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SEMANTIC OUTLINES OF MODERN GEOGRAPHY

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Abstract

The authors consider the process of geographical knowledge of spatial reality, perceived as a multi-level structure. The image of geographical science is presented in new contour lines and research opportunities. There is hardly sufficient reason for geographers to "privatize" space – one of the three categories of the world (space, time and matter), since all Sciences have spatial quality. Geography is not a "super science" of spatial relations, since this assumption automatically narrows the field of study of many other Sciences, as well as cannot be considered a generalizing or law-making science of spatial relations. It is argued that by its very nature topology does not and cannot answer the basic question of geography about the identification of the subject of science. The authors' position is reduced to rethinking the structural content of modern geography and actualization of its subject image. This does not change the main object of geography - connections, interactions, circuits, correlation relations, etc., confined to a specific spatial arena and beyond the microcosm. The role of praxiology - the doctrine of human activity, the realization of human values in real life-is increasing.

Keywords: *geographic factology, geographical phenomenology, geographic modeling, geographical conceptology, geographical praxeology, popularization of geographical knowledge*

1. INTRODUCTION

The public and disciplinary status of any area of knowledge depends on condition of a subject, semantic depths, presence (or absence) paradigm effect, a method, a point of view (and, certainly, degrees of error of the scientist). A number of knowledge, including geographical, is distinguished by its multifunctionality, being simultaneously a science and not a science. Some geographers operate with measures of scientists, others with measures of travelers or specialists in art. It is remarkable the lot of philosophy in which frameworks (natural philosophy) the first geographical views have been arisen. Today it doesn't serve neither to the science s nor theology though we can duffer in it the scientific and religious philosophy together with existentialism, postmodernism etc. Therefore the statement about existence of different kinds of philosophical knowledge is fair. Acting as a reflection over the world outlook universalism, basic values of culture, the philosophy has as though passed in the development two stages: the first associates with transformation universalism of cultures in philosophical categories (here vainly to search for visible scientific achievements); the second - it is connected with judgment primary category samples turning to strict definitions with which philosophers operate as theoretical ideal constructions. In this being the philosophy appears as enough strict theoretical science in spite of the fact that it contains obviously unscientific components in other quality.

It is known the part of knowledge exists at a joint of social, natural and existential, in "a backlash" (in “a condensation kernel”) between objective and subjective, natural-scientific and humanitarian. (Hence, the “vicious” division of sciences into natural and humanitarian, their vision in a “black-and-white” range). This knowledge in many respects associates with geography in general and in particular with human geography.

Geography deals with the study of the earth's space. It is believed that the earthly reality for the past time thoroughly studied geography, so now it remains only information and didactic functions. However, the world is conceived by an extended eternity, rejected from direct vision. Therefore, the power of geography is now moving into the semantic area, which is proportional to the experiences and feelings of life. This orientation of comprehension of space clearly distinguishes modern geography among other areas of knowledge.

2. PURPOSE AND METHOD OF STUDY

Now modern geographical science understands the subject of all that is required in the act of judgment, representation and sense of spatial reality through the stages of self-consciousness, culture, morality, art, religion, philosophy. The embodiment of the world now takes place in a plentiful and polysemous association of images, closely related to the semantic experience of understanding space. That is, the scope of the current geography includes not only the universality of natural nature, built on the principle of determinism, but summarizes the total existence, located outside the predicates of physical phenomena.

The aim of this study is to highlight the main cognitive projections of the new geography. In this case, the leading method the authors recognize the idiographic analysis of structural and cognitive levels of geographical science in the context of a holistic perception of theory and practice. At the same time, the homothetic approach advocated by many theorists of geography (the essence of which is to establish laws, to quantify geography, to mathematize it, to develop isomorphic models of spatial structures, etc.), is considered by the authors to be at best auxiliary in relation to the homothetic.

3. RESEARCH RESULT

3.1. Geographical Factology

Geographical knowledge contains a huge amount of empirical and factual information and materials. The study of facts and methods of their knowledge as a result provides scientific comprehension of geographical reality. Thus, geographical factology is the area of scientific knowledge about the methods of description and analysis of geographical objects, phenomena and processes in order to systematize them.

