyparchic Future—never ceases to redeem mankind. The Holy Trinity—Father, Son and Holy Spirit—never fail to redeem the promise to 'come and dwell with him' who is united with them in Love. There is, however, a profound change in the Present Moment, when the Word of God, the Cosmic Individuality, enters into the Unitive Energy and so returns to the existing world. This return is quite distinct from the Incarnation, for it remains within the region of the Cosmic Energies—Transcendent, Unitive, Creative and Conscious. By this act, the Cosmic Individuality intervenes in human destiny. This is quite a different matter from the redemption of the past which required the Incarnation. It is aptly described in the phrase 'come again in Glory' for the Cosmic energies are the Glorious Energies.

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Until this Act was made, the situation of mankind remained as it has been since the Incarnation: the possibility of liberation from egoism was assured; but, for most people, the ability to accept liberation was lacking. This was equally true for Christians as for those who repudiate the Christian doctrine of Redemption. Muslims are assured of salvation if only they will accept the promise of the Qur'an, and this they are almost all incapable of doing. The same is true for all men whatever form the promise may take.

Why is it that men in general have been unable to accept the gifts freely offered to them? It is evidently because the human mind cannot become aware of the Gift and its reality. Even in the ages of faith, there have been few who have seen the Truth for themselves. Second-hand faith, taught or affirmed by others, does not produce the required contact nor open the channel through which the Unitive Energy can flow. An additional help was necessary; but it could be given only when it became obvious that man could not be saved without it. There is abundant evidence that some new action is occurring in the world at the present time.

The Unitive Energy gives the human soul the possibility of union with Christ. This is the perfecting of the Individuality. But it can do so only if the soul is free from egoism. Therefore, a purifying or purgative action is necessary. This comes about by a contact between the selfhood of man and the will of the Cosmic Individuality. This contact can be made in thousands of ways, because the Unitive Energy is everywhere and can adapt itself to any kind of response. Thousands of men and women throughout the world experience the contact and are transformed : but the completeness and purity of the transformation depends upon their own nature. Some take the influx of energy to be their own power to use and misuse. Others undergo a private change and do not manifest. Some, again, become aware of the working and believe that they are called to a special mission. Some go mad and believe that they are the Messiah. Some are changed in character but not in understanding.

So powerful and so varied an action requires regulation. In part, it may be responsible for the explosions described at the beginning of this chapter. The task of regulation and adjustment falls to the Hidden Directorate and those who can communicate with it. There is thus a two-fold action. The first is direct and supernatural: it is the working of the Love and Power of God to enable mankind to evolve. The second is indirect and natural, it is the Great Work that has from the beginning guided the destiny of humanity. Those who can only see external

behaviour patterns find it hard to make sense of what they observe. For a more discerning eye, Destiny and Divine Providence have entered into an action that is changing the entire situation of mankind.

This does not mean that the evolution of man is assured against all hazards. The problem of communication remains. There is always something that man must accomplish within the limitations of his own self-hood. He must understand that what formerly was almost impossible because of the obstruction of egoism has now been made easy for those who can perceive the working. There are many who partly perceive, but do not understand. They can respond only imperfectly to the new working. A great obstacle is man's attachment to external forms of belief, of worship and of organization. We have used, in this book, a terminology intentionally remote from the theological and philosophical languages of the past. We have referred to the Cosmic Individuality instead of the Logos or Son of God. We have referred to the Unitive Energy or Cosmic Love rather than to the Holy Spirit. We have referred to the Cosmic Reconciling Impulse as the source of our intuitions of Deity.

These changes have been made to avoid associations either positive or negative. Whether they are acceptable or not, it remains true that very great changes in our understanding of the Supernatural Order will have to come. As we said in the Introduction to the first volume of this work; it is imperative that we should liberate ourselves from the geocentric and anthropomorphic language in which our religious beliefs are still expressed. A far more difficult and revolutionary requirement is that we should see that we are in the midst of the Parousia and realize that this is not the end of the world, but the beginning of a New Age. Hardest of all for modern man is to admit his own complete helplessness and dependence, upon all levels above that of his bodily organism. Only when he can make this admission can he become a channel for the transmission of the energies that will enable human evolution to make a step towards true responsibility and not imaginary dominion.

17.50.6. Acts of Will

Without the element of will in our experience there would be no history, only a determinate sequence of changes in a world without a present moment. Because there is a Supreme Will, there is a Total History which is the Drama of the Universe. As all else that exists, we are involved in the Act of Will whereby the Universe exists. This is a present act for the Totality: but we may conceive it as having occurred in the remote past or as constantly present according to the way we

interpret our experience. The distinction is objectively meaningless for it imputes time to an Act that creates time. It is a remarkable characteristic of twentieth-century modes of thought that we are able without difficulty to accept the idea that 'long ago' and 'now' can be the same. In this, and in many other ways, the Master Idea of the Synergic Epoch is beginning to change our modes of thought more profoundly than at any other time in the last two thousand five hundred years.

