

BOOK REVIEW

Taming the Dragon : Transforming Economic Institutions in the Face of Global Change by Carlo C. Jaeger
Gordon and Breach, Yverdon, Switzerland (1994) Cloth.

"Humans are the only species that has begun playing havoc with the biosphere. How can this same species learn to care of it?" Attempts to approach the answer to this crucial question marked the emergence of human ecology since the 1970's, from the shared environmental concern of biologists, socialologists, physicists, psychologists, economists and so on. These ventures have called for an analysis of interactions between political and economic processes. Such analysis is necessary for comprehending the various social forces that have created and shaped the global ecological crisis. Understanding these forces is a prerequisite to the task of taming the dragon.

Jaeger tries to understand the environmental crisis from a global historical perspective. His venture is particularly ambitious in view of the breadth and depth of the social realities he aspires to gauge. It is worth noting that *Taming the Dragon* is not just a multi-disciplinary treatment of the environmental issue, in the sense that different disciplines are not dealt with separately, one by one; they often interpenetrate in Jaeger's discussion, which provides a brilliant instance of inter-disciplinary scholarship.

Jaeger asserts that the processes underlying the immanent global environmental disruption have historical roots in the individual and social realities, which he tries to understand in terms of their mutual interdependence. In fact, the roots of all environmental evils have already been traced to the dangerous dialectic of the Enlightenment (Adorno and Horkheimer, 1944; Foucault, 1973), the Judaeo-Christian ethic of subjugating nature (Whyte, 1967), the industrial capitalism (Commoner, 1992), or to social dilemmas ("double-bind situations") that characterise modern society (Bateson, 1978). Jaeger tends to lay emphasis on Bateson's concept of madness which he thinks is es-

sential for an adequate discussion of ecological problems. He shows that common madness is a result of clusters of 'non-sensical beliefs' that can impair relations of responsibility, which are a necessary condition for the development of persons. While labelling a belief as 'non-sensical' is subjective, Jaeger indicates the possibility of objectively defining it in terms of the contradictions between certain beliefs underlying a social rule, and the reality of social structure. A cluster of such non-sensical beliefs would lead individuals to treat all interpersonal relations as being external to his personal identity, in spite of the fact that "without at least some interpersonal relations which are internal to the persons involved, there would be no persons at all" [p.68].

Jaeger sets out to trace the origins of common madness to the historical departures from pre-historic economy of archaic (pre-neolithic) social systems. Jaeger argues that in the archaic normative fields, humans were linked in kinship terms with non-human beings, and all members of the society were bound in rules of accountability relationships. Following the so-called Neolithic Revolution, the society became polarized between *private* and *public* dimensions. In the public realm, the goal of gaining power played a major rule, which also influenced gender relations within the private realm. An additional dimension of vocation emerged during the period from Renaissance through Enlightenment in Europe. This marked what Jaeger calls the second step of cultural macro-evolution. With the compartmentalisation of human existence into the modern triadic system, every human individual has been compartmentalised from each other. Thus, post-archaic societies are caught in a process of cultural degeneration, in which accountability relations are degraded; non-sensical beliefs are generated and perpetuated, because human consciousness is liable to perceive only fragments of social reality.

While the origin of the triadic social system is Jaeger's original construct, the subject of the fragmented perception of social reality by the masses has been treated by Marxist and exis-

tentialist writers in different terms. Furthermore, the first step of cultural macro-evolution has been described by several authors as the beginning of human impact on the natural environment. Curiously, current research indicates that this step, consisting of domestication of plants and animals, pottery, and metal work, took place in different parts of the world at different times (Goudie, 1990). Confining this phase to the neolithic age alone betrays an inclination to develop a simplistic model of world history. In fact, very notable changes in the soils, plants and animals were wrought by Neolithic and Bronze Age peoples over a very long period over wide areas. It is perhaps apt here to cite Harlan (1975: 57), who was in favour of a "no-model" which "leaves room for whole arrays of motives, actions, practices and evolutionary processes. ... A search for a single overriding cause for human behaviour is likely to be frustrating and fruitless."