Geographical fact is a phenomenon, event or process realized by the researcher, the reliability of which corresponds to objective reality and is established empirically. Many questions arise here. For example, should geography study the whole complex system of supra-biological programs of human activity or only its separate fragments? Is it not more logical to put the external, materialized, objectified part of history related to the real geospheres into the subject field of cultural geography research, and to leave the culture that is fixed in the mentality, morals, customs, in the living experience of people's life together, mainly to the representatives of related sciences? Where are the boundaries separating cultural geography from economic and social geography, sociology, philosophy of culture, cultural anthropology, cultural studies, cognitive psychology?

Phenomenological approach in geography (rooted in the works of Carl Sauer), can be perceived as a valuable scientific reflection only when it comes to the study of perception and

subconscious structuring of the natural environment and geospatial, the assessment of the quality of the natural environment (with access to the project and district planning), and even when subjected to the analysis of works of art, to illuminate the pages of paleography (how the landscape of a country). In those cases, when instead of facts it is proposed to study the perception of phenomena and to distinguish the relationship between them by means of visual, auditory or taste sensations, we can not talk about valuable scientific rationality. Recall: in phenomenology, a special place is given to imagination, fantasy (for Edmund Husserl - German philosopher, founder of phenomenology fantasy is more important than perception!), giving the possibility of free, unlimited variation of examples necessary for the comprehension of the essence.

Thus, the concept of fact in geographical knowledge remains one of the most difficult, since spatial givens are based on the multiple nature of what is happening. Therefore, the boundaries of geographical fact are usually fixed by its meaning and logical position of the researcher.

It should be emphasized that in spatial reality the fact can not only appear, exist, but also disappear. This suggests that the fact of science must be present in a holistic system of geographical knowledge, in the operational, semantic and conceptual sections of the entire subject area of geography. In these meanings, geographical fact embodies the semantic structure and information potential of space.

The formation of geographical fact is carried out by means of factual search in the logic of understanding and explanation of the object under study. This means that the actual data in geography are of particular value for science and practice. In this case, the description of the facts without their analysis and generalization (factography) is usually used to characterize the experience or for other purposes. Systematized facts that reflect the essence of the studied object, the connection between phenomena and events (factology), reveal features of the organization of individual components into the whole process. Thus, factography and factology to create the facture of the geographical space. On its basis the General statements having explanatory power are formulated [Goldstein, 1984].

Geographical facts have multiple parameters and characteristics by which the regularities of spatial reality are fixed. Interpretation of geographical facts can be carried out in various ways and techniques. The intensive development of geographical factology in recent decades has led to the formation of a special science - geoinformatics, which is engaged in the collection, processing and presentation of information about the properties of objects, processes and phenomena occurring on Earth. Geographic information systems (GIS) databases are used to gain new knowledge and to solve practical problems. Figuratively speaking, GIS technologies in geography are simultaneously “a telescope, a microscope and a computer” [Gladkiy, 2010].

3.2. Geographical Phenomenology

Phenomenology is a field of research that contains the roots of various sciences and concentrates the researcher’s attention on the problem of perception of space and space. The leading approach of phenomenology is the description of "animate natural reality." At the same time, phenomenology reveals the "sources" from which the basic concepts and ideal laws of pure logic "flow". In turn, the latter should provide the required understanding of the subject, “clarity and distinctness” of concepts and laws, which give objective knowledge and theoretical unity to all knowledge. Consequently, phenomenology means the seizure of objects, “that everything subject to analysis should be worked through in direct demonstration and direct proof” [Heidegger, 2011; Husserl, 2011].