This applies to supernatural history; which, from age to age, man has understood in very different ways. In the Megalanthropic Epoch, it was almost inevitable that anthropomorphic images of the Supreme Creator of the Universe should have suggested themselves. The Cosmic Individuality was most profoundly described in the Christian creed as the only-begotten Son of God consubstantial with the Father; but this doctrine has been understood by nearly all, Christian and non-Christian alike, as affirming that God is an existing Being who engendered the Son as a distinct Person, but nevertheless uniquely and wholly united with Him in a single Godhead. Even the doctrine of the Blessed Trinity is understood in terms of Being, as if there could be three Persons in one Being. As mankind emerged from under the influence of the Megalanthropic Master Idea, anthropomorphic conceptions of Deity began to look wrong. We are now in a transition period where the new Idea has not become fully operative, and old modes of thought continue by momentum to occupy men's minds. The new Synergic Master Idea is misunderstood as signifying that human cooperation will enable man to dispense with providential guidance and help. Thus, the Present Moment is threatened with humanistic and atheistic doctrines that are totally foreign to the reality of human destiny.

The resulting confusion does not stem from a breakdown in the religious experience of mankind; but from the new mode of will-action to which men are still quite unaccustomed. The clearest and strongest experience of the Supernatural History is that of Union in Love of Man's creative will with the Supreme Will. This union, and the complete certainty that accompanies it, is made possible by the operation of the Unitive Energy (E 2), but it is still an act of will. The creature annihilates its own separate claim upon existence to find that it need not exist; for the Will to which it has given itself can equip it with all it needs of both Being and Function.

The chief point of the experience—and this is neither new nor rare—is that there is no sense of union with Being but of Will alone. Deified man does not become God in the sense of Being, but in the sense of identity of Will. This is the only possible interpretation of the Christian

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doctrine that the sanctified man becomes the son of God 'by adoption', for adoption can be nothing else but an act of Will.

We return, then, to the conclusion reached in Vol. II,* that the pitfalls of pantheism, atheism and anthropomorphism can be avoided only if we put away the notion that God 'exists' in the way that we exist: that is, in a state of dependence upon some kind of material support. Arguments for the 'existence' of God nearly always disregard the obvious objections that any kind of existence is limitation and that the Creator of the universe cannot be a part of the creation; which, by definition, is all that exists.

God, understood as the Supreme Will, creating and sustaining the universe to be both vehicle and instrument of a Purpose that no creature can apprehend, is a notion free from contradiction and from unacceptable pantheistic implications of the kind expressed in the formula *Deus est omne quod est*; or monistic absolutism that makes no sense of the world. It must satisfy the central religious conviction of man that God is One and that there is an intimate relationship between God and the soul of man.

We must take into account the conclusion reached, step by step, that the universe, by its very existence, is involved in evil, and that the soul of man has taken on the universal taint and that by the Act of Will that we know as the Incarnation, man was redeemed and given the possibility of a transformation that will take him beyond the limitations of existence. This conclusion, almost self-evident if our major premise of Guided History is accepted, has serious theological implications, for it identifies the Cosmic Individuality with the Divine Logos and so with the Second Person of the Holy Trinity incarnated as Jesus of Nazareth. It requires that the Redemption of mankind be regarded not as a unique act of will made solely in the context of human history on this planet earth; but as part of an Act totally present within and throughout the entire existing universe, that is within the Cosmic Present Moment informed by the Will of God. These implications make it incumbent upon us to state unequivocally our Christological position.

The Christian faith, as stated in the Nicene Creed, requires belief in:

1. One God, Father and Maker of all things visible and invisible.
2. One Lord Jesus Christ the Son of God consubstantial with the Father.

* Chapter 27, pp. 80-82. 'God is beyond the highest and also eternally present in every manifestation of will as the Reconciling Power in every triad.' In Section 11.27.4, we considered some of the objections to any doctrine of God as a 'Triple Being'. Without suggesting that this doctrine correctly represents Christian theology, it must be admitted that expressions are constantly used that do imply that God is 'a' Being and even that He has functions by which He can be known.

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3. The Incarnation for us men.
4. The Crucifixion, Death, Resurrection, Ascension and Return.
5. One Holy Ghost.
6. One Holy Catholic Church.

