

# KNOWLEDGE AS CULTURAL AND HISTORICAL SYSTEM

V. S. Stepin

The various forms of human knowledge can be regarded as an integral, historically developing system. Universal cultural categories are a system-building factor. They form the core of the cultural and historical code by which a type of society is reproduced. The differences in the meaning of universals in traditional and technogenic cultures determine the difference in the organization of knowledge forms. The modern system of knowledge is developing under two general conditions: the search for a new worldview, as well as the intensification of cross-cultural dialogue. The transition to the technological mastery of complex, historically evolving systems forms new images of nature from the scientific perspective, as well as new strategies of activity. These new images of nature accord not only with the values of the European culture, but correlate with the worldviews of different Eastern cultures which had previously been rejected as unscientific.

## I

**H**uman knowledge, despite the variety of its types and forms, is systematically organised. Different forms of knowledge—scientific, religious, mythological, philosophical, common sense ones—can be regarded as relatively autonomous sub-systems in the historically developing system of human knowledge. The structure of knowledge as well as its forms are

being changed with the course of history. They do not come into existence simultaneously. Construction of every new form of knowledge can produce the changing of its former organization.

For example, as new world religions come into existence, the body of knowledge accumulated in previous mythological cultures is being organised in a new way. Due to the development of science and the dominance of scientific rationality in the new European culture, the system of human knowledge has been modernised to a greater extent.

## II

The universals (categories) of culture are the system-building factor in the historically developing knowledge. They help to define the most general, attributive characteristics of objects included in human activities as well as the very human being as a subject of activity, his attitude to other human beings, to the society at large, and to fundamental aims and values of social life.

The first aspect which characterizes the world of objects includes the categories "space," "time," "thing," "attribute," "attitude," "nature," "causality" and so forth. The second aspect which characterizes the subject-subject relations includes the categories "human being," "society," "Ego," "the other," "freedom," "good," "belief," "hope," "labour," "conscience," "justice," and others.

The universals of culture determine not only man's estimation and comprehension, but his emotional experience of the world as well. The universals of culture must not be identified with philosophical categories which are the results of reflection on the universals of culture. Philosophical cognition schematizes and simplifies the universals of culture. The cognitive aspects are stressed, while the sphere of feelings and emotional experience are neglected. Nevertheless, due to the schematization of the meanings of the universals of culture, it is possible to treat the categories as specific ideal objects. By means of this process, philosophy is able to generate new original ideas which exceed the limits of worldviews and images rooted in culture.

The universals carry out three main and interconnected functions in a culture. First, they act as categorial forms in which constantly changing social and historical experience is fixed and transmitted. Second, they form the categorial layer of consciousness of a given historical epoch. Third, being interrelated and interconnected, they generate the picture of the human life world: generalized images of nature, society, human being and his spiritual world. This picture is the world-view of an epoch and in many aspects it determines the value priorities and the system of meanings of

human life. The system of fundamental values, images of the world and life meanings which form the content of the universals of the culture can be interpreted as the most general program of social life. This program provides for the reproduction of a concrete society as an integral organism and functions as its specific genom. It determines what kind of personal experience gets into the "flood" of cultural transmission and what forms of knowledge dominate in a given type of culture.

The radical changes in the meanings of the universals denote that the foundations of former culture are being transformed and a new cultural tradition is coming into existence. Such changes signify the spiritual revolution in the process of which the core of cultural and genetic code of new civilization is being formed.

### III

Modern civilization originated as a result of the specific type of civilizational development in the European region approximately in the sixteenth and seventeenth centuries. It is often defined by the uncertain term "the West," according to the region of its origin. I prefer to call it technogenic, taking into consideration the fact, namely, that technological process leading to the acceleration of social changes plays the decisive role in this type of development.

Besides the technogenic there existed another, more ancient (the first if taken from the historical point of view) type of civilization; namely, the traditional societies. Some of them were absorbed by the technogenic civilization after it had come into existence, the others followed the way of modernization by using its achievements.

Certain specific system of life meanings and values, different from that of the traditional cultures, lies in the foundation of the technogenic ones. The technogenic civilization was preconditioned by the series of mutations of the traditional cultures. The synthesis of the achievements of the ancient culture and Christian cultural tradition in the age of the Renaissance, and further development of these ideas in the epoch of Reformation and Enlightenment has formed the system of values of the technogenic civilization.

In total they were functioning as the core of the cultural and historic code which determined the reproduction and dynamics of this civilization. We can single out the most important components of this system of values: understanding the person as an active being who opposes the world in his creative activity; understanding the activity itself as a creative, innovative process, directed at transformation of objects of the external world and giving man the power over them; understanding nature as the non-organic world which is well-ordered, law-governed field of objects which

are in turn understood as resources and material for transforming activity; the importance of an active, independent personality; the importance of innovations and progress; and, finally, the importance of scientific rationality.

