

Père Teilhard de Chardin
The Phenomenon of Man
London: Collins, 1959

Introduction by Sir Julian Huxley

The Phenomenon of Man is a very remarkable work by a very remarkable human being. Père Teilhard de Chardin was at the same time a Jesuit Father and a distinguished palaeontologist. In *The Phenomenon of Man* he has effected a threefold synthesis—of the material and physical world with the world of mind and spirit; of the past with the future; and of variety with unity, the many with the one. He achieves this by examining every fact and every subject of his investigation *sub specie evolutionis*, with reference to its development in time and to its evolutionary position. Conversely, he is able to envisage the whole of knowable reality not as a static mechanism but as a process. In consequence, he is driven to search for human significance in relation to the trends of that enduring and comprehensive process; the measure of his stature is that he so largely succeeded in the search. I would like to introduce *The Phenomenon of Man* to English readers by attempting a summary of its general thesis, and of what appear to me to be its more important conclusions.

I make no excuse for this personal approach. As I discovered when I first met Père Teilhard in Paris in 1946, he and I were on the same quest, and had been pursuing parallel roads ever since we were young men in our twenties. Thus, to mention a few signposts which I independently found along my road, already in 1913 I had envisaged human evolution and biological evolution as two phases of a single process, but separated by a 'critical point', after which the properties of the evolving material underwent radical change. This thesis I developed years later in my *Uniqueness of Man*, adding that man's evolution was unique in showing the dominance of convergence over divergence: in

the same volume I published an essay on *Scientific Humanism* (a close approximation to Pèrè Teilhard's *Neo-Humanism*), in which I independently anticipated the title of Pèrè Teilhard's great book by describing humanity as a phenomenon, to be studied and analysed by scientific methods. Soon after the first World War, in *Essays of a Biologist*, I made my first attempt at defining and evaluating evolutionary progress.

In my Romanes Lecture on *Evolutionary Ethics*, I made an attempt (which I now see was inadequate, but was at least a step in the right direction) to relate the development of moral codes and religions to the general trends of evolution ; in 1942, in my *Evolution, the Modern Synthesis*, I essayed the first comprehensive post-Mendelian analysis of biological evolution as a process ; and just before meeting Pèrè Teilhard had written a pamphlet entitled *Uneswa : its Purpose and Philosophy*, where I stressed that such a philosophy must be a global, scientific and evolutionary humanism. In this, I was searching to establish an ideological basis for man's further cultural evolution, and to define the position of the individual human personality in the process—a search in which I was later much aided by Pèrè Teilhard's writings, and by our conversations and correspondence.

The Phenomenon of Man is certainly the most important of Pèrè Teilhard's published works. Of the rest, some, including the essays in *La Vision du Passé*, reveal earlier developments or later elaborations of his general thought ; while others, like *L'Apparition de l'Homme*, are rather more technical.

Pèrè Teilhard starts from the position that mankind in its totality is a phenomenon to be described and analysed like any other phenomenon : it and all its manifestations, including human history and human values, are proper objects for scientific study.

His second and perhaps most fundamental point is the absolute necessity of adopting an evolutionary point of view. Though for certain limited purposes it may be useful to think of phenomena as isolated statically in time, they are in point of fact never static : they are always processes or parts of processes.

The different branches of science combine to demonstrate that the universe in its entirety must be regarded as one gigantic process, a process of becoming, of attaining new levels of existence and organization, which can properly be called a genesis or an evolution. For this reason, he uses words like *noogenesis*, to mean the gradual evolution of mind or mental properties, and repeatedly stresses that we should no longer speak of a cosmology but of a *cosmogensis*. Similarly, he likes to use a pregnant term like *hominisation* to denote the process by which the original proto-human stock became (and is still becoming) more truly human, the process by which potential man realized more and more of his possibilities. Indeed, he extends this evolutionary terminology by employing terms like *ultra-hominisation* to denote the deducible future stage of the process in which man will have so far transcended himself as to demand some new appellation.

With this approach he is rightly and indeed inevitably driven to the conclusion that since evolutionary phenomena (of course including the phenomenon known as man) are processes, they can never be evaluated or even adequately described solely or mainly in terms of their origins : they must be defined by their direction, their inherent possibilities (including of course also their limitations), and their deducible future trends. He quotes with approval Nietzsche's view that man is unfinished and must be surpassed or completed ; and proceeds to deduce the steps needed for his completion.