Eusebius who produced the first draft of this Creed at the Council describes Christ firstly as the Word of God and after other assertions of identity calls him Son and first-born before all ages. The term *homoousios* inserted as a safeguard against the Arian heresy has become a central notion for Christian theology and we must accept it.

The notion of sonship is derived from Our Lord's references to His Father and consubstantiality from John 10:30 'I and my Father are one.' But we must interpret this in the light of John 17:11, 21 and 22 where Jesus prays for his disciples that 'they all may be one as thou Father art in me and I in thee that they may also be one in us.' No reasonable account can be given of these utterances in terms of existence or even being; but they are satisfying, conclusive and wholly convincing if we understand the unity as that of Will.

The relationship of the Son and the Father is not that of creature and creator, for that would be applicable only to existing beings. It arises from an Act of Will: *hodie genui te*—this day have I begotten thee. The reference to the Logos or Word of God in John I is wholly compatible with this. But we are not obliged to invoke only Johannine theology; since any and every passage of scripture, as well as the inspired wording of the creed, can best be understood if we take God the Father as the Supreme Creative Will and God the Son as the Individualized Cosmic Will—consubstantial with the Father as the same will and yet distinct from the Father as the Individual is from the Unique. The Holy Spirit proceeding from the Father and the Son—if we accept the version of the Western Church—can be understood as the Universal Individuality not involved in Existence. Here we must recognize some ambiguity in our earlier accounts of the Universal Individuality. We have associated the Holy Spirit with the Unitive Energy (E 2) partly because in Christian theology, the third person of the Trinity is the Love of God. But the Unitive Energy exists and can therefore only be an instrument or a

vehicle for the Will that can direct it. No natural will can encompass the highest cosmic energies and we can therefore, without contradiction identify the third Person of the Christian Trinity with the Universal Individuality 'the Lord and Giver of Life' and also the Power that 'spoke by the prophets'. This identification comes down on the side of the Western Church in the filioque controversy; for the Universal Individuality, though supernatural, unlimited by existence and Being,

does 'proceed from the Father and the Son'; if by Father we understand the Supreme Will and by the Son, or Word of God, the Cosmic Individuality. All three are one Will and all are free from every possible limitation, and in particular those that are inherent in Existence; but each exemplifies in a distinct manner, the Will that both creates and sustains the Universe and also sets before it a task to be accomplished. Thus God as Will creates the Dramatic Situation inherent in the very existence of the Universe, redeems it from the consequences of its own failure and restores to it the possibility of fulfilling its task. These three Hypostases, though necessarily distinct are nevertheless wholly within the One Undivided Will that is God.

The Human Nature of Christ is by no means less significant than His Divine Nature. As the Perfect Man—wholly grounded in Existence—He is the Exemplar standing as the eternal evidence that perfection is possible even within the limitations of the existing world. He demonstrates that without ceasing to be Man, it is possible to 'conquer death with Death' and to overcome sin without destroying the sinner. The role of Exemplar would be meaningless unless Jesus were wholly Man with all the limitations of our human nature except the atavistic taint of sin. This is clearly stated by Paul in Philippians 2.6-7: 'Who being in the form of God, thought it not robbery to be equal with God: but emptied Himself taking the form of a servant,' etc. Not only was Jesus a man, but he was meek and humble, the stone which the builders rejected. His 'voiding' of His Godhead made it possible for Him to perform two necessary operations: that of redemption and that of exemplification. The first is possible eternally, out of time and place because He is God and the second was possible historically at a particular moment of time and place because He was Man. No one else could, ever has or ever will perform the two-fold operation. But all who are 'called to be saints' are destined to be exemplars according to their kind and degree. Thus the Godhead of Christ is unique but not localized in time or place; whereas His Manhood is historical and localized, and yet not unique inasmuch as it communicates to all those to whom 'He gives power to be made the Sons of God' (John 1.12).

Throughout the Historical Event, of which we are now witnessing the promised consummation, the Will of God remains transcendental, unique and ineffable. Even in the Incarnation, it is not made manifest and Jesus Himself by reason of His Manhood cannot comprehend it. The Unity of God, affirmed in the Creed, remains inviolate. The three

It would seem that this interpretation should be acceptable to Islamic theology which insists upon the Unity and the Otherness of God (e.g., in Qur'an Surat al Ikhlas verses 1 and 4) and yet affirms that God is nearer to man than his own jugular vein (Surat Qaf verse 16). Only Will can combine the three-fold property of oneness, otherness and immanence. The apparently irreconcilable conflict between Christianity and Islam seems to come from the affirmation by the one, and the denial by the other, of the doctrine of the Holy Trinity and the Sonship of Christ. The real opposition comes from misunderstanding the role of Nature. Islamic theologians who are not connected to the tradition of the Work—that is, those who reject Sufism—tend to disregard nature including the nature of man himself. The presence in man of a personal will is grudgingly admitted in the doctrine of the *iradeijuz'i* or 'minute will' compared with the *iradei qulli* or total will of God. The creation is represented as no more than a means whereby God tests man's belief (Surat Ibrahim verses 28-34). The significance of Nature as the seat of a created and yet free will is lacking. This is found in Christianity in the role of Mary, who in the words *fiat mihi*, 'be it done unto me according to thy word', consents to the Working of the Holy Spirit by which the Incarnation is accomplished.