If a phenomenon is considered only what constitutes being, then phenomenology in turn implies a descriptive philosophical method capable of providing science with reliable cognitive tools. At the same time, phenomenology is not limited to the “real” orientation. Above the

reality is the opportunity. Therefore, phenomenology embraces realities and opportunities, the present and the future. Thus, geographical phenomenology is a conscious experience of the embodiment of spatial reality and possibility, represented by unique essential attributes. In the study of phenomenal images of space, the phenomenological methodology of knowledge should be decisive as a dialectical translational movement from sensual immediacy through the stages of science to “absolute knowledge” [5]. The thinking of such a plan is capable of producing a kind of phenomenological reduction, meaning the reduction of being to phenomena and putting the world beyond the brackets. The most important feature of this consciousness is its intensity, that is, the focus on any object. The “entities” generated in this way have the meaning of “individual data” belonging to the corresponding “essence”. In other words, the universality of entities and constituent of the ultimate task of geographical phenomenology. Consequently, the phenomenological consciousness is the reliance of the world, that is, a direct focus on this, on the subject of "intensionality". As a result of the “Intentional Experience”, the world becomes a “world phenomenon”. In this sense, phenomenological attitudes make it possible to construct such structures of being that are of ideal subjectness for a particular person. These actions are carried out in the experiences of consciousness that give rise to the value meaning of geographic space in its “intensionality” images [Husserl, 2011].

With the help of phenomenological consciousness, all kinds of theoretical dualisms are overcome. At the same time, the human world, in essence, turns into “for-itself-being”. Hence, a person strives to become being itself, and any human desire is only a lack of being [Hegel, 2007].

This imperative sets a perfectly defined ontology, in which the external world is viewed as permeable to a person and possessing the necessary semantic density. This world has its own tension, able to bring outrage in the field of human consciousness and action. Such a world becomes transparent to the thinking individual. This semantic substantiality means that in every decision a person chooses the whole world.

3.3. Geographic Modeling

Modeling as a method of knowledge acts as an intermediate link connecting the object of study with the subject. At the same time, modeling is an integral part of a scientific concept, a kind of skeleton of theory. Much has already been said about the role of modeling and the significance of models in geography. In general, it can be argued that geographical modeling is the process of constructing and researching a standard image of a spatial object, on which scientific theory and practice are oriented.

The whole process of geographical modeling is based on the structural limitation of the qualitative content of the object to be cognized. The result is a strictly defined structure that covers only the elements and relationships of a certain composition and character. It follows that for large geographic complexes the stock of models is practically unlimited.

The final stage of the simulation is a mental or material realizable construction reflecting the object of study. The model allows you to formalize the analyzed problem and integrate a way of understanding and explaining the essence of a geographical phenomenon or process. At the same time, the model performs the function of scientific foresight, has a heuristic value, and provides for obtaining new object data hidden from empirical measurements.

The main tool of geographic modeling and search criteria for the optimization of spatial structures are now GIS technologies. With their help, it is possible to ensure the proportionality of the main ingredients of the geographical space. Efforts in this direction are focused on creating a universal model of the world.

Summarizing the accumulated experience, we can distinguish functional and dynamic models of geographic space. The first fixes the relationship of components within the space.

The latter are designed to identify and analyze various state variables of the analyzed geographical objects.

Information models of natural complexes and world systems, which have received many interpretations, are particularly well known in geography. In the meantime, the causal matrix underlying the actual picture of geographic space is extremely complex. The tangle of systemic interdependence in the real world, in the words of the American geographer W. Isard, is "truly monstrous." However, taking into account the concept of geographic space, its universal dominant is the space of human society. It localizes the socio-economic practice of people, which is a sphere of interaction between society and the natural environment.

3.4. Geographical Conceptology

A concept is a semantic unit of representation of one or another form of scientific judgment. This may be related to a concept, idea, theory, or training. They, in turn, determine the boundaries and scope of scientific knowledge development and the possibility of its transformation into reality [Bordovskaya, 2001].

Thus, the geographical conceptology is a system of views and considerations that reflect the scientific point of view in the form of ideas and constructive principles in explaining and changing the subject of the study.

The main attributes of geographical conceptology are social conditionality and the scientific and practical need for new ideas, but also the depth of the subject coverage and targeting of recommendations. The degree and level of conceptuality may vary. Therefore, there are many variants of geographical concepts - from scientific justifications and declarations to applied design and experimental actions.