This new (comparing to the traditionalist one) system of values stipulated the dominating state of science among other forms of human knowledge.

In traditional societies, scientific knowledge was included into the context of different activities, and subordinated to the religious and mythological ideas which acted as the world-view of the respective traditional culture. Only in the technogenic civilization is science constituted as a particular independent field of activity and thus obtains the status of a world-view in itself. It elaborates a picture of the world showing it as a system of objects developing according to natural laws. This picture is always renewed due to the achievements of the fundamental sciences and, furthermore, pretends that understanding of the world and human activity should be commensurable with it. General ideas of the world and concrete knowledge of its objects and processes given by science become the basis for education which involves more and more people.

Through a system of education and technological application of knowledge, science influences not only ordinary consciousness but forms the very structures of reasoning. So, the investigations of thinking of the traditionalist groups in the Middle Asia (made by R. Luhria) and in Liberia (made by M. Cowell) showed that representatives of these groups had great difficulty in solving problems demanding formal reasoning on the scheme of syllogism. Only those who had school education and had studied mathematics and other scientific disciplines could solve the problems with relative ease.

In the technogenic civilization (the culture of which is based on the ideals of transformative activity, innovations and creativity), science and its technological application become one of the important factors for social change. Until now this fact made science a priority in the system of human knowledge.

## IV

A new situation emerged at the end of our century when the limits of the technogenic type of civilizational development began to be clearly seen in connection with the aggravation of the global crises (ecological, anthropological and others).

The growing probability of destroying the foundations of civilized life invigorates the critics of the values' priorities of the technogenic

culture and the search for new world-view orientations. Many hopes are placed in projects of new metaphysical and moral paradigms based on the ideals of man-nature relations which are characteristic of the oriental cultural tradition (e.g., J. B. Callicott, R. Attfield, F. Capra, and others).

In this connection there arises the problem of changing the image of science and its place in the system of developing human knowledge. Up to now, the scientific picture of the world confronted the world-view rooted in traditional oriented cultures. It was developing within the framework of alternative world-views and values of the technogenic civilization and constantly correlated to them new knowledge about the world.

But now at the end of the twentieth century, the situation has changed. There has appeared the opportunity to apply scientific knowledge to the world-view field more widely. The possibility for transforming former world-view universals originate from new tendencies of scientific and technical development, which are the basis of technogenic civilization. Modern science and technical activity deal with specific objects of mastery, which are the complex historically developing systems. These systems change our idea of the environment and need special strategies of activities.

But now there exists some kind of “roll-call” with the world-view images of the traditional oriental cultures, which were rejected at the former stages of the technogenic culture development as unscientific.

First, modern scientific ideas of the environment as the global ecosystem—biosphere, which is a specific integral organism, correspond to the organismic images of nature developed in the traditional cultures.

Second, the idea of transforming objects actively—using force—can not be effective when dealing with the complex developing systems. Their synergetic characteristics assume that at bifurcation points any minor, often casual influence, can radically change the line of development. By simply increasing the external force pressure a system can produce one and the same set of structures, but in the state of instability (bifurcation points) often some minor influence—a prick into appropriate spacial and temporal locus—due to cooperative effects that can result in creating new structures and levels of organizations (“roll-call” with the ideal of non-violent actions and principle of the ancient chinese culture *wu-wei*).

Third, work with complex, man-involved systems (those ones where human being is included as a particular component) needs a new type of integration of truth and morality, aim-rational and value-rational activities, which would be resonant with the ideas of cognition and activities of the traditional oriental cultures. The choice of a line of development at the bifurcation points for the man-involved systems is determined not only by knowledge about possible scenarios of development but first of all by moral orientations which regulate activities.

The system of knowledge nowadays acquires the features of global open system, developing under the following two conditions: transformation of universals in the technogenic culture, and intensification of dialogue across cultures.

## V

The type of scientific rationality is changing now, but that very rationality is still necessary for understanding and interacting with different cultures. The dialogue of cultures is impossible without a reflexive attitude to their fundamental values. Rational understanding makes equality of all the basic values (starting points) and openness of different cultural worlds for dialogue possible. In this sense we can say that the idea about the special importance of scientific rationality developed in the Western cultural tradition remains a great factor in the search of new world-views, though this rationality in its contemporary development has new-found definitions and modifications.

*V. S. Stepin, Moscow Institute of Philosophy, Russian Academy of Sciences, Moscow, Russia 119842*