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A PHILOSOPHICAL APPROACH TO THE ECOLOGICAL CRISIS

Today no one questions the fact that our earth's ecological system is in real crisis. The non-renewable resources of nature are running out at a fast pace. Owing to over-industrialization, the air and water are polluted; acid-rain and other phenomena caused by man's rape of nature are taking a heavy toll on human health. In the super-affluent and heavily industrialized countries, one is faced with the irony that there is rarely a family without one or more members terminally ill with cancer, emphysema and other eco-related diseases. The real tragedy is that since the developed world cannot reconcile itself with any possible diminution in its present standard of living, there is little hope that it will readily give up its present extravagant way of squandering the patrimony of nature. We can fully agree with the statement that the present ecological crisis is mostly due to man's ignorance, greed, aggression, and arrogance, and that an inadequate understanding of the natural world and its laws is the potent cause of the environmental disaster. The only way open to us is to educate people on the root causes of the present rape of nature, so that they will change their attitudes and habits before it is too late.

Science and Ecology

Generally science and technology are blamed as the principal culprits in the present ecological crisis. But science itself is culturally conditioned. Anthropologists point out as a typical example of this cultural divergence of outlook in the pursuit of science, the discovery of perpetual motion. In 1050, Bhaskara, an Indian mathematician proposed the notion of perpetual movement, and in the Indian context it was taken as a metaphysical proposition showing the peculiarity of the phenomenal world. But immediately the idea was transmitted to the Arab world, and through them to the West and there, within a hundred years, it led to the discovery of the fly-

wheel and the pump. While for the East, science was essentially an expansion of consciousness to understand the phenomenal world, the Greek world and the whole West took a spectator's attitude to nature. According to both Plato and Aristotle, philosophy was born out of wonder and the curiosity about the regularities of sun, moon and tides and other phenomena of nature. On the other hand, inquiry into the sources of human suffering and an appropriate way for removing suffering and attaining self-understanding was the main concern of Eastern philosophy. Curiosity prompted the question what one could do with one's information, and *techne* or art was the consequence. According to Aristotle *phronesis* or practical wisdom was implied in every act of knowing, and every concept was a sort of blue print of a practical project for using it for one's own benefit.

The Judeo-Christian culture lent strong support to this Graeco-Roman pragmatism concerning nature. In the Biblical view the world was simply the arena where God and man met, and the rest of the things in the world had no meaning of their own. All things were created for the benefit of man, and he was given the command to dominate and rule the earth. Though man was made the spear-head of creation and the vanguard of its forward movement, he felt very little responsibility for maintaining the balance and beauty of nature. In the Decalogue, there is no specific mention of the earth and its goods put under the trusteeship of human beings. Such injunctions had very little relevance when human beings were few, and the resources of nature appeared almost inexhaustible. The only problem was the great gap between rich and poor, and the main concern was to take care of the orphans, the widows and aliens in the distribution of the wealth of the earth. Though the New Testament has beautiful statements concerning the lilies of the field and the sparrows about which God has great care, it contains no ecological precepts. In fact, the Christian idea of 'redemption' as the retrieval of the soul from the contamination of the body, too much influenced by Greek thinking, has a pessimistic outlook on nature itself.

Added to this Christian inertia concerning nature is what Max Weber described as the Protestant Ethic. The Protestant Christians following the outlook of Biblical Jews considered material affluence a sign of God's blessing. It was the main inspiration for the rise

of Capitalism, which encouraged each one to amass as much wealth as possible, with whatever means that were available, exploiting the inexhaustible raw materials, and the cheap labour of the masses that could be procured at a modest price. This, in turn, led to the Industrial Revolution for mass producing goods for human use. If one succeeded in making a great profit out of them, it was a sign that God was pleased and that one has been doing something good. This produced the mad rush to capture the available resources of nature-gold, silver, iron ore, other minerals, and especially gasoline – and use them all for the production not only of consumable goods, but particularly of weapons of aggression and mass destruction to dominate the whole earth and to keep it under one's control. But the consequence is that the whole project has boomeranged. Not only has technology made the globe more and more inhospitable to human beings, but also created a situation in which the dangerous products of human technology, like the nuclear bomb, chemical and bacterial weapons, hang like Damocles Sword over the very survival of the human species.