The theoretical constructs of the classics of geographical science and authoritative modern scientists (including representatives of the regional economy) - W. Christaller, N. Kolossovskii, T. Hagerstrand, F. Perroux, Yi-Fu Tuan, D. Harvey, E. Soja, D. Massey, B. Rodoman, M. Porter, P. Krugman, etc, are outstanding examples of geographical conceptology. Despite the high level of abstraction of many geographical concepts, they tend to be problem-oriented. This is confirmed by the theories of geographical determinism, numerous concepts of regional development, etc. In the content of geographical conceptology, the most important fact is the process of transition from the essence of the interpreted object to the normative part. It provides a general idea of what should be considered an ideal and how this can be approached. Finally, the agreed standards are transformed into projects that acquire the language of practical action.

The set of geographical ideas, reflecting the measure of knowledge and scientific understanding of the studied spatial reality, creates a kind of conceptual field of geography. His condition is directly related to the structure and directions of development of geographical science. The current stage of the formation of the conceptual field of geography can be named by paradigmatic. Therefore, modern geographical studies use systems of developing concepts and explanatory procedures that correspond to the genesis and logic of science in understanding and constructing an ideal plan of action.

3.5. Geographical Praxeology

Praxiology is the doctrine of human activity, the realization of human values in real life. As a research area, it covers the sphere of socio-economic practice of society. the most developed section of praxiology now is sociological and economic theory. Geographical praxiology identifies special structural range of scientific disciplines, making effective substantive reflection of the achieved level of knowledge. thus, the essence of geographical praxiology is the research specifics and practical recommendations for the arrangement of geographical

space. One of the clearest examples of geographical praxiology is currently geopolitics. now this term has a very wide circulation. Its frequent use directly or indirectly indicates the demand for geopolitical thought, the conceptual topic of which has a synthetic character. In this sense, geopolitics is a holistic methodology that explains the "attitude of the state and society to space" [Dugin, 2011].

At least "praxeological" is also geoeconomics. It is a complex transregional economic space that includes economic, ethno-cultural and social structures aimed at long-term planning for large-scale redistribution of resources, financial flows and world income as the main source of systemic profit. There is an opinion, geoeconomics is a "global economic federation, a kind of way of intensive economic development of the material world" [Neklessa, 2019].

Special praxeological role of geoecology. It is based on the idea of reasonable interaction of geographical space and human society. This is a kind of reaction of public consciousness, which came to understand the place of man in nature. The core of modern geo-ecology is the phenomenon of the value of the world and the self-value of life in general. To date, this idea of geoecology has become widespread and of global importance [Kochurov, Antipova, 2013; Petrov, 2004]. Of course, the mentioned areas of "modernistic" scientific knowledge do not reduce the enormous role of traditional scientific disciplines: physical geography, economic, social, etc.

4. DISCUSSION

4.1. Codes of Geography

The modern scientific picture of the world is associated in the view of many people with the achievements of such sciences as physics, chemistry, biology, astronomy. They cover not only the visible environment, but also the microcosm, space, living and inanimate nature.

And geography? Everything is clear when you look back at the past. There were Strabo, Columbus, Bihime, Magellan. Great geographical discoveries took place and people learned how the surface of the globe works. However, all this is from the realm of the known. What new can be comprehended with the help of geography today?

When you think about this issue, you have to admit that most people in the world do not know what modern geography does, what is its practical role and, therefore, remain in positions of geographical nihilism. This is where many problems in public life, economics, and politics begin, which could have been avoided with the help of geography.

Geography in its traditional sense is a very ancient area of knowledge. For a long time she was a descriptive discipline. Therefore, many people firmly retain the idea of geography as a nomenclature science. Understanding geography as a description of what he saw and is now the most common. In this regard, geography is often associated with travel and exciting tours and coincides with the knowledge of factography. This identification of science and descriptions is particularly strikingly reflected in university textbooks for schools and universities. In the meantime, advanced geographical science has long overstepped the edge of descriptiveness and has become analytical knowledge. All the classics of world geographical science were analyst geographers. At the same time, they sought to bring the analysis to practical conclusions, recommendations and forecasts.

