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Constructivism as a Way of Thinking and Paradigm

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ABSTRACT

the article explores the ontological aspects of constructivist paradigms that have an innovative character in science and philosophy.As a new occupation of epistemology, the emergence of a constructive style of scientific thought, the essence of the main directions of constructivist paradigms is revealed. The role of constructs in scientific cognition has been analyzed both cognitive and evristical. There are considerations about the directions of cognitive constructivism. In accordance with the principle of cognitive constructivism, the subject is able to actively and foresee knowledge, to know the environment in advance, individuals perceive according to their beliefs, experiences, etc. Conceptual and impersonal cosntructures built by an realized person are understood in the form of a product of cognitive activity.

Introduction. In his later years, great creative opportunities and the prospect of progress arose in the formation and development of national philosophy in our Republic. This is due to the fact that at a time when serious paradigm shifts are taking place in our philosophy, interest in the theoretical methodology of constructivism has increased. This, in turn, leads to a focus on the way of thinking within the framework of the problems of constructivism. In particular, the formation of a constructivist style of scientific thought, the disclosure of its cognitive and epistemological essence, became a methodological necessity.

A deep study of the directions of cognitive constructivism gives a new image and Horizon to the way of thinking. Thanks to new constructive changes, innovative processes in the way of thinking are carried out, the landscape of the universe, the paradigm of science are also transformed into transformation. Constructivism as a new direction in epistemology, philosophy and methodology of science was formed at the end of the 20th century [1.142]. Prior to this period, constructivism had been widely used in Architecture, Design, linguistics, cybernetics and other fields. But gradually, in epistemology, this concept began to be studied in depth as an element of the cognitive process. This system of methodological concepts of various names, actively used in quantum physics and structural linguistics, is finding its foundation in the humanities as a paradigm of Constructivism. Several areas and theories of cognitive Constructivism in the last century including: radical constructivism; social constructivism; cultural constructivism; naturalistic constructivism; epistemological constructivism; cognitive constructivism arose.

All directions, flows of constructivism are recognized, spread by teachings in the name of constructivism, applying the constructivism of the process of cognition, understanding one

aspect of society. Radical, ontological, cultural, naturalistic manifestations of the philosophical-episcemological way of thinking are formed and developed modern directions of constructivism. For example, Culturology in the way of thinking, culture is considered as the main conceptual element, a construct. The authors of constructivism determine what Essence cognitivism acquires in relation to which sphere.

The idea of Constructivism was invented by the American philosopher T.Rockmore believes that Gobbs, Vico, goes back to Kant [2.35-46]. Also, Fixte, Hegel, Marx also demonstrated various manifestations of Constructivism in their scientific and theoretical activities. The term "constructivism" was introduced into active circulation at the end of the 70s of the XX century to designate theoretical and methodological approaches in the humanities.

Constructivism in philosophy, psychology, sociology as a direction and methodological principle J.Kelly, J.Piaje, 3.Schmidt, A.Shyus, K.Gergen, P.Berger, X. von Ferster, T.Lukman, V.S.Stepin, O.Maturana, F.Varela, R.Vatslavik, I.Glazerfeld, G.Roth, G.Rum and others were manifested in their creativity.

From Russian scientists V.F.Petrenko, S.A.Lebedev, I.T.Kasavin's philosophical interpretation of the term constructivism and those who revealed the paradigmal approach [3.] In this, constructivism serves as a creative-intellectual factor in the occurrence of revolutions in each historical period, the emergence of new paradigms.

Research methodology. The article used the methods of critical-reflection, objectivity, norms of a systematic approach, analysis and synthesis, analogy, generalization, comparative analysis, induction, deduction, unity of historicism and logic.

Analysis and results.

Constructivism is a complex of approaches and concepts, which includes such many methods as sociology, psychology, linguistic consciousness, the constructive nature and cultural-historical connection of cognition in philosophy, understanding and constructive alternative to being (theory of interpretation of reality), the individuality of cognitive constructs, as well as various theories about reality pluralism.

The theories that make up the mental space of the constructivist paradigm, which is the basis of the constructivist way of thinking, can be divided into different branches. In the formation of the constructivist way of thinking, many methods, such as psychology, sociology, the constructive nature of cognition in philosophy, the linguistic and cultural-historical connection of consciousness, the individuality of the constructs of cognition and understanding of the world, constructive alternativism (conceptualization of interpretation of reality), as well as doctrines and approaches, which include different theories about reality pluralism, had a great influence.

The main element of the constructivist way of thinking is the constructor. The concept of Constructivism is a word, from which the name of the direction also comes the concept of "Constructivism". These constructs also often refer to concepts of dependent-opposite meaning birlashtirgan.Ba Zi researchers believe that proliferative methods of interpreting being through constructs are effective.The study of the historical foundations of the constructivist way of thinking provides an opportunity to reveal its hypothetical, prognostic and conceptual capabilities in the process of scientific cognition.