From the point of view we are developing, the most significant feature of the role of the Virgin Mary is that it is by an act of will that she fulfils her role. As she is a natural being, created with the freedom of choice, she exemplifies the essential character of the relationship between Nature and God. This is where there appears to be an incompatibility between Islamic and Christian doctrine. In the Qur'an, (Surat Maryam verses 16-22) there is no suggestion that Mary's consent had any significance or was even asked. The Spirit of God (*Rouhana*) which appears to Mary says: 'it is a matter decreed and then she conceived him'. The Qur'an returns again and again to the expression *kun fa yakunu*, or a Be and it was as the unique mode of God's action in the world. This has led to the extreme predestinarianism of some Islamic theologians and a resulting disregard of the role of Nature as the receptive element without whose consent the Divine Purpose could not be fulfilled. The Surat of the Bee, which describes Nature as a wholly passive factor in the all-important relationship of Man to God, seems to support this view. There is no kind of suggestion that there is any freedom in Nature.*

* The phrase *kun fa yakunu*, 'Be: so it is there!', appears in many passages of the Qur'an. It asserts that Allah creates and annihilates. In the Surat of Cow, vv. 117-21, the decree of God in the phrase *kun fa yakunu* refers to the transformation of human existence that is to come from the Message brought by Muhammed.

Nevertheless, the same Surat emphasizes the freedom of man to accept or reject the Messengers of God. The pre-eminence of Muhammad came from his perfect obedience and submission (Islam) to the Divine Command. We cannot but see here a parallel between Muhammad and Mary and indeed some have gone so far as to assert their identity, which is seen to be in the role of transmission. Both Mary and Muhammad were channels or vehicles through whom the Divine Operations were made manifest in the world. The same is true of John the Baptist who is so closely linked with Mary in the manifestation of Christ. There are very great differences of degree; but there is a characteristic role that has to be filled in every manifestation. This is one of the ways in which we can recognize the pattern which history is destined to realize.

Whatever views we may hold as to the doctrinal differences, it would be quite inconsistent to equate Muhammad and Jesus as co-equal prophets in the manner of Islamic theology. The Prophet of Islam based his claim upon his perfect submission to the Amr or Will of God. Jesus claims to be the Incarnation of that very same Amr. The Amr is not the command (trade) but the will that commands. Jesus is the Will or Logos of God by virtue of his Deity and the Amir or Commander by virtue of his humanity.

The strict monotheism of Islam rejects the Christian heresies that were current in Arabia in Muhammad's day: but it does affirm that God is to be understood as Ahad, Amr and Zat: that is as One, as Will and as Essence. There is an immense difference of emphasis as between the Islamic and Christian orthodoxies: but a remarkable concurrence of religious experience towards awareness of the Power and Love of God within the human soul. More than one Islamic mystic has been accused of Christianizing tendencies in references to Jesus as the Amr of God, for such references identify Jesus in his spiritual nature with the second hypostasis of the Trinity Ahad-Amr—Zdt.

The overt conflict of theological doctrines would disappear if both parties were to think of the Divine Nature in terms of will.

But it is also necessary to come to terms with the Will that operates in the Creation. This is why the roles of Mary, Muhammad and Abraham can be seen as the common focus of the three religions of the West. Remarkably enough, we can find common ground also with Buddhism if we consider the paradox of the doctrine of non-self, anatman and that of moksha, liberation, as self-attained. This doctrine requires belief that man has a central will but not a central being or self, and it also implies that there is an act of will by which man can pass beyond the

limitations of existence. This act which is no other than the abandonment of the craving for existence, can be placed alongside the Islamic surrender of separateness and the Christian 'Be it done unto me according to thy word'.

Religious dogmas which, interpreted in terms of Being and Function, are incompatible and even mutually exclusive, are seen to be different ways of stating the same ultimate truths about Will. We can go further and see a reconciliation between the dogmas of religion and those of dialectical materialism providing the latter are understood in theory—as they must of necessity be in practice—in terms of Will. Dialectical materialism in effect postulates a cosmic affirmation of progress by thesis—antithesis—synthesis and a human freedom to respond to and cooperate in the process, or to reject and oppose it. This is the conflict of revolution and counter-revolution which would have no meaning unless understood as acts of will. Upon any strict mechanistic interpretation, which by reducing all experience to behaviour alone rejects the reality of will, the conflict disappears and with it all purpose or direction either in private life or in the human community. Humanism is nothing at all, unless man is credited with the power of choice.