In the meantime, geography objectively possesses deep cognitive potential. First of all, we must bear in mind that the human worldview is historical. It can only be understood and understood as developing. For this reason, geography cannot be deleted from the intellectual process, because along with the history of geographical discoveries, there is also a history of geographical ideas. Not everyone knows that geography influenced the formation of evolutionary studies and civilography, that such concepts as “regulation”, “space”, and

"environment" came into modern science from geography. In other words, geography is by no means the last item in today's rapidly changing life.

The geographical picture of the world as a conceptual system of accumulated knowledge now increasingly demonstrates the identity of the components of scientific results and, therefore, the merging of geographical meanings. This suggests, as their name, a certain group of theories that can explain the essence of what is happening and expand the scientific picture of the world.

The highest concept in geography is considered to be the category "geographic space" as a form of the contemplated (as I. Kant would probably say). So the geographical space is identical to the act of his knowledge, which is experienced by a deep understanding and understanding. At the same time, the logic of space in geography also assumes the logic of time.

The basis of consideration of geographical space is a picture of the unity of nature and society. At the same time, nature has a characteristic feature of length, which includes absolutely everything. Mankind is that one hundred, which emerges from the sensual order of factors as a direction coming from life, that is, every human multitude has its own horizon. Because of this, nature and society differ critically. Ultimately, the geospace is functionally related to the streams of living existence. Society in these streams acts as a permanent formation. That is, society is an eternal future. Nature, on the contrary, is perceived as a past which has become and eternal. Aspects of human life, bearing in themselves the goal and the future, turn into mechanical principles of cause and effect, the center of gravity of which lies in the past.

Thus, geographic space is a symbolic expression of nature, within which a person communicates the unity and meaning of his own life and thereby intensifies (and ornaments) its reality. How does the mechanism of these plastic forms work? This is the main question of geographical science [Paranina, Paranin, 2018; Sukhorukov, 2009].

The mechanism of geospace is learned and improved by terms and concepts, dismembered, reduced to laws and teachings, and finally to a system. The systematic way of seeing the world has reached its apex in modern geography and has even stepped over it. The visible proscenium of a geospace demonstrates its appearance, that is, it acquires the same value as the appearance of an individual. However, to be a connoisseur of geographic space means, at the same time, to see in it the inner content, to understand the "language" and "deeds" of a geospace in the same way that an individual is perceived. Therefore, the knowledge of the geographical space should always remain a matter of training and education.

Geography is doomed to be a popular educational discipline. In our world, where thousands of durable strings connect the population with the environment, where nature directly or indirectly determines most of the decisions in the socio-economic sphere, the deep possibilities of geography in knowing the world around us must be fully utilized. In this regard, the geography is necessary to think and speak with optimism.

4.2. Popularization of geographical knowledge

One of the important tasks now is popularization of geographical knowledge. The main organizational form uniting geographers of the whole world is the international geographical union (IGU), established in 1922. The international geographical union has the following goals:

1. To promote the study of geographic problems;
2. Initiate and coordinate geographic research requiring international cooperation, ensure their broad scientific discussion and publication of results;
3. To ensure the participation of geographers in the work of international organizations;
4. Assist in improving the collection and dissemination of geographic data and documentation;
5. To facilitate the holding of International Geographical Congresses, regional conferences and specialized symposia, the themes of which correspond to the goals of the Union.
6. Participate in any other forms of international cooperation to promote geographical research and the application of their results in practice;
7. To promote international standardization and unification of methods, nomenclature and symbols used in geography.

Geographical societies also play a huge role in the popularization of geographical knowledge. One of the oldest and most honored is the Russian Geographical Society (RGS), founded in 1845. Its founders, among whom were well-known naturalists, travelers and seafarers, identified the cultivation of Russia's geography as the main task of the Russian Geographical Society.