In the historical aspects of the constructivist way of thinking, one can find a succession in the ideas of Constructivist philosophers of the distant past and present. The first cornerstone of the constructivist way of thinking can be considered the philosophy of knowing Socrates in antiquity, with Vico as Kant. Nevertheless, the direction of Constructivism and the style of Constructivist thinking are a phenomenon that appeared in the 20th century. It has its own area of discussion, methodology, language and argumentation based on modern psychological,

sociological, anthropological, linguistic and neurobiological studies. In this sense, when discussing the genesis of the constructivist way of thinking, one can argue that attracting some traditional problems of epistemology, as well as linking it to philosophers of the distant past, is a controversial approach.

Representatives of the direction of radical constructivism, who added hssa to the formation of a constructivist way of thinking, gave integral interpretations with other branches of science, prioritizing a specific concept, giving absolute meaning. These theories include P.Vatslavik's communicative constructivism, E. von Glazersfeld's radical constructivism, X. the epistemology of Von Fjorster's closed circle, he.Maturana and F.The theory of autopoietic structures of Varelas, as well as g.The neurobiological constructivism of Roth is like. Radical constructivism is the principle of the accepted Universe, reality, the world to the ideas of the world, constructed by the living system, the informational framework of cognitive systems and self-referent (self-description), the suitability and viability of knowledge, the Observer's indistinguishable from what is observed, his ideas about autopoiesis (the ability of the system to organize order in exchange.

In the paradigm of Constructivist epistemology, the criterion for the correspondence of knowledge to reality is changed. Knowledge is not an image of objective reality, but rather a certain way of organizing and coordinating one's experience in the process of life [4.89], it is this thought that is the central idea of radical constructivism. These integrative concepts filled the gap between constructivist epistemology and radical Constructivism in content. In this, looking from a synergistic point of view, it turns out that in radical constructivism, constructs have the property of self-organization, creation and control.

It is known that most of the basic epistemological concepts of the direction of radical constructivism came from other sciences. In the style of radical constructivist thinking, F.Varela and Maturana. The construction (self-creation), created by, occupies an important heuristic place. From this point of view, reason, mind and reflection are the essence of the phenomenon of linguistic connection [5.230]. This in some ways also manifests elements of biological-evolutionary thinking.

According to the constructivist way of thinking, the integrity of the subject and the object, that is, in a constructive sense: an understanding of the dialectical relationship between the processes of observation and the phenomenon to be observed, becomes important. To understand this, it is advisable to use the concepts of interchangeability in neoclassical physics. A.Yu.Antonovsky came to the conclusion: truth as an independent category in relation to knowledge appears only in secondary observation, and not everything that the second observer knows the first is true [6]. This emphasized the heuristic role of active and passive observation processes in experimental research.

As a result of the study of the trends of the paradigm of Constructivism, methodological differences, substantive similarities between the directions of Constructivism, radical constructivism and social constructionism can be understood. English art critic John Raskin argues that all three of these recorded currents are interpreted constructivist in a new way in relation to knowledge[7.24]. Also, a number of rules can be distinguished related to important problems of epistemology (truth, the problem of cognition and the criteria for the quality of knowledge). The directions listed here combine. In conclusion, we can formulate them as follows: 1) knowledge is structure; 2) reality is diverse; 3) the criterion for "good" knowledge is suitability.

In western philosophy, the problem of Constructivism began to be studied within epistemology. The study of the formation of epistemological models and approaches became the basis for the direction of evolution epistemology.

Evolutionism epistemology is an epistemological direction that views and studies cognition as a moment of living nature evolution and its derivative[8.507-508] . Evolutionism epistemology assesses knowledge as the result of a cumulative process that grows from simplicity to complexity, from uncertainty to accuracy, as in the flora and fauna. A kind of orientation towards evolutionary epistemology is called genetic epistemology.

Genetic epistemology – (greek genetikos – on birth, origin; episteme – knowledge; logos – doctrine) Swiss psychologist J.Piaje's research on the study of the field of psychology and logical thinking in the twenties and forties of the last century was developed in the early 50s. In some sources, cognitive psychology, also known as. For the first time, full views on this concept were outlined in the scientist's three-volume work “introduction to genetic epistemology”. According to the concept of genetic epistemology, real knowledge can be achieved through a historical-critical and genetic (psychological) approach: knowledge develops in stages, this process is associated with the adaptation of an individual to specific situations of real cognition: being able to actively adapt to situations is an innate need of an individual, and the enrichment of knowledge is determined.