In this context, Jaeger's account of the emergence of the vocational realm of society deserves particular attention. The Renaissance engendered the establishment of a systematic co-ordination of specialized vocational activities. Specific resource use patterns and techniques took shape in a process of *cultural micro-evolution*. Thus specific traditions of different occupations have evolved, which "deeply shapes the biographies of the persons who reproduce it" [p. 117]. However, Jaeger seems to ignore the fact that the vocational dimension emerged in India with the emergence of an elaborate caste system in around 1000 BC. The caste system determined the vocation of individuals, which in turn strongly shaped their biographies and delimited their abilities, projects, desires, and potentials. In the Indian context the origin of the caste system may therefore be considered as a step of cultural macro-evolution no less potent than the Renaissance in terms of changing personal biographies, social structure and normative fields. Clearly, the European model of cultural evolution is not adequate to encompass the global cultural diversity.

In fact most western theorisation of the process of cultural evolution suffers from two weaknesses. The first involves the posting of

Europe, especially western Europe, as the model of world history, and the second consists in an attempt to draw a linear course of unfolding complexity. Marx realised the incompatibility of his linear model of European history with the co-called "Asiatic mode of production", and acknowledged the existence of at least a separate lineage of cultural development. However, just as the blanket appellation of "Asiatic" failed to recognise the non-European cultural diversity, so the correspondence of the emergence of the vocational realm with European Renaissance and Enlightenment fails to discern similar steps of cultural macro-evolution in the non-European civilisations. This is not to deny that the modern technology, responsible for its immense impact on the global environment, took off from the Renaissance and the Enlightenment. My point is merely to indicate that at least in India, a cultural macro-evolution constituting the compartmentalisation of human existence was accomplished by the occupational caste division, long before the emergence of the vocational realm *sensu* Jaeger in the West.

Today it is generally accepted that the current environmental crisis is a fallout of the Enlightenment worldview which laid emphasis on mechanistic thinking. Following the profound success of Newtonian mechanics, mathematical formalism has been a pride of place for all branches of science. Botkin (1990) has given a lucid account of the development of theoretical ecology which tends to rely more on mathematical models than on field research for predictions. But mathematical models must simplify real life complexities. The assumptions of mechanistic simplicity inherent in such models have often led to wrong conclusions and predictions. For example, the conditions of ecosystem stability, and even the very concept of stability, are now being challenged by fresh field data. This critique is not to deny the remarkable advancement of our understanding of nature with the help of mechanistic metaphors, but it is useful to remain aware of their limitations. This is a point of departure for Jaeger. He believes scientific reason can still be fruitfully used as the most reliable method of understanding nature. For a particularly revealing il-

illustration, Jaeger refers to an anecdote discussed by Rom Harre:

"At a party, a woman tells her friend, 'Do you see the man over there who is just pouring himself a glass of gin and tonic?' He nods, they approach the man and realize that it is not a man but a woman and that she is drinking vodka on the rocks. Clearly, the initial utterance was erroneous in several respects. Nevertheless, it was perfectly successful as an act of identifying a real entity which could then be described more accurately." (p. 158)

Jaeger argues, a similar situation arises while recognizing and identifying the environmental problems by mechanistic thinking. The problems are then liable to be more correctly described by improved scientific techniques. The Club of Rome's forecast, based on certain flawed assumptions, that the human population would exceed the earth's carrying capacity by the 1970's, later proved wrong; yet the Club's models helped crystallizing a general consensus on the global ecological problems.

This argument construes that more rational application of the method of science, rather than the abandonment of science, is likely to correct our folly, and the shortcomings of science itself. The global scale of pollution from modern technology could not have been appreciated unless the ozone hole above Antarctica was discovered by artificial satellites, themselves a product of technology. Measurements, experiments, computations and models in science are liable to unending improvement, engendering a better understanding of nature that will provide humanity with a greater far-sight and wisdom in using nature.