Today, the Russian Geographical Society is an all-Russian public organization that unites almost 30 thousand members in all constituent entities of the Russian Federation and abroad and has regional and local branches, as well as branches and representative offices throughout Russia. One of the priority tasks of the RGS now is the dissemination of geographical knowledge, propaganda of the achievements of domestic and world geography, education of geographical culture, assistance in improving the quality of geographical education among various age and professional groups of the population, teaching geography in secondary and higher education.

In May 2019, a list of instructions of the President of the Russian Federation on the popularization of geography was published. Currently, in Russia, in order to popularize geography and increase the prestige of the geographer's profession, a professional holiday is being set - Geographer's Day, which will be celebrated on August 18, the day the Russian Geographical Society was founded.

In Russia, the question is being considered of entering the All-Russian Classifier of the Geographers Study Group, the types of economic activities "Conducting Geographic Research" and the professional standard "Geographer". The establishment of centers for studying geography for schoolchildren at educational institutions of higher education, including within the framework of the national project "Education", is envisaged. The agenda also includes proposals for the implementation of measures aimed at improving the quality of teaching the subject "Geography" in general education organizations, taking into account the priorities and objectives of the scientific, technological and spatial development of the Russian Federation, as well as taking into account the results of monitoring and other forms of objective knowledge assessment students in the field of geography [President of Russia, 2019].

5. CONCLUSION

The above considerations lead to the following main generalizations:

- geographical science is constantly being improved, introduces new layers of knowledge into the sphere of its cognitive interest, which requires clarification of its semantic contours;
- modern geography is experiencing a pronounced humanitarian stage of its development, demonstrating a fundamental appeal to the human consciousness;
- in the development of geographical science significantly increases the role of praxiology - the doctrine of human activity, the implementation of human values in real life;
- geographical knowledge is currently embodying the integral representations of the "life world" [Mitin, 2004; Sukhorukov, 2015]. These areas of geographical thought also should be reflected in educational geography and in the media.

REFERENCES

Bordovskaya, N.V. (2001). *The dialectics of pedagogical research: the Logical and methodological problems.* St. Petersburg: Publishing House of the Russian Christian Humanitarian Institute: 227.

Dugin, A.G. (2011). *Geopolitics: the textbook for high schools*. Moscow: Academic Project, Gaudeamus: 4-5.

Gladkiy, Yu.N. (2010). *Humanitarian geography: scientific explication*. Sankt-Petersburg: Faculty of Philology, St. Petersburg State University: 1- 625.

Goldstein, M., Goldstein, I. (1984). *How we know: an exploration of the scientific process*. Moscow: Publishing House "Knowledge": 42-43.

Hegel, G. (2007). *Phenomenology of the Spirit. Philosophy of history*. Moscow: EKCMO: 458-471.

Heidegger, M. (2011). *Being and time*. Moscow: Academic Project: 31, 35.

Husserl, E. (2011). *Logical Studies. Vol. II. Part 1: Research on phenomenology and theory of knowledge*. Moscow: 8-9, 347-349.

Kochurov, B.I., Antipova, A.V. (2013). Geography as a science for the future. *Problems of regional ecology*: 5: 76-91.

Mitin, I.I. (2004). From cognitive geography to mythogeography: interpretations of space and place. *The first Russian conference on cognitive science.* Kazan: Publishing house of Kazan Univ.: 163-165.

Neklessa, A. *Geo-Economics. Introduction to the problem*. http://tower-libertas.ru/research/ (May 18, 2019)

Paranina, A., Paranin, R. (2018). Exploration of geographical space-time as a factor of the evolution of nature and culture. *European Journal of Geography Volume 9, Number 4: 51-61*

Petrov, K.M. (2004). *Geoecology*. St. Petersburg: Publishing house of St. Petersburg. Univ.: 1-274

President of Russia. (2019). *The list of instructions on the popularization of geography.* http://kremlin.ru/acts/assignments/orders/60537 (May 05, 2019)

Sukhorukov, V.D., (2009). Geographic space as a principle of contemplation. *Geography at school*: 7: 35-39.

Sukhorukov, V.D., (2015). Cognitive levels of geography. *Geography at school*: 1: 36-44.