Pèrè Teilhard was keenly aware of the importance of vivid and arresting terminology. Thus in 1925 he coined the term *noosphere* to denote the sphere of mind, as opposed to, or rather superposed on, the biosphere or sphere of life, and acting as a transforming agency promoting hominisation (or as I would put it, progressive psychosocial evolution). He may perhaps be criticized for not defining the term more explicitly. By *noosphere* did he intend simply the total pattern of thinking organisms (i.e. human beings) and their activity, including the patterns of their interrelations : or did he intend the special environment of man, the systems of organized thought and its

products in which men move and have their being, as fish swim and reproduce in rivers and the sea? Perhaps it might have been better to restrict *noosphere* to the first-named sense, and to use something like *noosystem* for the second. But certainly *noosphere* is a valuable and thought-provoking word.

He usually uses *convergence* to denote the tendency of mankind, during its evolution, to suppose centrifugal on centrifugal trends, so as to prevent centrifugal differentiation from leading to fragmentation, and eventually to incorporate the results of differentiation in an organized and unified pattern. Human convergence was first manifested on the genetic or biological level: after *Homo sapiens* began to differentiate into distinct races (or *subspecies*, in more scientific terminology) migration and intermarriage prevented the pioneers from going further, and led to increasing interbreeding between all human variants. As a result, man is the only successful type which has remained as a single interbreeding group or species, and has not radiated out into a number of biologically separated assemblages (like the birds, with about 8,500 species, or the insects with over half a million).

Cultural differentiation set in later, producing a number of psychosocial units with different cultures. However, these 'interthinking groups', as one writer has called them, are never so sharply separated as are biological species; and with time, the process known to anthropologists as cultural diffusion, facilitated by migration and improved communications, led to an accelerating counter-process of cultural convergence, and so towards the union of the whole human species into a single interthinking group based on a single self-developing framework of thought (or noosystem).

In parenthesis, Père Teilhard showed himself aware of the danger that this tendency might destroy the valuable results of cultural diversification, and lead to drab uniformity instead of

¹ In *La Pèriosphère Humaine* (p. 201) he refers to the *noosphere* as a new layer or membrane on the earth's surface, a 'thinking layer', superposed on the living layer of the *biosphere* and the lifeless layer of inorganic material, the *lithosphere*. But in his earlier formulation of 1925, in *La Vision du Paracét* (p. 92), he calls it 'une sphère de la réflexion, de l'invention consciente, de l'union sacrée des âmes'.

to a rich and potent pattern of variety-in-unity. However, perhaps because he was (rightly) so deeply concerned with establishing a global unification of human awareness as a necessary prerequisite for any real future progress of mankind, and perhaps also because he was by nature and inclination more interested in rational and scientific thought than in the arts, he did not discuss the evolutionary value of cultural variety in any detail, but contented himself by maintaining that East and West are culturally complementary, and that both are needed for the further synthesis and unification of world thought.

Before passing to the full implications of human convergence, I must deal with Père Teilhard's valuable but rather difficult concept of *complexification*. This concept includes, as I understand it, the genesis of increasingly elaborate organization during cosmogenesis, as manifested in the passage from subatomic units to atoms, from atoms to inorganic and later to organic molecules, thence to the first subcellular living units or self-replicating assemblages of molecules, and then to cells, to multicellular individuals, to ephalized metazoa with brains, to primitive man, and now to civilized societies.

But it involves something more. He speaks of complexification as an all-pervading tendency, involving the universe in all its parts in an *enroulement organique sur soi-même*, or by an alternative metaphor, as a *repliement sur soi-même*. He thus envisages the world-stuff as being 'rolled up' or 'folded in' upon itself, both locally and in its entirety, and adds that the process is accompanied by an increase of energetic 'tension' in the resultant 'corpuscular' organizations, or individualized constructions of increased organizational complexity. For want of a better English phrase, I shall use *convergent integration* to define the operation of this process of self-complexification.

Père Teilhard also maintains that complexification by convergent integration leads to the intensification of mental subjective activity—in other words to the evolution of progressively more conscious mind. Thus he states that full consciousness (as seen in man) is to be defined as 'the specific effect of organized

complexity'. But, he continues, comparative study makes it clear that higher animals have minds of a sort, and evolutionary fact and logic demand that minds should have evolved gradually as well as bodies and that accordingly mind-like (or 'mentoid', to employ a barbarous word that I am driven to coin because of its usefulness) properties must be present throughout the universe. Thus, in any case, we must infer the presence of potential mind in all material systems, by backward extrapolation from the human phase to the biological, and from the biological to the inorganic. And according to Père Teilhard, we must envisage the intensification of mind, the raising of mental potential, as being the necessary consequence of complexification, operating by the convergent integration of increasingly complex units of organization.