2. The New Attitude Toward Science

But as science has progressed in this twentieth century, the old Newtonian mechanistic conception of the world in terms of mass and velocity has turned out to be simplistic. The interpretive revolution introduced by Quantum Physics tells us that the Cartesian subject-object dichotomy no longer provides a possible starting point for understanding physics. John Wheeler strongly puts it: "The old word 'observer' simply has to be crossed off the books and we must put in the new word participator".¹ As Werner Heisenberg says: "The familiar classification of the world into subject and object, inner and outer world, body and soul, somehow no longer quite applies, and indeed leads to difficulties".² The times when physics, chemistry, etc, were named exact sciences, capable of finding out exactly what is in things out there is gone. Just as the suprasensible things are a mystery for human beings, the intra-atomic realities also proved to be beyond human comprehension and measurement.

1. See *A Question of Physics; Conversations in Physics and Biology*; ed. Paul Buckley and David Peat (Toronto; Univ. of Toronto Press, 1979), p. 55

2. Werner Heisenberg, "The Representation of Nature in Contemporary Physics", *The Discontinuous Universe*, ed. S. Sears & R. Lord, (New York; Basic Books, 1972), p. 131.

What was termed 'atom', the indivisible ultimate unit of things, is shown to have great many parts, the electron, proton, positron, the nucleus and the like within it. Since our means of measurement themselves may distort the sub-atomic realities, there is no way of finding out exactly what they are, even if they have any regularities like that of macro-world. Hence there is a definite de-absolutizing of contemporary physics, a break with the narrow correspondence between the conceptual model and nature in itself. So there is a recovery of the original Greek meaning of 'theory', an insight, a way of looking at the world and not actual description of the way things really are.

This means a collapse of naive realism in scientific epistemology. According to Heisenberg, "we do not have a picture of nature, but rather a picture of our relation to nature".³ Hence Fritjof Capra says that we should abandon the idea of the world as a machine and entertain a more consistent world-view characterized by holism, system and ecology.⁴ What the present crisis of physics involves is not the substitution of some new paradigms in the place of the old, but rather the recognition and acceptance of the limitations of all paradigms and the collapse of the transcendental individualism of the independent observer. In fact, the 'individual' is retrieving its old connotation, namely the 'indivisible', that which is comprehensible only as a whole and inseparable from the whole.⁵

When in 1864 Maxwell published his *A Dynamic Theory of the Electromagnetic Field*, Lord Kelvin accused him of abandoning science and lapsing it into mystery, and he kept up that accusation till his death in 1905. In 1905 Einstein published his famous essays on the special theory of Relativity and Quantum physics, which denied the Newtonian radical opposition between absolute mathematical time and space and relative apparent time and space. He showed that time and space were inherent features of the ongoing empirical universe and inseparable from its dynamic connections and processes, and thus inseparable from one another, as the space-time metrical field, in terms of which the universe as a whole is explained.

3. *Ibid.*, p. 134.

4. Fritjof Capra, *The Turning Point* (New York: Bantam, 1982), p. 75-97.

5. See Raymond Williams, *Key words* (London: Fontana, 1976).

Einstein emphasized an intuitive apprehension of the limited range of human understanding, "the humble attitude of mind towards the grandeur of reason incarnate in existence and which in its profoundest depths, is inaccessible to man".⁶ According to him "the scientist's religious feeling takes the form of rapturous amazement at the harmony of natural law, which reveals an intelligence of such superiority that, compared with it, all the systematic thinking and acting of human beings is an utterly insignificant reflection".⁷

In this new perspective, scientists have an attitude to nature similar to that of medieval mystics like Meister Eckhart, Hildegard of Bingen, Julian of Norwich and Mechtild of Magdeburg, who had a spirituality centered on creation. Freeing themselves from Augustinian pessimism, they felt close to nature. For them the earth itself was a symbol of a divine maternal presence. Along with the mystics, there are artists who have made the environment their material. They show how the boundaries between 'art' and 'environment' break down. A consciousness adequate to the realities of creation and the needs of the environment must be whole enough to reconcile science and art. But Christian tradition, despite its powerful involvement in the rise of the technology and cultural attitudes that have produced today's environmental problems, is not by itself a sufficient frame of reference for global problems.