Naturalized epistemology is a component of empirical psychology and is considered as part of natural science. The founder of this direction is U.Kuayn is. The manifestations of “naturalized epistemology” developed an evolutionary epistemological theory on the basis of psychology or biological sciences, formed bioepistemological views on the basis of brain and mind studies that have entered the framework of modern” cognitive sciences". This could lead to the prospect of creating a unified evolutionary theory of knowledge, relying on biological research materials[9.216] . In this, the emphasis is placed on the fact that cognitive constructivism is a biological process.

Cognitive constructiveness is a mental process aimed at putting a scientific problem and finding its solution, which leads to the creation of constructive ideas, hypotheses, theories, as well as laws. This manifests itself the stages in the scientific cognitive process of cognitive constructivism. In our opinion, cognitive constructivismg itself as an epistemological problem means epistemological image, imagination, approach. Cognitive constructiveness belongs to the framework of the subject of study of epistemology.

Each new concept, idea and principle that has arisen in the development of science is a process of cognitive constructivism, its product and result. The new concept expands the horizon (horizon)of cognition. Hence, the rise of Science always takes place through cognitive constructivism.

The fundamental types of constructs become an element of the way of thinking (helplessness, determinalized chaos, attractor, etc.). In particular, the main concepts and categories of the scientific direction of synergetics (chaos, order, bifurcation, fluktuation, inconsistency, self-organization, fractal attractor) are also among the epistemological constructs.

In the formation of the thinking style, cognitive constructivism is activated, manifested as a direction, in the situation of choosing the direction of research, in the regulation of the results obtained.

Construction represents something new that is built. Innovative thinking style is the side and result of cognitive constructivism. Constructivism can lead to an innovative process or lead to ideas that do not meet the norms of scientific knowledge. Also, theoretical-conceptual ideas, not recognized by the scientific community in the history of science, do not become constructs and, therefore, do not lead to innovation.

Constructivism in this case manifests itself in a cognitive sense as a way of thinking as a worldview that creates a picture of the universe. It is known that the principle of Constructivism is a way of thinking that determines social reality. In cognition, the idea of Model construction is

covered in the works of Piaje.

The derivative of cognition (constructive models, new concepts, advanced theories) is influenced not only by the properties of the object of cognition, but also by the subject (with its motivation, culture and language (method) of interpretation), as well as the specific properties of the means of cognition (means of scientific cognition). Intuitionistic constructivism, on the other hand, helped to understand set theory.

As you know, knowledge and information about the world is not exactly. It follows from this that knowledge about the world affects the subject through the perceived historical and cultural aspects of the object, and in a broad sense it follows from the method of its description, the level of vocabulary and the characteristics of grammar of the natural language, formalism (mathematical) and visual means, in particular, the media, the level of development of social networks. The scientific picture of the universe is a product of the motivational sphere of the subject of cognition (collective or individual), which arises through the level of development of cognitive instrumental means and the images of the perceiver.

The term constructivism does not imply the concept of a particular single author in the process of considering that it does not have clearly defined symbolic boundaries. This approach, too, as a concept, expresses an active attitude towards rough materialism and naive realism. The idea of constructivism, based on a constructivist approach, includes a number of constructive ideas found in a number of researchers and scientists, in one or another combinations. This is what is found in these scientists, and a number of constructive ideas in one or another combinations form the theoretical-ideological basis of the way of thinking.

At the end of the 19th century, in the process of dividing the linguistic Sciences, represented by hermeneutics, into the sciences that study the human psyche (social-humanitarian Sciences) and the sciences that study nature (Natural Science), a new concept of “social reality” arose. Such views over time T.Lukman, A.Shyus, P.Berger was manifested in his scientific research. Lukman's interactional symbolism provided an opportunity for elements of the style of thinking to understand the semantic sides in a more heuristic way.

The idea of developing (structuring) cognitive models in perception is present in the research of Jean Piaje, who, in his way of thinking, made good use of logic and plural theory with the aim of interpreting the mental cognitive structures of theinng. Alternatively, Kelly psychologist who described her views on interpersonal constructs as constructivist alternativism, argued that there are many variations of her models about the world that may be between others and herself. J.Kelly analyzes the understanding of the picture of the world from the point of view of the activities of a researcher who creates hypotheses about the universe with a simple subject, checks whether they correspond to the reality, and corrects them. With this J.Kelly became the founder of constructive alternativism. In this interpretation, subjective wakefulness is created by man and is formed to a lesser or greater degree of accuracy in personal constructions. Based on the above hypotheses, it is possible to create various methods of restructuring and cognitive assistance.