The sweep of his thought goes even further. He seeks to link the evolution of mind with the concept of energy. If I understand him aright, he envisages two forms of energy, or perhaps two modes in which it is manifested—energy in the physicists' sense, measurable or calculable by physical methods, and 'psychic energy' which increases with the complexity of organized units.¹ This view admittedly involves speculation of great intellectual boldness, but the speculation is extrapolated from a massive array of fact, and is disciplined by logic. It is, if you like, visionary: but it is the product of a comprehensive and coherent vision.

It might have been better to say that complexity of a sort is a necessary prerequisite for mental evolution rather than its cause. Some biologists, indeed, would claim that mind is generated solely by the complexification of certain types of organization, namely brains. However, such logic appears to me narrow. The brain alone is not responsible for mind, even though it is a necessary organ for its manifestation. Indeed an isolated brain is a piece of biological nonsense, as meaningless as an isolated human individual. I would prefer to say that mind

¹ See, e.g., C. Calkins, *Père Teilhard de Chardin*, Paris, 1938, p. 420. We certainly need some new terms in this field; perhaps *mentoid* and *psychoid* would serve.

is generated by or in complex organizations of living matter, capable of receiving information of many qualities or modalities about events both in the outer world and in itself, of synthesizing and processing that information in various organized forms, and of utilizing it to direct present and future action—in other words, by higher animals with their sense-organs, nerves, brains, and muscles. Perhaps, indeed, organizations of such complexity can only arise in evolution when their construction enables them to incorporate and interiorize varied external information: certainly no non-living, non-sentient organization has reached anything like this degree of elaboration.

In human or psychosocial evolution, convergence has certainly led to increased complexity. In Père Teilhard's view, the increase of human numbers combined with the improvement of human communications has fused all the parts of the noosphere together, has increased the tension within it, and has caused it to become 'infolded' upon itself, and therefore more highly organized. In the process of convergence and coalescence, what we may metaphorically describe as the psychosocial temperature rises. Mankind as a whole will accordingly achieve more intense, more complex, and more integrated mental activity, which can guide the human species up the path of progress to higher levels of hominisation.

Père Teilhard was a strong visualizer. He saw with his mind's eye that 'the banal fact of the earth's roundness'—the sphericity of man's environment—was bound to cause this intensification of psychosocial activity. In an unlimited environment, man's thought and his resultant psychosocial activity would simply diffuse outwards: it would extend over a greater area, but would remain thinly spread. But when it is confined to spreading out over the surface of a sphere, idea will encounter idea, and the result will be an organized web of thought, a noetic system operating under high tension, a piece of evolutionary machinery capable of generating high psychosocial energy. When I read his discussion of the subject, I visualized this selective web of living thought as the bounding structure of evolving

man, marking him off from the rest of the universe and yet facilitating exchange with it: playing the same sort of role in delimiting the human unit of evolution and yet encouraging the complexification of its contents, as does the cell-membrane for the animal cell.

Years later, when at the University of California in 1932, this same vivid imagination led Père Teilhard to draw a parallel between the cyclotron generating immense intensities of physical energy in the inwardly accelerating spiral orbits of its fields of force, and the entire noosphere with its fields of thought curved round upon themselves to generate new levels of 'psychical energy'.¹ How his imagination would have kindled at the sight of the circular torus of Zeta, within whose bounding curves are generated the highest physical energies ever produced by man! Père Teilhard, extrapolating from the past into the future, envisaged the process of human convergence as tending to a final state,² which he called 'point Omega', as opposed to the *Alphat* of elementary material particles and their energies. If I understand him aright, he considers that two factors are co-operating to promote this further complexification of the noosphere. One is the increase of knowledge about the universe at large, from the galaxies and stars to human societies and individuals. The other is the increase of psychosocial pressure on the surface of our planet. The result of the one is that the noosphere incorporates ever more facts of the cosmos, including the facts of its general direction and its trends in time, so as to become more truly a microcosm, which (like all incorporated knowledge) is both a mirror and a directive agency. The result of the other is the increased unification and the increased intensity of the system of human thought. The combined result, according to Père Teilhard, will be the attainment of point Omega, where the noosphere will be intensely unified and will have

¹ *En regardant un cyclotron*: in *Recherches et réflexions*, Paris, April 1933, p. 123.