3. The Need of a New Environmental Ethic

An ethic that respects the integrity of nature and its eco-system cannot come from the Bible, with its absolute freedom of man regarding all other things of nature. Nor can it come from the Greek view of man as a spirit thrown into the prison of the body. Greeks naturally had a contempt for matter. Nor is the Indian worship of Earth as Mother as such acceptable. Here the question is: What is this Nature that we conform ourselves to and almost worship? All assume that we should live in harmony with nature. But what is this Nature? Nature can be brutal as well as beautiful. There is ample evidence in the animal kingdom of deception, cuckoldry, 'rape', infanticide and so on. Thomas Huxley's strong thesis that humanity cannot model its own morality on the model of the process

6. A. Einstein, *Ideas and Opinions* (New York: Crown, 1948, 1954), p. 49.

7. *Ibid.*, p. 40.

and products of evolution, which are morally unacceptable to humans, has good many fervent supporters even among modern scientists. The ethical progress of humanity depends not on imitating nature, but on combating its evil tendencies and saving whatever is good.

Hence not only is the Sannyasi living in harmony with nature in his mountain retreat, but so also is the scientist who with his elaborate technology comes to know the hidden mysteries of the universe. The "natures", however, with which each is in harmony may be quite different. A romantic identification with nature is naive. There is both good and bad nature-loyalty, self-sacrifice and other recommendable qualities, as well as greed, cruelty and manipulation. Biologists today realize that unpleasant behaviour among animals can be important, that unpleasantness may be normal and adaptive, that apparent generosity is limited to special situations in which it can be explained by selfish motives. Thus special favour shown by an animal to another can be sheer "nepotism", manipulation, and reciprocity strictly limited by the necessity of safeguards against cheating. As a general rule today a biologist seeing one animal doing something to benefit another assumes either that it is manipulated by the other individual or that it is being subtly selfish.

Today environmental ethics should be seen within the process of cosmic evolution, since human evolution is inseparable from the cosmic process. But there is a distinctive element in human evolution. In discerning the cosmic evolutionary process, we start from the effect and go to the cause. But in the self-determination of the human moral agency, individuals and groups select the courses of events that become the future. This is an emergent evolutionary quality on which more and more the fate of the cosmos depends. The very term 'ecology', derived from *oikos* (house) is "the science of the relationships that determine the stabilities and the compositions of partly self-sufficient ecosystemic "households", which weave together in higher orders of integration".⁸ It is the science of the part-whole relationships. Individuals are invested with meaning in relation to the global boundary conditions; the stability of the individual is nested in the stability of the ecological community, and the value of the individual is assessed by its contribution to this community.

8. Jeffrey S. Wicken, "Towards an Evolutionary Ecology of Meaning" *Zygon*, 24 (1989) 153-184.

Here are two evolutionary sources of value; one goes downward from the individuals to the raw materials of environment, since life invests a special meaning in them. The other moves outwards from the individual, by its "selfishness" surviving and reproducing systems, to the ecosystem and system of ecosystems, which contextualize the selfish interests within the functional frame work of the higher order. The meaning is that the individual can survive and grow only if it positively contributes to the ecosystem which contextualizes it, and that in turn, for the ecosystem, to endure, it has to guarantee the growth of the individual. The whole community interest is written into the individual adaptive strategy.

