

being able longer to contain, he broke out with a lamentable cry saying "What shall I do?"

It was not without cause that Bunyan's 'Christian' was so greatly distressed.

'I am for certain informed (said he) that this our city will be burned with fire from Heaven—in which fearful overthrow both myself with thee my wife and you my sweet babes shall miserably come to ruine, except (the which yet I see not) some way of escape can be found, whereby we may be delivered.'

What response to this challenge is Christian going to make? Is he going to look this way and that as if he would run, yet stand still because he cannot tell which way to go? Or will he begin to run—and run on crying 'Life! Life! Eternal Life!'—with his eye set on a shining light and his feet bound for a distant wicket-gate? If the answer to this question depended on nobody but Christian himself, our knowledge of the uniformity of human nature might incline us to predict that Christian's imminent destiny was Death in his City of Destruction. But in the classic version of the myth we are told that the human protagonist was not left entirely to his own resources in the decisive hour. According to John Bunyan, Christian was saved by his encounter with Evangelist. And, inasmuch as it cannot be supposed that God's nature is less constant than Man's, we may and must pray that a reprieve which God has granted to our society once will not be refused if we ask for it again in a humble spirit and with a contrite heart.

TEILHARD DE CHARDIN: *The Phenomenon of Man* *

Not all twentieth-century philosophies of history are pessimistic. In *The Phenomenon of Man* (published posthumously in France in 1955) Pierre Teilhard de Chardin views history in the long time perspective of evolution and comes to decidedly optimistic conclusions. Teilhard (1881–1955), Jesuit Father and noted paleontologist, was professor of geology at the Catholic Institute of Paris, corresponding member of the Académie des Sciences, and for many years scientific adviser to the Geological Survey of China.

A New Phase of Evolution

WE ARE, at this very moment, passing through an age of *transition*. . . .
. . . To us, in our brief span of life, falls the honour and good fortune of coinciding with a critical change of the noosphere.

In these confused and restless zones in which present blends with

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future in a world of upheaval, we stand face to face with all the grandeur, the unprecedented grandeur, of the phenomenon of man. Here if anywhere, now if ever, have we, more legitimately than any of our predecessors, the right to think that we can measure the importance and detect the direction of the process of hominisation. Let us look carefully and try to understand. And to do so let us probe beneath the surface and try to decipher the particular form of mind which is coming to birth in the womb of the earth today. . . .

In the last century and a half the most prodigious event, perhaps, ever recorded by history since the threshold of reflection has been taking place in our minds: the definitive access of consciousness to a *scale of new dimensions*; and in consequence the birth of an entirely renewed universe, without any change of line or feature by the simple transformation of its intimate substance.

Until that time the world seemed to rest, static and fragmentable, on the three axes of its geometry. Now it is a casting from a single mould.

What makes and classifies a 'modern' man (and a whole host of our contemporaries is not yet 'modern' in this sense) is having become capable of seeing in terms not of space and time alone, but also of duration, or—and it comes to the same thing—of biological space-time; and above all having become incapable of seeing anything otherwise—anything—not even himself. . . .

. . . Man discovers that *he is nothing else than evolution become conscious of itself*, to borrow Julian Huxley's concise expression. It seems to me that our modern minds (because and inasmuch as they are modern) will never find rest until they settle down to this view. On this summit and on this summit alone are repose and illumination waiting for us. . . .

[However, it is not enough to say] that evolution, by becoming conscious of itself in the depths of ourselves, only needs to look at itself in the mirror to perceive itself in all its depths and to decipher itself. In addition it becomes free to dispose of itself—it can give itself or refuse itself. Not only do we read in our slightest acts the secret of its proceedings; but for an elementary part *we hold it in our hands*, responsible for its past to its future.

Is this grandeur or servitude? Therein lies the whole problem of action.

A Feeling to Be Overcome: Discouragement

The reasons behind the scepticism regarding mankind which is fashionable among 'enlightened' people today are not merely of a representative order. Even when the intellectual difficulties of the mind in conceiving the collective and visualising space-time have been over-

come, we are left with another and perhaps a still more serious form of hesitation which is bound up with the incoherent aspect presented by the world of man today. The nineteenth century had lived in sight of a promised land. It thought that we were on the threshold of a Golden Age, lit up and organised by science, warmed by fraternity. Instead of that, we find ourselves slipped back into a world of spreading and ever more tragic dissension. Though possible and even perhaps probable in theory, the idea of a spirit of the earth does not stand up to the test of experience. No, man will never succeed in going beyond man by uniting with himself. That Utopia must be abandoned as soon as possible and there is no more to be said.

To explain or efface the appearances of a setback which, if it were true, would not only dispel a beautiful dream but encourage us to weigh up a radical absurdity of the universe, I would like to point out in the first place that to speak of experience—of the results of experience—in such a connection is premature to say the least of it. After all half a million years, perhaps even a million, were required for life to pass from the pre-hominids to modern man. Should we now start wringing our hands because, less than two centuries after glimpsing a higher state, modern man is still at loggerheads with himself? Once again we have got things out of focus. To have understood the immensity around us, behind us, and in front of us is already a first step. But if to this perception of depth another perception, that of *slowness*, be not added, we must realise that the transposition of values remains incomplete and that it can beget for our gaze nothing but an impossible world. Each dimension has its proper rhythm. Planetary movement involves planetary majesty. Would not humanity seem to us altogether static if, behind its history, there were not the endless stretch of its prehistory? Similarly, and despite an almost explosive acceleration of noogenesis at our level, we cannot expect to see the earth transform itself under our eyes in the space of a generation. Let us keep calm and take heart.