This understanding is essential in bringing about changes in many of our economic concepts such as positive rates of interest which "imply a confusion between usufructory rights and rights of possession" [p. 234], leading to the absence of social accountability in capitalist market economy. Indeed, modern capitalism has led to "a situation where the survival of humankind and the fate of the biosphere are at the mercy of monetary institutions unchecked by suitable forms of social responsibility" [p. 242]. Jaeger expresses his conviction that triadic human ecological system which has caused the cultural degeneration, resulting in the erosion of accountability relations, might

well go along with a comprehensive cultural regeneration, which needs to be combined with development. This combination will constitute a process of sustainable development. In this process, the incentive for increased production will disappear, and a steady-state economy will be directed toward quality improvement and innovation. The new world economy, characterized by vocational property rights, "by rates of interest and rates of profit both fluctuating around zero, by public property of rent-yielding assets and freely tradeable usufructory rights for such assets" will be able to solve the environmental problems "by embedding the generalized end of action of money in reliable networks of interpersonal responsibility" [p. 242]. He illustrates how a zero rate of interest would transform market for rent-generating resources into market for usufructory rights, so that no one can purchase the right to destroy a landscape or the ozone layer.

However, the shift from quantitative to qualitative economic growth is not viable for developing countries, because they must emulate, legitimately, the standard of living of the rich countries until the former attain the triadic human ecological system by developing the vocational realm. Thus the developing countries may continue to pollute to environment in the process of development, but their contribution to the global pollution will still be less than that of the advanced countries. Jaeger indicates that the rich countries have no moral right to tell the poor countries to stop emitting carbon dioxide, for example, because the US alone produces 5 metric ton of carbon dioxide per capita - five times the global average - whereas the emissions are at least ten times less in China and Brazil. Thus Jaeger places the onus of responsibility for reducing the environmental impact on the rich countries; the increase in pollution due to physical growth of capital in developing countries "must be compensated by a reduction of environment impacts in the advanced countries; and it has to be successfully completed before the potential for such reductions is exhausted" [p. 255].

Jaeger's imagination is powerful enough to formulate both the principle and strategy of a comprehensive social change. This endeavour

may be described as a rich utopia - complete with a programme for restoring reason, with an ethical eye on an ideal of the past (archaic normative field). I use the word "utopia" in its broad sense, following the usage by Frank and Fritzie Manuel (1979). This utopia does not, however, require a world government to overcome the difficulties of meeting national politics fostering regional innovations with the new liberatory global economy. For Jaeger thinks the concept of an enlightened world government stems from the mechanistic idea that an agent can be rational is a solipstic mode in a world which is irrational. "It would be much more promising to foster a society of nations structured by strong accountability relations" [p. 272], and restoring strong accountability relations among individuals, communities and nations, is prerequisite for shaping the New Enlightenment. The beauty of this utopia is that emphasizes on a very large number of agents, engaged in situations of multiple control, where each single actor is dependent on others' actions. In this age of twilight o utopia, when there is no ideal of social change (Manuel and Manuel, 1979), Jaeger's vision should inspire a new emancipatory movement, and

conscientize very one concerned with global environment problems.

REFERENCES

- Adorno, T.W. and Horkheimer, M. : *Dialectic of Enlightenment*. (Tr. J. Cumming) Verso, London [1944] (1979).
- Bateson, Gregory : *Steps to an Ecology of Mind*. Granada Publishing, London (1978).
- Botkin, Daniel : *Discordant Harmonies*, Oxford University Press, New York (1990).
- Commoner, Barry : *Making Peace with the Planet*. The Free Press, New York (1992).
- Foucault, Michel : *Order of Things : An Archeology of the Human Sciences*. Random House, New York (1973).
- Goudie, Andrew : *The Human Impact on the Natural Environment*. MIT Press, Cambridge, 3rd Edition (1990).
- Harlan, J. R. : *Crops and Man*. American Society of Agronomy, Madison (1975).
- Manuel, Frank E. and Manuel, Fritzie P. : *Utopian Thought in the Western World*. Belknap, Harvard, Mass (1979).
- Whyte, L. : The historical roots of our ecological crisis. *Science*, 155 : 1203-1205 (1967).

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