The fundamental point is that nature and its ecological system has billions of years of chronological precedence over man in the universe and a greater right to continue in its integrity, to live and flourish. Man is only an infinitesimal speck in the world of beings. Man's rights are totally different in quality from the right of other beings. As a rational being his right is to be reasonable in his use of nature. Nature has a steady state economics; man's rationality lies in making the world through careful management as an appropriate expression of his personality. Here preservation and conservation are two conflicting interests in environmental literature. Preservation of the material world in all its beauty and grandeur, leading it to its highest achievement through the progress of science and technology is one of the tasks of human leadership. Every new invention of human ingenuity adds to the beauty of nature. Here no expense is too much to make the world a proper expression of the human spirit.

But there is no possibility of continuous progress. Hence the primary task is conservation of the limited resources of nature, so that it serves the needs of humanity to as many as, and as long as, possible. An ethics centered on conservation focuses on preserving nature and replenishing renewable resources. It *opposes* consumerism, an economics of constant growth, and the wasteful use of any resources. It emphasizes the need for appropriate technology to replace the traditional use of non-renewable resources.

4. Ecophilosophy and Interreligious Ethics

The ethical praxis of ecological responsibility in a way brings the ethical traditions into a sort of dialogue. All religions do en-

courage their followers to show respect to the earth and its ecological balance, and their belief systems show a certain convergence. Both India and Greece venerated the Earth as a goddess who nourishes her children. Indian philosophy conceived nature as *Prakrti*, the three-coloured goddess, who through her three gunas of *sattva*, *rajas*, *tamas*, produce all beings according to the different proportions of these gunas. But what gives them balance and the possibility of liberation from the time-place bondage is *Purusa*, the spirit, by whose light of consciousness all evolutions take place. It is *buddhi*, the principle of knowledge, which, on the one hand, perceives its light from *purusa*, and, on the other, is an evolute of *prakrti* itself, that operates as a sort of *mediator* in the return of all things to their original balance in the bosom of *prakrti*. This implies that it is the human faculty of *knowledge* that should make this world a human world and then finally a spiritual world. Human *life* itself has four equally important goals: *artha*, wealth; *kama*, pleasure; *dharma*, righteous living; and finally, *moksha*, liberation from this present life of suffering and ignorance. Man's first task is to make the earth fruitful and earn wealth for his own maintenance. Secondly, he should derive legitimate pleasure from his bodily existence in married life, and then organize his whole life according to his four-fold debt to the different categories of beings. To God he should offer worship by studying the scriptures; to the departed ancestors he has to bring solace through ritual offerings, to human guests he should offer hospitality; and he has to express his unity with all other animals, including birds and even ants providing them with food. When he has accomplished these obligations, he is ready to pass on to a life of bliss in final liberation.

Plato's *Symposium* in a way typically represents the dynamic character of Earth. *Gea*, who is the female principle along with *Ouranos*, begets all beings, and their offspring, *Eros*, is one of the first gods that assures the progress and movement of all things. Though there is a heavenly and masculine god of love and an earthly and female *Aphrodite*, the two are one, since in a healthy body is a healthy spirit. But the movement that starts from the earthly principle proceeds through love through the aesthetic and spiritual levels to absolute Beauty itself. Human life is inextricably bound in this movement from the earthly principle to the contemplation of absolute Beauty as its final object of contemplation.

Hebrew thought conceived man as a microcosm with three parts: the *basar*, or flesh, which is in communion with the material things; *nepesh*, or psyche, which explains life within the human organism; and *ruvah*, or spirit, which is in contact with God. With regard to man the three are of equal importance. When the Jewish interpreters ask themselves in what respect man is similar to God, they point out his body, by which he is procreative, a creator in his own sphere. Hence the material things and earthly possessions, far from being an obstacle to the authentic life of man, are in fact a sign of God's blessings. Spirituality itself is a life lived in faithful cultivation of the presence of the spirit and also in behaviour that is in accord with its leadings. It is also a reconciliation, breaking down the barriers between human beings and nature.

In no religion is man an isolated individual. He belongs to a totality in which he has fellowship with the whole earth and all its diverse beings.