In spite of all evidence to the contrary, mankind may very well be advancing all round us at the moment—there are in fact many signs whereby we can reasonably suppose that it is advancing. But, if it is doing so, it must be—as is the way with very big things—doing so almost imperceptibly.

Love as Energy

We are accustomed to consider (and with what a refinement of analysis!) only the sentimental face of love, the joy and miseries it causes us. It is in its natural dynamism and its evolutionary significance that I shall be dealing with it here, with a view to determining the ultimate phases of the phenomenon of man.

Considered in its full biological reality, love—that is to say the affinity

of being with being—is not peculiar to man. It is a general property of all life and as such it embraces, in its varieties and degrees, all the forms successively adopted by organised matter. In the mammals, so close to ourselves, it is easily recognised in its different modalities: sexual passion, parental instinct, social solidarity, etc. Farther off, that is to say lower down on the tree of life, analogies are more obscure until they become so faint as to be imperceptible. But this is the place to repeat what I said earlier when we were discussing the 'within of things.' If there were no internal propensity to unite, even at a prodigiously rudimentary level—indeed in the molecule itself—it would be physically impossible for love to appear higher up, with us, in 'hominised' form. By rights, to be certain of its presence in ourselves, we should assume its presence, at least in an inchoate form, in everything that is. And in fact if we look around us at the confluent ascent of consciousnesses, we see it is not lacking anywhere. . . .

Mankind, the spirit of the earth, the synthesis of individuals and peoples, the paradoxical conciliation of the element with the whole, and of unity with multitude—all these are called Utopian and yet they are biologically necessary. And for them to be incarnated in the world all we may well need is to imagine our power of loving developing until it embraces the total of men and of the earth.

The Ultimate Earth

With that said, we have now to ask: *along what lines* of advance, among others—judging from the present condition of the noosphere—are we destined to proceed from the planetary level of psychic totalisation and evolutionary upsurge we are now approaching?

I can distinguish three principal ones in which we see again the predictions to which we were already led by our analysis of the ideas of science and humanity. They are: the organisation of research, the concentration of research upon the subject of man, and the conjunction of science and religion. These are three natural terms of one and the same progression. . . .

We can envisage a world whose constantly increasing 'leisure' and heightened interest would find their vital issue in fathoming everything, trying everything, extending everything; a world in which giant telescopes and atom smashers would absorb more money and excite more spontaneous admiration than all the bombs and cannons put together; a world in which, not only for the restricted band of paid research-workers, but also for the man in the street, the day's ideal would be the wresting of another secret or another force from corpuscles, stars, or organised matter; a world in which, as happens already, one gives one's life to be and to know, rather than to possess. That, on an estimate of the forces engaged, is what is being relentlessly prepared around us.

In some of the lower organisms the retina is, as it were, spread over the whole surface of the body. In somewhat the same way human vision is still diffuse in its operation, mixed up with industrial activity and war. Biologically it needs to individualise itself independently, with its own distinct organs. It will not be long now before the noosphere finds its eyes. . . .

. . . Man, the knowing subject, will perceive at last that man, 'the object of knowledge,' is the key to the whole science of nature. . . .

. . . So far we have certainly allowed our race to develop at random, and we have given too little thought to the question of what medical and moral factors *must replace the crude forces of natural selection* should we suppress them. In the course of the coming centuries it is indispensable that a nobly human form of eugenics, on a standard worthy of our personalities, should be discovered and developed.

Eugenics applied to individuals leads to eugenics applied to society. . . . Points involved are: the distribution of the resources of the globe; the control of the trek towards unpopulated areas; the optimum use of the powers set free by mechanisation; the physiology of nations and races; geo-economy, geo-politics, geo-demography; the organisation of research developing into a reasoned organisation of the earth. Whether we like it or not, all the signs and all our needs converge in the same direction. We need and are irresistibly being led to create, by means of and beyond all physics, all biology and all psychology, *a science of human energetics*.

It is in the course of that creation, already obscurely begun, that science, by being led to concentrate on man, will find itself increasingly face to face with religion.

To outward appearance, the modern world was born of an antireligious movement: man becoming self-sufficient and reason supplanting belief. Our generation and the two that preceded it have heard little but talk of the conflict between science and faith; indeed it seemed at one moment a foregone conclusion that the former was destined to take the place of the latter.

But, inasmuch as the tension is prolonged, the conflict visibly seems to need to be resolved in terms of an entirely different form of equilibrium—not in elimination, nor duality, but in synthesis. After close on two centuries of passionate struggles, neither science nor faith has succeeded in discrediting its adversary. On the contrary, it becomes obvious that neither can develop normally without the other. And the reason is simple: the same life animates both. Neither in its impetus nor its achievements can science go to its limits without becoming tinged with mysticism and charged with faith.

Firstly *in its impetus*. We touched on this point when dealing with the problem of action. Man will only continue to work and to research

so long as he is prompted by a passionate interest. Now this interest is entirely dependent on the conviction, strictly undemonstrable to science, that the universe has a direction and that it could—indeed, if we are faithful, it *should*—result in some sort of irreversible perfection. Hence comes belief in progress. . . .

In short, as soon as science outgrows the analytic investigations which constitute its lower and preliminary stages, and passes on to synthesis—synthesis which naturally culminates in the realisation of some superior state of humanity—it is at once led to foresee and place its stakes on the *future* and on the *all*. And with that it out-distances itself and emerges in terms of *option* and *adoration*.

Thus Renan and the nineteenth century were not wrong to speak of a Religion of Science. Their mistake was not to see that their cult of humanity implied the re-integration, in a renewed form, of those very spiritual forces they claimed to be getting rid of. . . .

Always pushing forward in the three directions we have just indicated, and taking advantage of the immense duration it has still to live, mankind has enormous possibilities before it.