

## Science and Morality as Paradoxical Aspects of Human Reason\*

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In this lecture I try to show that the set of fundamental, intuitive epistemological concepts, thanks to which human reason constructs reality from experience, contains internal contradictions. These contradictions are not so grave that they prevent man from constructing a superficially coherent picture of reality. Contradictions become apparent only when scientists and philosophers pursue the analysis of this picture to the bottom of the night. Then, as soon as a certain threshold has been transcended, paradoxes or incoherences suddenly appear which cannot be resolved, unless one or another of the fundamental, intuitive epistemological concepts is altered. Such alterations may restore "local" coherence to the picture of reality, but they have serious affective consequence: they alienate man from the reality with which he has to deal in ordinary, everyday life.

The contradictory relation between science and ethics, as well as the lack of internal coherence within either of these two ways of structuring the world of experience, provide examples of the paradoxical nature of human reason. Thus we necessarily regard science as an "objective" exercise of pure reason, completely independent of moral judgements, whereas we must regard morality as the practice of "autonomous" judgements of responsible persons, made independently of the laws of nature. However, philosophical considerations show that science can no more be "objective" than can morality be "autonomous". Probably the most widely discussed example of a paradox arising from the lack of ultimate coherence of our intuitive concepts is the "complementarity" of quantum physics. This paradox was the subject of a still unresolved, long-term epistemological dispute between Niels Bohr and Albert Einstein. Another well-known

example is the discovery by Kurt Gödel of the existence of undecidable propositions in the theory of numbers.

As the work of Jean Piaget and his school of development psychologists has shown, the child constructs its fundamental scientific and ethical concepts in the course of a process of "genetic epistemology" marked by a sequence of characteristic steps. These concepts thus arise as products, not of culture, and certainly not of philosophical thought, but of a natural dialectic between the developing central nervous system and the world as it is. These concepts are therefore really intuitive, and to construct them is what it means to grow up into a sane human being.

Regarded from this point of view, the "three teachings" of the Far East, Buddhism, Taoism and Confucianism, evidently represent a project whose aim is to resolve the contradictions inhering in reason, particularly the paradoxes arising from our simultaneous role as actor *and* spectator in the great drama of existence, by altering some fundamental intuitive concepts. Thus classical Chinese culture knows neither objective science nor the morally autonomous person. In order to reconcile this fact with Piaget's developmental-psychological findings, according to which Chinese children would have to undergo the same characteristic steps in their cognitive epistemology as do Western children, one may consider the Far-Eastern world view, with its devaluation of reason and its emphasis of introspection and self-knowledge, as a yet later step of cognitive development, rarely reached in the Western cultural milieu. On reaching this late step, the paradoxes inhering in human reason may well be resolved, but meanwhile the very foundations of our own Western science and ethics have been destroyed.

\* Abstract of a lecture delivered at the XXIII Annual Meeting of the Sociedad de Biología de Chile, November 28, 1980, Viña del Mar, Chile.