² Presumably, in designating this state as Omega, he looks as a novel state or mode of organization, beyond which the human cannot at present picture, though perhaps the strange fact that the many perceptions uncreated by the infant science of parapsychology may give us a clue as to a possible more ultimate state.

achieved a 'hyperpersonal' organisation.

Here his thought is not fully clear to me. Sometimes he seems to equate this future hyperpersonal psychosocial organization with an emergent Divinity: at one place, for instance, he speaks of the trend as a *Christogenesis*; and elsewhere he appears not to be guarding himself sufficiently against the dangers of personifying the non-personal elements of reality. Sometimes, too, he seems to envisage as desirable the merging of individual human variety in this new unity. Though many scientists may, as I do, find it impossible to follow him all the way in his gallant attempt to reconcile the supernatural elements in Christianity with the facts and implications of evolution, this in no way detracts from the positive value of his naturalistic general approach.

In any case the concept of a hyperpersonal mode of organization sprang from Père Teilhard's conviction of the supreme importance of personality. A developed human being, as he rightly pointed out, is not merely a more highly individualized individual. He has crossed the threshold of self-consciousness to a new mode of thought, and as a result has achieved some degree of conscious integration—integration of the self with the outer world of men and nature, integration of the separate elements of the self with each other. He is a person, an organism which has transcended individuality in personality. This attainment of personality was an essential element in man's past and present evolutionary success: accordingly its fuller achievement must be an essential aim for his evolutionary future.

This belief in the pre-eminent importance of the personality in the scheme of things was for him a matter of faith, but of faith supported by rational inquiry and scientific knowledge. It prevented him from diluting his concept of the divine principle inherent in reality, in a vague and meaningless pantheism, just as his apprehension of the entire process of reality as a system of interrelations, and of mankind as actively participating in that process, saved him from losing his way in the deserts of individualism and existentialism.

He realized that the appearance of human personality was

the culmination of two major evolutionary trends—the trend towards more extreme individualism, and that towards more extensive interrelation and co-operation: persons are individuals who transcend their merely organic individuality in conscious participation.

His understanding of the method by which organisms become first individualised and then personalised gave him a number of valuable insights. Basically, the process depends on cephalization—the differentiation of a head as the dominant guiding region of the body, forwardly directed, and containing the main sense-organs providing information about the outer world and also the main organ of co-ordination or brain.

With his genius for fruitful analogy, he points out that the process of evolution on earth is itself now in the process of becoming cephalized. Before the appearance of man, life consisted of a vast array of separate branches, linked only by an unorganized pattern of ecological interaction. The incipient development of mankind into a single psychosocial unit, with a single noosystem or common pool of thought, is providing the evolutionary process with the rudiments of a head. It remains for our descendants to organize this global noosystem more adequately, so as to enable mankind to understand the process of evolution on earth more fully and to direct it more adequately.

I had independently expressed something of the same sort, by saying that in modern scientific man, evolution was at last becoming conscious of itself—a phrase which I found delighted Père Teilhard. His formulation, however, is more profound and more seminal: it implies that we should consider inter-thinking humanity as a new type of organism, whose destiny it is to realize new possibilities for evolving life on this planet. Accordingly, we should endeavour to equip it with the mechanisms necessary for the proper fulfilment of its task—the psychosocial equivalents of sense-organs, effector organs, and a co-ordinating central nervous system with dominant brain; and our aim should be the gradual personalization of the human unit of evolution—its conversion, on the new level of co-operative

interthinking, into the equivalent of a person.

Once he had grasped and faced the fact of man as an evolutionary phenomenon, the way was open towards a new and comprehensive system of thought. It remained to draw the fullest conclusions from this central concept of man as the spearhead of evolution on earth, and to follow out the implications of this approach in as many fields as possible. The biologist may perhaps consider that in *The Phenomenon of Man* he paid insufficient attention to genetics and the possibilities and limitations of natural selection,¹ the theologian that his treatment of the problems of sin and suffering was inadequate or at least unorthodox, the social scientist that he failed to take sufficient account of the facts of political and social history. But he saw that what was needed at the moment was a broad sweep and a comprehensive treatment. This was what he essayed in *The Phenomenon of Man*. In my view he achieved a remarkable success, and opened up vast territories of thought to further exploration and detailed mapping.

