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### SECTION 30. Philosophy.

## METODOLOGY AND WAY OF THINKING IN POSTNONCLASSICAL PHYLOSOPHY (Epistemological analysis)

**Abstract:** In this article considered the connection of thinking style and methodology of postnonclassical science. Referred to the new scientific currents: synergetics, cyclology, nanoscience, global evolutionism, virtualistics which played a major role in the emergence of postnonclassical philosophy. Due to the paradigmatic innovations in science explained the method of postnonclassical scientific thinking.

**Key words:** methodology, style of thinking, science, postnonclassical science, personal knowledge, proliferation, method, self-organization, paradigm.

**Language:** English

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Since we are building a new life, a democratic constitutional state, I think that everyone understands that time itself encourages us to think in new way and to be in step with the time, to change radically old outdated views of our society.

Scientific way of thinking, methodological attitude is one of the most urgent problems of philosophy. There has been a dialectical relationship between the methodology and way of thinking from ancient philosophy to postnonclassical philosophy.

At the end of the last quarter of the twentieth century, appeared new scientific directions such as synergy, Nano science, global evolutionism, cyclology, the theory of dissipative structures.

These new directions, originated in the system of sciences, are making fundamental changes in the meaning of scientific way of thinking and methodology of science. In particular, spiritual ideological foundations of social and biological sciences and the humanities are updating, under the influence of this process, we can say, postnonclassical scientific worldview is generating.

Epistemological "roots" of the primary principles and conceptual ideas which caused the formation of post-nonclassical scientific thinking, are from a classic science. Some industry ways of thinking (physical, biological, cybernetic, etc.) which are connecting link of classical and postnonclassical ways of thinking that were formed in the non-

classical science, have been playing a major role in the revolution of modern science and technology. Emerging Postnonclassical scientific way of thinking, as widespread social and epistemological phenomenon, opens up new horizons in the renewal of modern science, philosophy, worldview and scientific visions. When it comes to post-nonclassical scientific thinking it can be given the following annotation as a primary working description: **"Postnonclassical way of scientific thinking as a guiding intentions to sciences which study the material and spiritual beings, is the ideological and theoretical branch has incorporated elements such as: universality, disbalancity, gradualness, cyclicality, disorderliness, uncertainty, instability, multipolarity, multidimensionality, nonlinearity"**.

Postnonclassical scientific thinking incorporates the conceptual elements of modern sciences at the same time highlights the problems with the epistemological and heuristic value which are important for scientific knowledge and practice.

The state of non-linearity, which is examined by postnonclassical science, manifests in objects that have not been studied by classical and non-classical science. It may be noted the formation of the concepts: **"instability"** **"disbalancity"** **"organize"** **"self-organizing"** that stand for characterizing features of objects.



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In postnonclassical science is a growing trend humanizing which means that development of such areas as synergetics, virtualistics, global studies, requires assimilating of humanistic problems by modern postnonclassical scientific thinking. K. Popper put forward a number of ideas, which played an important role in shaping of the postnonclassical philosophy. In his opinion, the main task of philosophy is the development of scientific knowledge and exploring ways and means of separating scientific knowledge from unscientific knowledge. K. Popper called this way demarcation. K. Popper is considered one of the founders of postnonclassical evolutionary epistemology. K. Popper put forward the problem of demarcation as one of the most important tasks of philosophy against the opinion of the logical empiricists that the criterion of scientific thinking is the principle of verification. A method of demarcation is tampering, denial of all the opinions relating to science.

Michael Polanyi another philosopher who played a major role in the formation and development of postnonclassical philosophy. Created by Michael Polanyi concept of latent personal knowledge is different by its originality and does not fit to standard - rationalistic problems of previous stages.

Personal knowledge is a manifestation of researcher's way of thinking level of his understanding, his qualifications, appropriate signs of researcher that reflect his talent, his personal style.

According to Polanyi, science is developed by persons who are rich in thought and language who have the talent of analyzing and generalizing who have a peculiar way of thinking and skills.

Moreover, to the works and ways of thinking of researcher has an impact, as an example, the tradition of scientific schools, communication, and the work of other scientists.

Methodological pluralism is the understanding that any methodology including rational methodology is one-sided and bounded. American scientific methodologist Paul Feyerabend noted this state by principle all styles are suitable and this principle is reinforcing pluralistic features of postnonclassical scientific thinking. His approach is called anarchical epistemology. Feyerabend denies the existence of a single universal method.

P. Feyerabend developing his pluralist methodology introduced the principle of proliferation to philosophy. The term proliferation is derived from biology and means growth an offshoot of tissue by virtue of emerging of new cells in animals and plants. According to the basic idea of Feyerabend enrichment of knowledge happens by way of "rooting" and "branching" and devising alternative theories. Formed, in relation to the underlying foundational theories as a result of the branching,

theories are not related deductively to each other, have no common regulatory rules and use different concepts and methods.

Point of views, which are accepted in principle of proliferation which was justified by the scientists, despite the fact that they are approved and accepted, allow the creation of theories that are not suitable to them. According to Feyerabend's opinion " Diversity of thoughts is necessary for objectivity of cognition process "

Proliferation, in the way of thinking, reveal itself by division to classical and nonclassical types in its evolutionary system and cybernetic shape, form, dialectics, binary, metaphysics, innovative and other sections. Reflection of a number of theoretical ways of thinking (dialectic, binar, metaphysical, dogmatic, systematic) that ruled for a long time as a general theoretical way of thinking which had sometimes positive and sometimes negative impact on the development of scientific knowledge, are important in analysing and evaluating of post-nonclassical way of thinking.

It is important to mention, postnonclassical ideas and approaches set for philosophy and scientific methodology a number of ontological and methodological problems. Representatives of postnonclassical philosophy performed important creative approaches in considering these problems. Especially, one of the scientists who had made a great contribution in this area is Imre Lakatos. In his methodology development of science is regarded as a continuous interchanging of research programs.

According to Lakatos's scientific program is the basic unit of scientific knowledge. From the point of view of concept which was put forward by him the development of science is changing of research programs. He admits "I look at the continuity of science through glasses of Popper" [6, - C. 78.]

This continuity is caused by criteria that indicate the way of positive and negative heuristics in science. According to I. Lakatos in the process of implementation of research plans it can be sorted out two stages i.e. perspective and outdated its capabilities stages. [7, C. 138]

At a new stage "positive heuristics" actively involved in the promotion of a scientific hypothesis that extends the empirical and theoretical content, in the next stage slows down the development of research plans, its "positive heuristic" loses its inventive force and as a result grows number of alleged thoughts associated only with the current state.

So the true theoretical and methodological model of the development of science developed by K. Popper, P. Feyerabend, Imre Lakatos played an important role in shaping of post-nonclassical science and way of thinking

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