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PHILOSOPHY OF UNCERTAINTY

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Summary. In the article the main tendencies areas of modern development of philosophical knowledge's and their paradigmatic opportunities in modern science are opened.

Keywords: philosophy; complex systems; modern society; philosophical ideas; thinking; instability; chaos; order; determinism; approach.

Fast rate of social, political, ecological, scientific changes in the integrity engender quite a number of uncertainty in consciousness of separate personality, public consciousness, culture. In our daily life, it seems to us that we move from the definite past into the indefinite future. In comprehension of the modern world together with all of its contradictions and crisis states (financial-economical, ecological crisis, crisis of traditional science), the philosophy plays a particular role analyzing possible ways of subsequent development of up to date civilization. The certain conceptual approaches, the type of thought dominate allowing adequately to reflect complex unlinear processes which are taking place in the modern world.

Transformations happening over all the spheres of human activity, concern knowledge too. Knowledge is a main producer determining development of the country for the modern postindustrial, information society. All over the world, fast growth of knowledge is going on; the industry of knowledge is growing continuously. All people need knowledge regardless of kinds of their profession. It is not possible to adapt the modern society adequately without certain minimum of economical, social, political etc. knowledge.

Knowledge is a base of activity of any modern man operating in different areas of the society. At the same time, possession of knowledge allows «to make some people what the others do» (Fr. Olsen) or «to create difference: to do something: to make a structure of activity» (M. Fuko, T. Dyurberg). It is possible to see it as examples of development of sciences and complex social processes.

Transformation of knowledge, methodological approaches can be considered as an example of scientific knowledge. The characteristic feature of scientific description is complete definition. The definition is typical peculiarity of science, methodology which bases on the principle of determinism. The cumulative epistemology demonstrated science as an ideal of strict proved and incontrovertible knowledge. The scientific achievements of new period raised mathematics to pedestal of higher truth and engendered illusion of achievement of perfection.

Early in the XX century, that model was dethroned as a result of the crisis of mathematics. Early in 30-s of the XX century, K. Gedel showed impossibility of complete formalization of knowledge as an example of groundlessness of ideas of complete and final basis of mathematics. Cognition was reflected as removal of subjective uncertainty. The classical model of science which the principle of determinism has predominated in, could not explicated about the principle of Gedel. Meaning of discover by Gedel takes down that the mathematician from the most ancient times endeavoured to demonstrate

mathematics and mathematical conclusions in clear and regulated form. «The great dream of all the mathematicians is to found a mathematics on accurate certain rules of conclusions and in the end absolute clear fundamental assertions called axiom. ...Arithmetic of whole numbers was formalized enough early, and a peak of the great dream of mathematicians was hope that everyone who has had meaning of assertion on whole numbers systematically, was allowed to solve, it was truth or false. Namely this hope was eliminated by Gedel» [8, p. 137].

Gedel's theorem about incompleteness of formal system on the one hand widened possibility of cognitive process, while showing that aspiration to definition is not always adequately reality, on the other hand enlarged horizons of development of mathematics. Gedel's theorem on language of mathematics showed that uncertainty exists; it seemed to be one of exact sciences of mathematics. Proceeding from this theorem, some investigators consider that «Gedel's theorem must exist in biology showing impossibility of complete description of living organisms in clear genetically terms» [5, p. 109].

In the structure of scientifically knowledge, definition reflecting objectivity, completeness of reproduction of object represents an ideal of cognition. As is generally known, such model allowed to achieve many huge successes in cognition of the living nature. At the same time it presents a basis of cognation of environment surrounding us too. But such sciences as biology, sociology, psychology study the objects subjected to accidental fluctuations, influences, that is, the uncertainty found general and natural. The principle of the uncertainty by Geyzenberg exposed ontological essence of this conformity with a law in quantum physics.

Gayzenberg's principle reflects objective uncertainty between spatial-time and impulsive-energetic condition, micro fractions in their intercommunications. Definition of some states engenders uncertainty of the others which comes into existence not as consequence of experimental mistakes, but presents a inner property of micro fractions.

The objective uncertainty exists in the nature of the same subject being studied, with not controlled influences, taking effects on studying parameters and displays on investigation of the mass phenomena and probable-statistic conformity with a law. Such conformity with a law was discovered both in the biology, and in the psychology, and in the sociology, and generally everywhere [2, p. 38]. Realization of the place of uncertainty in the cognitive process and in the objective reality, that is, exposure of the gnosiological and ontological statues of uncertainty had an influence on interpretation of the categories of determinism, causation, accident.

Obtaining information on the object being studied is bound up with such peculiarities of knowledge as definition and uncertainty. Cognition was reflected only as a removal of subjective uncertainty before research of the complex objects, that is, uncertainty itself was presented only as a particularity of a subject, but not object of cognition. The object «was considered strict, simple certain, and for this reason, a process of reflection connected with exposure of this definition by means of removal of subjective uncertainty» [10, p. 153]. The more definition in knowledge, the more possibilities of exposure of knowledge appears about ignorance, the problem situation and uncertainty arise longer. This objective uncertainty in the research of complex systems may have a different characteristic. Subjective uncertainty is overcome in the course of cognition, then it will be necessary component of cognitive process as the objective uncertainty.

It is possible to notice that investigation of thermal, quantum-mechanic complex objects may be found on using the statistic methods in contrast to the classical

physics. On principle it is impossible to create conditions taking into consideration of all possible external influence being studied on the complex object because their cognition is always bound up with uncertainty.

Therefore «the tasks of good organization of researches are that this uncertainty is minimized but by no means that it will not be removed utterly» [4, p. 13] that it is obviously as the modern investigations demonstrate that it is impossible to remove uncertainty.