The facts of Père Teilhard's life help to illuminate the development of his thought. His father was a small landowner in Auvergne, a gentleman farmer who was also an archivist, with a taste for natural history. Pierre was born in 1881, the fourth in a family of eleven. At the age of ten he went as a boarder to a Jesuit College where, besides doing well in all prescribed subjects of study, he became devoted to field geology and mineralogy. When eighteen years old, he decided to become a Jesuit, and entered their order. At the age of twenty-four, after an interlude in Jersey mainly studying philosophy, he was sent to teach physics and chemistry in a Jesuit College at Cairo. In the course of his three years in Egypt, and a further four studying theology in Sussex, he acquired real competence in geology and palaeontology; and before being ordained priest in 1912, a reading of Bergson's *Evolution Créatrice* had helped to inspire in him a profound interest in the general facts and theories of evolution.

¹ Though in his Institute for Human Studies he envisaged a section of Eugenics.

INTRODUCTION BY SIR JULIAN HUXLEY

Returning to Paris, he pursued his geological studies and started working under Marcelin Boule, the leading prehistorian and archaeologist of France, in his Institute of Human Palaeontology at the Museum of Natural History. It was here that he met his lifelong friend and colleague in the study of prehistory, the Abbé Breuil, and that his interests were first directed to the subject on which his life's work was centred—the evolution of man. In 1913 he visited the site where the famous (and now notorious) Piltdown skull had recently been unearthed, in company with its discoverer Dr. Dawson and the leading English palaeontologist Sir Arthur Smith Woodward. This was his first introduction to the excitements of palaeontological discovery and scientific controversy.

During the first World War he served as a stretcher-bearer, receiving the Military Medal and the Legion of Honour, and learnt a great deal about his fellow men and about his own nature. The war strengthened his sense of religious vocation, and in 1918 he made a triple vow of poverty, chastity and obedience.

By 1919 the major goals of his life were clearly indicated. Professionally, he had decided to embark on a geological career, with special emphasis on palaeontology. As a thinker, he had reached a point where the entire phenomenal universe, including man, was revealed as a process of evolution, and he found himself impelled to build up a generalized theory or philosophy of evolutionary process which would take account of human history and human personality as well as of biology, and from which one could draw conclusions as to the future evolution of man on earth. And as a dedicated Christian priest, he felt it imperative to try to reconcile Christian theology with this evolutionary philosophy, to relate the facts of religious experience to those of natural science.

Returning to the Sorbonne, he took his Doctorate in 1922. He had already become Professor of Geology at the Catholic Institute of Paris, where his lectures attracted great attention among the students (three of whom are now teaching in the

INTRODUCTION BY SIR JULIAN HUXLEY

University of Paris). In 1923, however, he went to China for a year on behalf of the Museum, on a palaeontological mission directed by another Jesuit, Pere Licent. His *Lettres de Voyage* reveal the impression made on him by the voyage through the tropics, and by his first experience of geological research in the desert remoteness of Mongolia and north-western China. This expedition inspired *La Messe sur le Montel*, a remarkable and truly poetical essay which was at one and the same time mystical and realistic, religious and philosophical.

A shock awaited him after his return to France. Some of the ideas which he had expressed in his lectures about original sin and its relation to evolution, were regarded as unorthodox by his religious superiors, and he was forbidden to continue teaching. In 1926 he returned to work with Pere Licent in China, where he was destined to stay, with brief returns to France and excursions to the United States, to Abyssinia, India, Burma and Java, for twenty years. Here, as scientific adviser to the Geological Survey of China, centred first at Tientsin and later at Peking, he met and worked with outstanding palaeontologists of many nations, and took part in a number of expeditions, including the Citroën *Croisière Jaune* under Haardt, and Davidson Black's expedition which unearthed the skull of Peking man.

In 1938 he was appointed Director of the Laboratory of Advanced Studies in Geology and Palaeontology in Paris, but the outbreak of war prevented his return to France. His enforced isolation in China during the six war years, painful and depressing though it often was, undoubtedly helped his inner spiritual development (as the isolation of imprisonment helped to mature the thought and character of Nehru and many other Indians). It encouraged ample reading and reflection, and stimulated the full elaboration of his thought.