This is not to say that all religions are one and that there is no difference between theism and atheism. There are all-important differences in the Acts of Will postulated in the various doctrines of Man and the Universe and God. The central theme of the present work is that of the Dramatic Character of existence and we have seen that this arises from limitation and the possibility of failure, evil and sin. Since the Christian faith most explicitly recognizes these features of human experience, and their necessary concomitant in the Supernatural Redemption of the world—it would seem to express most fully the needs and the obligations of mankind. There is, however, a very great step to be made before the New Dispensation can fulfil its purpose. We are in the Synergic Epoch, within which humanity is to enter into the experience of a total Present Moment. This requires the surrender of all separateness. The Christian Church must surrender its claim to the exclusive possession of revealed truth. It must be accepted that the custody of a fuller Revelation confers neither moral superiority over others nor the right to assert authority. It is as hard for the Christian believer as for the Muslim or the Jew to surrender the belief that he belongs to a chosen people, to enable the nobler vision of a true Universal Church to be realized. This and no less, is the Act of Will that we are called upon to make: and it could not be made by man's unaided under-

standing. On the side of God, it is the Holy Spirit, that enables us to love; on the side of nature, it is the quality exemplified in Mary and in Muhammad that enables us to surrender our self-will.

These high Acts of Will would not avail if the present moment were not ripe. This is the last point we have to make before ending the present work. Here and now, in the latter part of the twentieth century of the Christian Era, a supernatural action is taking place. It comes from beyond Nature and it does not wholly enter into Nature—that is into the world of earthly life. It is the Presence of the Cosmic Individuality, that is Christ, transforming the entire human situation. All people are called to the act of will that will enable the human soul-stuff to be impregnated with the Unitive Energy that is the Love of God. Not many are able within the present moment to be aware of the Destiny that leads mankind forward. Untransformed man lives within the small present moment of his subjective experience and can neither understand what is occurring upon a far greater scale nor see what is required of him. This is not to say that psychostatic man has no place in the Great Work of human progress; but that he must depend upon those who can see to guide him. The psychokinetic order is open to all; but only some can reach the degrees of Counsellor or Initiate and so become aware, in their own experience, of the true character of the event. They can serve the Great Work consciously; but they, in their turn, depend upon the radically different insights that are accessible to psychoteleios men. They alone can be channels of communication between mankind and those regions of Experience that belong to the Hyparchic Future. They transmit not only knowledge, but the power of action without which the world would be held in the fetters of causality and chance.

Within the present moment of modern man—that is the twentieth century of the Christian Epoch—few outside the Hidden Directorate are aware of the true situation; but the destiny of mankind towards a high and responsible task requires that more and more should become known. It is in the character of the Synergic Epoch upon which we have now entered that much should be revealed that has hitherto been hidden. It is in this sense, that we understand the Parousia or Manifestation of the Cosmic Individuality. As our last task, we must seek to express something of the nature of this Manifestation as it emerges from our long study.

We have the notion of the Millennium that has so plagued the imagination of the Christian world since apostolic times. The meaning of the term has changed in the minds of people since the early days when it

THE DRAMATIC UNIVERSE

stood for the early End of the Age and the coming of Christ in glory. At the height of the Megalanthropic Epoch, the notion had changed to that of a humanist paradise won by man and created by his own power. Nowadays, it has become a term of ridicule attached to those obscure sects and individuals who believe that some supernatural catastrophe will bring the world to an end. None of these interpretations correspond to the picture of Human Destiny that we have drawn in this last volume of the Dramatic Universe. There is, however, another and far more remarkable way of looking at the Millennium as a change in the time-scale of human experience. The pace of events is so accelerating that, by the end of the present century, major changes in the present moment will occupy decades instead of centuries: this will compel mankind to abandon the present attachment to a single generation or even a lifetime as a unit of experience. The unit of the present moment must, of necessity, change so as to restore the sense of stability and integrity that is threatened by the explosion of progress. Men will begin to think in millennia and no longer regard their own lives as so important as they seem now. It may well be that the life-span of people will be greatly lengthened. Some men may begin to live in full possession of their powers for five centuries or more. This will bring about a drastic change in man's sense of the Present Moment. The Millennium will no longer be regarded as a period of time to be experienced successively by generations of men and women; but as a Present Moment to be embraced and experienced as a whole. This in its turn will call for powers of perception and memory that may now be latent in the genetic constitution of man, but will have to be released by selective breeding and developed by the methods and under the conditions of the Psychokinetic Group of Society.