The classical epistemology supposed existence of a single objective description of practicable reality. The material system was described so as it was, not depending on selection of ability of observation. The principle of uncertainty in the cognitive system brings in its corrective amendment. While considering the principle of uncertainty from position of natural philosophy, N. Bor called it the principle of addition. This allows interpreting phenomena, events in view-point of different methodological directions, thereby widening possibilities of cognition and comprehension.

The principle of addition ascertains wealth and diversity of reality, superior figurative possibilities of any separately elected logical structure. Each language is able to express only some kinds of parts of reality. For instance, «not a direction in the imitative art and musical composition from Bax to Shenberg does exhaust all the music» [7, p. 200]. The wealth of diversity of human thought in the each certain case is expressed through definite abstract conception, reflecting definite aspects, a verge of reality. The principle of addition enriches investigator by means of some specter of the methodology which allows recreating integral picture of the object of the investigator.

Aspiration of the classical science to ideal of accuracy and completeness permits it to operate strict definite collection of research approaches, it cannot modify, alter them. A single linear, strict determined approach made science «bankrupt in front of face of global crisis not managing to foretell, to solve imminent problem. The crisis makes to recognize that it needs diverse methodology, new paradigm to study possessing vital capacity organic, developing objects» [1, p. 211].

The problem of prediction also depends on the methodological directions of subject and character of objects being studied. Such sciences as mechanics, astronomy, physics leans upon common, universal laws, where a prediction is possible. «We use idea of the classical physics which is deterministic completely on large scales. It includes laws of mechanics by Newton, laws by Maxwell ... two theories of relativity by Einstein ... all of these laws are carried out by large distance exceptionally with high accuracy» [9, p. 21]. But such strict determined laws are not available in sociology, psychology, economics and etc., these sciences will have to limit to laws with the statistic character.

The modern scientific researches ascertain that the equilibrium systems exist in our expanding universe parallel with unbalance ones, functioning by other laws, rules. The present state found its reflection in two approaches based on the different methodological approaches. All of main equations of physics symmetric are symmetric at times, they are reversible at times. In the second beginning of thermodynamics, the temporary asymmetry operates, that is, irreversibility is one of the main state. «Einstein was a supporter of this direction with the exception of irreversibility from physics and Wathad became a spokesman of this direction with his conception of crisis with recognition of irreversibility as important peculiarity of the natural phenomena. At present noone makes doubt of it that irreversibility exists in macroscopic level and plays important constructive role» [7, p. 229].

The systems exists in the nature whose reversibility can be described by

deterministic laws and irreversible which were based on probability-statistic approaches. Symmetry is inherent in the classical physics at times; one-sided direction of time is typical to the thermodynamics.

The reversible systems are defined by symmetry at times, whereas «any probability interpretation gets possible only after the temporary symmetry has been broken» [7, p. 261]. Infringement of symmetry arisen in the irreversible processes can be observed on studying heat conductibility; the solar radiation appears as result of the irreversible nuclear reactions etc.

In natural sciences conception of entropy (connected with the second principle of thermodynamics) shows difference between reversible and irreversible processes. The temporary asymmetry is straight effect that «our system began to evolve from special (low-entropy) condition and our observation revealed a fact of growth of its entropy for its following evolution» [6, p. 257]. Asymmetry of the past and future is evident.

The uncertainty of future and irreversibility of time in the epoch saturated critical social dispute of global and regional character, exceptional temporary saturation allow to consider a period as a value. Our relations to it can cardinally alter condition in the social environment. Time is transient, no return to latest developments. What the future brings, it depends on our relation to it. Time may be realized as a fatal, we seem to be taken in captivi in it. It can be realized differently. Time belongs to us as far as possible we feel responsible to cognize, to value and to operate. Rational approach will further adequate orientation in the condition of uncertainty.

The most diverse, at times diametrical-contrary strategy of behavior appears in the condition of global uncertainty: from active insertion in globalization to becoming reserved within the regional association. Way out of a epoch of global uncertainty is problem standing before mankind as a whole and before every state, a society. The mankind always had a chance between variants of the future. In the presence of various variants, the mankind elects not that variant, which was presented as the most possible. In opinion of many investigators «not coming forecast true is not obligatorily bad forecast at all».

Election of ways of progress takes place in the point of bifurcation. Election of a single direction from a great number of others means that the system cannot come back to primary conditions. An accident influence defines an election, a new direction in irreversible. In the bifurcation point, inner difference becomes apparent between parts of the very system and a system and an environment surrounding it. The origin of dissipative structure infringes homogeneity of time, symmetry of time. Analyze of modern state of mankind demonstrates that the mankind entered a new bifurcation which possible ways of development have been many diversities.

Investigation of complication requires changes of mentality, cognitive art. The categorical apparatus, our cognition are enriched by new approaches, new categories. The modern investigation of reality inform of impossibility of moving away of uncertainty from cognition and about constructive role of uncertainty in cognition. The uncertainty displays all over spheres of our vital activity. We can explore and realize our world proceeding from state that «incompleteness and imperfection are necessary for comprehension of the very existence of our world, so incompleteness and imperfection are problems, unfinished state laying in the very heart of our knowledge make understanding to exist knowledge and its progress. Only insufficiency is productive» [3, p. 439]. Cognition in its movement endeavours to larger definition by means of election

from numerous possible signs which was recognized definitely presenting aspect of reality being studied. Taking down uncertainty is essential feature of complex, unlearned processes of development. One of the modern methods of cognition of complication is complex thought, furthering cognitive knowledge of definition in uncertainty, order in disorder basing on creative ideas.

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