It was a nice stroke of irony that the action of Pere Teilhard's religious superiors in barring him from teaching in France because of his ideas on human evolution, should have led him to China and brought him into intimate association with one of the most important discoverers in that field, and driven him to

enlarge and consolidate his 'dangerous thoughts'.

During the whole of this period he was writing essays and books on various aspects and implications of evolution, culminating in 1938 in the manuscript of *Le Phénomène Humain*. But he never succeeded in obtaining permission to publish any of his controversial or major works. This caused him much distress, for he was conscious of a prophetic mission: but he faithfully observed his vow of obedience. Professionally too he was extremely active throughout this period. He contributed a great deal to our knowledge of palaeolithic cultures in China and neighbouring areas, and to the general understanding of the geology of the Far East. This preoccupation with large-scale geology led him to take an interest in the geological development of the world's continents: each continent, he considered, had made its own special contribution to biological evolution. He also did important palaeontological work on the evolution of various mammalian groups.

The wide range of his vision made him impatient of over-specialization, and of the timidity which refuses to pass from detailed study to broad synthesis. With his conception of mankind as at the same time an unfinished product of past evolution and an agency of distinctive evolution to come, he was particularly impatient of what he felt as the narrowness of those anthropologists who limited themselves to a study of physical structure and the details of primitive social life. He wanted to deal with the entire human phenomenon, as a transcendence of biological by psychosocial evolution. And he had considerable success in redirecting along these lines the institutions with which he was connected.

Back in France in 1946, Pèrre Teilhard plunged eagerly into European intellectual life, but in 1947 he had a serious heart attack, and was compelled to spend several months convalescing in the country. On his return to Paris, he was enjoined by his superiors not to write any more on philosophical subjects: and in 1948 he was forbidden to put forward his candidature for a Professorship in the Collège de France in succession to the Abbé

Breuil, though it was known that this, the highest academic position to which he could aspire, was open to him. But perhaps the heaviest blow awaited him in 1950, when his application for permission to publish *Le Groupe Zoologique Humain* (a recasting of *Le Phénomène Humain*) was refused in Rome. By way of compensation he was awarded the signal honour of being elected *Membre de l'Institut*, as well as having previously become a Corresponding Member of the *Académie des Sciences*, an officer of the *Légion d'Honneur*, and a director of research in the *Centre National de la Recherche Scientifique*.

Already in 1948 he had been invited to visit the U.S.A., where he made his first contacts with the Wenner-Gren Foundation (or Viking Foundation as it was then called), in whose friendly shelter he spent the last four years of his life. The Wenner-Gren Foundation also sponsored his two visits to South Africa, where he was able to study at first hand the remarkable discoveries of Broome and Dart concerning *Australopithecus*, that near-ancestor of man, and to lay down a plan for the future co-ordination of palaeontological and archaeological work in this area, so important as a centre of hominid evolution.

His position in France became increasingly difficult, and in 1951 he moved his headquarters to New York. Here, at the Wenner-Gren Foundation, he played an important role in framing anthropological policy, and made valuable contributions to the international symposia which it organized. And here, in 1954, I had the privilege of working with him in one of the remarkable discussion groups set up as part of the Columbia Bicentennial celebrations: just before this, he had returned to France for a brief but stimulating month of discussion.

Throughout this period, he had been actively developing his ideas, and had written his spiritual autobiography, *Le Cœur de la Matière*, the semi-technical *Le Groupe Zoologique Humain*, and various technical and general articles later included in the collections entitled *La Vision du Passé* and *L'Apparition de l'Homme*.

He was prevailed on to leave his manuscripts to a friend.

INTRODUCTION BY SIR JULIAN HUXLEY

They therefore could be published after his death, since permission to publish is only required for the work of a living writer. The prospect of eventual publication must have been a great solace to him, for he certainly regarded his general and philosophical writings as the keystone of his life's work, and felt it his supreme duty to proclaim the fruits of his labour.

It was my privilege to have been a friend and correspondent of Pere Teilhard for nearly ten years ; and it is my privilege now to introduce this, his most notable work, to English-speaking readers.

His influence on the world's thinking is bound to be important. Through his combination of wide scientific knowledge with deep religious feeling and a rigorous sense of values, he has forced theologians to view their ideas in the new perspective of evolution, and scientists to see the spiritual implications of their knowledge. He has both clarified and unified our vision of reality. In the light of that new comprehension, it is no longer possible to maintain that science and religion must operate in thought-tight compartments or concern separate sectors of life ; they are both relevant to the whole of human existence. The religiously-minded can no longer turn their backs upon the natural world, or seek escape from its imperfections in a supernatural world ; nor can the materialistically-minded deny importance to spiritual experience and religious feeling.