He used cognitive theories and the logic of language to describe the psychological cognitive structures of thinking. Kelly called the theory of personal constructions constructivist alternativism. With Kelly's views on the universe, he relates the pluralistic models of the subject, that is, diversity emphasizes existence. He considers the construction of a picture of the world by an ordinary person, comparing it to a scientist who creates hypotheses about the universe, checks whether they correspond to reality and corrects them.[10.78]

The levels of human consciousness, as well as the system of meanings, act as mediators in the understanding and perception of social cognition. According to the Kelly principle, the formation of new concepts, thereby changing the categorical network of world perception human behavior changes social reality itself as a result of this circular chain of cause and effect. Derrida, on the

other hand, interprets this idea as follows: "from the point of view of the structure of socio-psychological research, the subject is able to participate in the creation of new forms of cultural life. Indeed, in scientific communities of the present time, knowledge is not only a way to spiritually master social cognition, but also a means of its practical formation.

It is worth noting separately that the constructivist approach creates its own artificial language of its methodology. Within the framework of the constructivist way of thinking, it is necessary to recognize not the truth or falsity of the cognitive model, but its compliance with the norms and criteria of rational thinking and science, its self-awareness (or, conversely, non-conviction) of the scientific picture of the universe.

When a comparative analysis of the theoretical and empirical constructions of various fields of human knowledge is carried out, one takes into account the convergent justification, the predictive (prognostic) force, the botinical consistency of the embodiment of the circle of phenomena that it explains, its depth, complexity and simplicity. Constructs in the process of the formation of the constructivist way of thinking in the approach of the methodology of Constructivism represent in one way or another the subject of cognition and empirical materials resulting from his cognitive actions, his theoretical-conceptual construction, the individual-individual knowledge of the researcher and his goals.

The influence of culture and innovative ideas, speech and the state as a “social order” as a single holistic process, a complex variable system exists in Cognitiv-constructive activity, the product of which is represented by theoretical, empirical, conceptual constructs such as “objective wakefulness”.

Despite the existing differences between the directions of Constructivism, radical constructivism and social constructionism, they have a clear commonality. J.Raskin argues that all three are seen as interpretations in relation to knowledge[11. 7-24]. It is also possible to distinguish a number of rules related to important problems of epistemology (the problem of cognition, criteria for the quality of truth and knowledge), where the listed directions converge.

The style of scientific thinking, including the Constructivist style of thinking, goes through the stages of emergence, formation and change as a developing intellectual phenomenon. In this regard, they go through evolutionary and revolutionary renewal processes. Scientific knowledge, which is the basis for the way of thinking, is the property of things in the universe, movement and existence consists in the perception, explanation of the essence of laws in thinking through the development of concepts, theories and other constructs.

Intuitionistic constructivism, on the other hand, helped to understand set theory. Theoretical ideas, approaches necessary for the study of the constructivism and changing properties and laws of the style of scientific thinking were developed. In social life, the constructive transformation of scientific thinking is influenced by objective and subjective, internal and external forces, various factors. These processes ultimately lead to a constructivist style of thinking, the formation of various variants in its composition [12.59].

Constructivists oppose naive realism to the interpretation of the knowledge of any of its products as the results of reflection in interaction with an objective being, and others in this regard [13.197].

According to constructivism, there is no truth other than that created by man. The main difference between man and other beings is that he is not thoughtful, even active or active, but a constructive, creative and constantly self-creating being, according to the manifestations of this direction. Proceeding from this idea, we can say that the constructive transformation of the style of scientific thinking involves the mechanism of creativity, which constantly takes on such an important element as opportunity. In the way of thinking, constant updates and innovations come true in exchange for constructive tranformation.

Conclusions:

An important postulate of the way of thinking according to the constructivist paradigm: "reality is pluralistic, that is, it has a polymorphic appearance". In accordance with the pose of Constructivism, reality is a prisipial alternative, many different, culturally historically contextual, substantive, phenomenal, territorial and spatial i.e. arising from a certain concrete situation. From this it follows that in scientific knowledge there are no truths of universal or universal meaning outside the state, cultural and historical context of the Observer and social contract and agreements. Constructivism opposes absolutization and fundamentalism in this regard in epistemology. From such studies, a pragmatic model of the constructivist way of thinking was manifested.

The constructivist way of thinking is interpreted in the sense of theoretical activity aimed at analyzing how to form the inner and outer spiritual world of a person, the causality that gives rise to the process of thinking, the nature and features of its laws, as well as the types and methodologies of cognition. The constructivist approach provides an opportunity to describe the essence and polymorphic aspects of the style of scientific thinking as fully as possible and as a whole. The norms and ideals of fundamental theories that influence the constructivist paradigm, the leading representations embodied in them, determine the direction of other scientific theories. In this, the imagination of classical mechanics also penetrated into physics, chemistry, biology, social philosophy.

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