Then, and then only, can the Great Work come into the open and be manifested as the Word of God. That self-denial and undemanding service that Jesus showed in his earthly life will be seen as a necessity of the new Epoch. Self-effacement will be seen as evidence of merit; and ambition and the desire for popular acclaim as evidences of a defective mind. The Christian world will again remember the words of Jesus at the Last Supper when he washed the disciple's feet, saying: 'Ye ought to wash one another's feet, for I have given you an example, that ye should do as I have done to you.' The leadership of self-effacement is a condition of man's entry into the promise of the New Epoch. This requires so profound a change in the attitudes and actions of mankind as to be impossible by any natural process of evolution or even by the devoted work of the nascent Psychokinetic Order of Society. It can be

THE NEXT AGE OF MIND

achieved only by an Intervention from beyond the natural order. This Intervention, now in progress, takes innumerable forms and calls for our cooperation to the extent of our powers and understanding. This makes the present moment of history one of the most interesting and most important since man was first endowed with Mind.

The Universe is nothing if not interesting; and it is interesting because it is the scene of a prodigious Drama, of hope and hazard, of a marvellous harmony and of an equally amazing uncertainty and disorder. We men are entirely involved in this Drama, but we are not and we cannot be alone. Intelligences of a higher order are intimately concerned in our destiny as we should be concerned in that of the humblest forms of life that share with us the surface of the Earth. The bond of Love that unites the visible and the invisible is created by our acceptance of mutual dependence. This dependence is not to be understood rightly within the Present Moment of our mental activity. The contradictions and absurdities of life as it presents itself to our experience can never be reconciled within the narrow limits of space and time. That is why we regard the chief contribution made in this Essay to a better understanding of Man and his Destiny as consisting in the extension of our framework in the dimensions of Eternity and Hyparxis and in the central theme of the present volume: the Intelligent Guidance of History.

GLOSSARY OF TERMS

Used with Special or Technical Meanings

ACCELERATED
PROGRESS, Law of

ACTION

AMORPHOUS

AZOIC

CENTRES OF
TRANSFORMATION

COALESCENCE

COMPRESENCE

COSMIC

INDIVIDUALITY

The empirical observation that equal increments of progress in the Biosphere require diminishing durations of time according to a logarithmic law. (pp. 166-9)

The simplest kind of change in which there is no gain or loss of either energy or order, (p. 75)

The state of the pre-crystalline earth. The first stage of evolution towards life. (pp. 121-2)

The time of formation of the earth's crust and the oceans, (pp. 126-7)

The four hypothetical regions where 35,000 to 40,000 years ago the human mind was endowed with creativity and man became Homo sapiens sapiens. Withdrew 12,000 years ago in Epoch of Language Creation (pp. 259-63). Sources of the four main cultures: Creator God (q.v.), Great Mother (q.v.), Great Spirit (q.v.), Saviour God (q.v.). (pp. 244-52)

The result of an act of Will whereby component elements are fused into a substantial unity. (pp. 4-8)

The mode of togetherness where the bond is the result of an external action as when the energies of mind are brought together in the early stages of life's evolution, (p. 28)

The Supreme Will manifesting in the Universe as an Independent Source (cf. Vol. II). In this volume, is identified with Christ, the Son of God. (pp. 338-44)

GLOSSARY OF TERMS

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CREATION

CREATOR GOD
CULTURE

CYCLES, GREAT

The operation whereby the Cosmic Energies
harmonize Destiny with the Foreordained Plan.
(p. 79)

A body of traditional beliefs and practices
probably developed in Africa and based on
Sun-Worship and the sense of the Unity and
Absolute Supremacy of God. (pp. 270-5)

In Human History. Periods of some 25,000
years in which decisive transformations of man's
nature are observed to occur, (p. 171)

DEMIURGE, A level of being superior to man in conscious-

DEMIURGIC ness and creativity. The instruments of the

INTELLIGENCE, Universal Individuality whereby the evolution

DEMIURGIC POWERS of life on the earth has been aided and guided

within the framework of natural laws. (pp. 94,
131, and 295)

DEVELOPMENT

DIRECTORATE,
HIDDEN

EDAPHOS, EDAPHIC
HISTORY

EGOISM

ENABLEMENT

EVENT(S)

A process within the present moment (q.v.) that
is directed towards a definite end-point and the
maximum expression of a particular pattern of
potentialities, (p. 77)

(see Hidden)