Like him, we must face the phenomenon. If we face them resolutely, and avail ourselves of the help which his intellectual and spiritual travail has provided, we shall find a more assured basis for our thought and a more certain direction for our evolutionary advance. But, like him, we must not take refuge in abstractions or generalities. He always took account of the specific realities of man's present situation, though set against the more general realities of long-term evolution ; and he always endeavoured to think concretely, in terms of actual patterns of organization—their development, their mode of operation and their effects.

26

INTRODUCTION BY SIR JULIAN HUXLEY

As a result, he has helped us to define more adequately both our own nature, the general evolutionary process, and our place and role in it. Thus clarified, the evolution of life becomes a comprehensible phenomenon. It is an anti-entropic process, running counter to the second law of thermodynamics with its degradation of energy and its tendency to uniformity. With the aid of the sun's energy, biological evolution marches uphill, producing increased variety and higher degrees of organization.

It also produces more varied, more intense and more highly organized mental activity or awareness. During evolution, awareness (or if you prefer, the mental properties of living matter) becomes increasingly important to organisms, until in mankind it becomes the most important characteristic of life, and gives the human type its dominant position.

After this critical point has been passed, evolution takes on a new character : it becomes primarily a psychosocial process, based on the cumulative transmission of experience and its results, and working through an organized system of awareness, a combined operation of knowing, feeling and willing. In man, at least during the historical and proto-historical periods, evolution has been characterized more by cultural than by genetic or biological change.

On this new psychosocial level, the evolutionary process leads to new types and higher degrees of organization. On the one hand there are new patterns of co-operation among individuals—co-operation for practical control, for enjoyment, for education, and notably in the last few centuries, for obtaining new knowledge ; and on the other there are new patterns of thought, new organizations of awareness and its products.

* As a result, new and often wholly unexpected possibilities have been realized. The variety and degree of human fulfillment has been increased. Pere Teilhard enables us to see which possibilities are in the long run desirable. What is more, he has helped to define the conditions of advance, the conditions which will permit an increase of fulfillment and prevent an increase of frustration. * The conditions of advance are these : global unity

27

of mankind's noetic organization or system of awareness, but a high degree of variety within that unity; love, with goodwill and full co-operation; personal integration and internal harmony; and increasing knowledge.

Knowledge is basic. It is knowledge which enables us to understand the world and ourselves, and to exercise some control or guidance. It sets us in a fruitful and significant relation with the enduring processes of the universe. And, by revealing the possibilities of fulfilment that are still open, it provides an overriding incentive.

We, mankind, contain the possibilities of the earth's immense future, and can realize more and more of them on condition that we increase our knowledge and our love. That, it seems to me, is the distillation of *The Phenomenon of Man*.

London, December 1958

Preface

IF THIS book is to be properly understood, it must be read not as a work on metaphysics, still less as a sort of theological essay, but purely and simply as a scientific treatise. The title itself indicates that. This book deals with man *solely* as a phenomenon; but it also deals with the *whole* phenomenon of man.

In the first place, it deals with man *solely* as a phenomenon. The pages which follow do not attempt to give an explanation of the world, but only an introduction to such an explanation. Put quite simply, what I have tried to do is this; I have chosen man as the centre, and around him I have tried to establish a coherent order between antecedents and consequences. I have not tried to discover a system of ontological and causal relations between the elements of the universe, but only an experimental law of recurrence which would express their successive appearance in time. Beyond these first purely *scientific* reflections, there is obviously ample room for the most far-reaching speculations of the philosopher and the theologian. Of set purpose, I have at all times carefully avoided venturing into that field of the essence of being. At most I am confident that, on the plane of experience, I have identified with some accuracy the combined movement towards unity, and have marked the places where philosophical and religious thinkers, in pursuing the matter further, would be entitled, for reasons of a higher order, to look for breaches of continuity.¹ But this book also deals with the *whole* phenomenon of man. Without contradicting what I have just said (however much it may appear to do so) it is this aspect which might possibly make my suggestions *look* like a philosophy. During the last fifty years

¹ See, for example, the footnotes on pp. 169, 186, 208.