The soil and its development and transforma-
tion with special reference to its place in man's
evolution on the earth, (pp. 82-3)

The central defect of human nature on account of which man rejects his rôle of service to the cosmic purpose in order to satisfy his own impulses. The atavistic taint in the human Soul-Stuff (q.v.). (pp. 252-9)

The operation whereby Will in the Hyparchic Future (q.v.) and unattached to Existence makes possible transformations within the Present Moment (q.v.). (pp. 131, 418-19)

The coalescence of a group of happenings to give a significant pattern that is more than temporal. The building bricks of history, (pp. 68-71)

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FOREORDAINMENT

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FORMATION

GREAT MOTHER
CULTURE

GREAT SPIRIT
CULTURE

GUIDANCE, GUIDES

HEMITHEANDROS,
HEMITHEANDRIC

HIDDEN
DIRECTORATE

The plan of creation that takes form as the hyparchic creative plan and becomes effectual as the eternal pattern. Foreordainment completes with Predestination and Predetermination the three modes of the 'Future', (p. 64)

Change in the Present Moment (q.v.) that conforms to an orderly pattern and yields enduring objects, (p. 76)

(see Hyparchic Future)

A body of traditional beliefs and practices, originating in S.W. Asia some 10,000 years ago, according to which man descended from a common mother who also endowed him with all the arts of life. (pp. 263-5)

All ways of life founded on belief in a supreme—generally impersonal—Spirit Power that is the Source of order and that can be invoked by magic and ritual: originated in the Far East and spread to America and most parts of the world, though usually combined with other beliefs, (pp. 268-70)

Change within the Present Moment {q.v.}, where the activity is selectively directed towards a destination, (p. 77)

The doctrine that the evolutionary progress, including that of mankind, requires and has received help and direction from superhuman Intelligences {q.v.}. (pp. 193, 251, 325)

Man believed to have superhuman attributes and powers enabling him to act as intermediary between the gods and ordinary people. The H. Epoch from 3200 to 800 B.C. is that of Heroes and Priest-Kings, (pp. 307-10)

Hypothetical group of Psychoteleios men in contact with the Hyparchic Future {q.v.} and able to influence without overt intervention the course of historical events to assure the orderly progress of mankind, (pp. 325-7)

GLOSSARY OF TERMS

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HYPARCHIC FUTURE

(also Past and Present)

ILLUMINATION

INTELLIGENCE

INTERACTION

MAGIC

MEGALANTHROPIC,
MEGALANTHROPY

MENTAL OBJECTS

MIND

MIND-STUFF POOL

A region of experience in which the Will is free from the limitations of existence and yet can operate to produce transformations {q.v.}. Has the characteristic of the Future, except that it is free from all pre-determination (p. 51). Equated to the 'Kingdom of Heaven' (p. 348). The same condition can also be experienced within the present moment (ecstasy or transformation), and can remain in the Past (the Living Past).

of

The state of the supraconscious soul aware of Destiny in the Hyparchic Future, (pp. 94-5)

The coalescence of consciousness and creativity to produce 'Higher Mind' or Higher Wisdom. (p.95)

The simplest kind of change which involves exchanges of energy, (p. 75)

The operation of Will whereby transformations of Mind can be produced. The work of Intelligence in the material world, (pp. 231-4)

The ascription of over-riding significance and value to the human person. The Epoch from 550 B.C. to A.D. 1850 during which this attitude dominated mankind, (pp. 328 and 360)

The content of the present moment. They can be immediate, that is, actual; or latent, that is, in the state of potentiality, (pp. 15-62)

The compresence of consciousness with sensitivity and automatism. The field of immediate experience in man. The precursor of soul {q.v.}. The history of mind is the history of man. (pp. 197-204)

The compresence of the accumulated sensitive energy that has preserved the experiences of animals and men through whom it has passed. The precursor of the Soul-Stuff Pool {q.v.}. (pp. 202-4)

FUTURE

GROWTH

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ORDER

PATTERN

PLAN

POOL(S)

PREDESTINATION

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The compresence of compatible elements. The eternal component of any present moment. There are 'orders of order' (p. 20). Increase of order is a criterion of progress, (pp. 412-13)

The structure of potentialities that sets up an organizing field in the Present Moment (q.v.). The link between the hyparchic plan and its temporal actualization, (pp. 32 and 123)

The foreordained structure which all Existence is set to realize, also applied to any finite situation including human destiny, (pp. 49, 114-20)

(see Mind-stuff and Soul-stuff)

The plan of history taking form in the Hyparchic Future (q.v.) in response to the Foreordained (q.v.) Purpose of Creation, (p. 63)

PRESENT MOMENT

PROGRESS

SAVIOUR GOD

CULTURE

The field of operation of a Will. The Present Moment is a state of incessant flux under influences entering from sources that we call 'past', 'future', 'form', 'pattern', 'decision', 'freedom', i.e. the determining conditions of Time, Eternity and Hyparxis. The present moment varies in extent and duration according to the strength or weakness of its presiding will, (p. 41, etc.)

The transition from a less to a more ordered state within a given Present Moment (q.v.) is the progress of that moment. Progress in one Present Moment may be at the expense of regress in another. Progress is also the way of return to the Perfectly Ordered Source, (p. 147)

A body of beliefs and practices believed to have originated in the Arctic Circle about 12,000 years ago and based on the sense of dependence on a Divine Being to deliver the world from the darkness of winter. This afterwards evolved towards a doctrine of Divine Salvation and hence to the Christian doctrine of Redemption, (pp. 275-84)

GLOSSARY OF TERMS

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SCHOOLS OF
WISDOM

SIN

SOUL

SOUL-STUFF
POOL

SYNERGIC,
SYNERGY

TRANSFORMATION

UNEXPECTEDNESS

WAR WITH TIME

WILL

WORK, THE GREAT

Groups of men of the Psychoteleios and Psycho-kinetic orders engaged in the transmission of Higher Energies and wisdom to mankind. (p. 382)

The rejection by man of his obligation to serve the purpose of his existence. The misuse of freedom latent in the human will. (p. 257)

The coalescence of the elements of the human Mind-stuff to produce a stable entity independent of the physical body. (p. 165)

The compresence in a state of compatibility, but without organization, of the sensitive and conscious energy that has passed through the experience of mankind. From this is drawn the material for the formation of new human selves., (pp. 204, 323)

The state of co-operation between the lower and higher natures of man. Also the social state of co-operation between man and the Universal Individuality, (pp. 340, 386)

The kind of process in which there is co-operation between entities of different levels to produce a higher degree of order within the common Present Moment they share, (p. 78)

A distinguishing mark of hyparchic operations that have no temporal antecedents, (p. 115)

Picturesque description of the operations by which the disordering effect of temporal succession is diminished, neutralized or overcome, (pp. 6-7)

The active principle in the triad Function-Being-Will. The mark of Individuality. The sole power able to convert a compresence into a coalescence (q.v.) (p. 14)

The operation whereby the deviations and distortions in humanity's progress towards fulfilling the aim of Existence are rectified and the evolution of mankind sustained, (p. 295)

THE DRAMATIC UNIVERSE

J. G. Bennett

J. G. Bennett (1897-1974) devoted his life to unravelling the mysteries of human existence and the secrets of human transformation. Taking the ideas and methods of G. I. Gurdjieff as a starting point, he set himself to discover, in a practical way, the means whereby a man could attain the freedom that is the aim of all religions and philosophical systems. Although his life was very much a 'work in progress', Bennett did come to certain conclusions concerning the universal drama and he set forth these conclusions in his four-volume work, *The Dramatic Universe*.

In this great work, Bennett presents a unified vision of God, man, and the universe in which Fact and Value are reconciled through the Doctrine of Reciprocal Maintenance. The latter is one of the 'crumbs from the ideas table of Gurdjieff, but *The Dramatic Universe* is more than a presentation of Gurdjieff's ideas. It is a systemization of all human experience, combining science, religion, history, and philosophy into a realistic picture of man and his world accessible to everyone.

The breadth of J. G. Bennett's vision is clear in reading *The Dramatic Universe*. Volume I is concerned with the world of Fact, based on the idea that all knowledge cannot be contained in space and time alone, and that it is necessary to take into account the unseen inner dimensions of eternity and hyparxis. In Volume II, Bennett presents a systemization of Value, going beyond the knowable into the realms of Being and Will. Volume III concerns man and his nature, and in the final volume, Bennett applies the conclusions previously reached to a study of history. He presents evidence that the evolution of life on earth has been guided by a high but limited intelligence, and discusses the implications this has for the fulfillment of human destiny, both that of the individual and of societies.

The Dramatic Universe is an astonishing and inspiring work. Through it, readers can become acquainted with the tremendous vision given to J. G. Bennett, a vision he shared with others throughout his sojourn in this world.

In these days when even specialists can keep abreast of work in their fields only by means of abstracts, it is an awe inspiring spectacle to find a man who takes all knowledge for his province. Such a man is J. G. Bennett.

The (London) Times Literary Supplement

Bennett...is not simply giving us Ouspensky with different terminology. After leaving that starting-off place, he has made full use, on the way to these conclusions, of his own knowledge and expertise. And I for one am grateful to him.

J. B. Priestly, Author Man and Time

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