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Methodology of Natural Geographical Sciences

Nigmatov A.N[1]; Allanov K.A[2]

[1] Doctor of Geographical Sciences, Professor, Department of "Ecology and Geography", Gulistan State University, Uzbekistan

[2] Candidate of Geographical Sciences, Associate Professor, Department of Geography, Termez State University, Uzbekistan

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Abstract

The article uncovers the scientific and theoretical establishments of the methodology of natural geographical sciences, its contrasts from natural sciences, its idiosyncrasies, systemic requirements, and its importance in conducting an investigation within the relevant field.

Keywords: *Science; System of Sciences; Natural Sciences; Philosophical Approach; Methodology; Geography; Method and Their Systematization; Demand*

Introduction

For each science to be an autonomous science or system of sciences, it is essential to form its theoretical premise. The main issue of the theoretical basis is the science or methodology of sciences. This can be probably why this issue is at the center of the philosophers' debate, and, unfortunately, they have not yet reached a consensus.

The prominent Uzbek philosopher O. Fayzullaev says: "Science is a system of knowledge about the world, one of the forms of social consciousness." [Fayzullaev, p. 16] This idea is recognized by nearly all philosophers in one form or another. But information or knowledge of the world is realized not as it were through science, but also outside the sciences - paralympic, doctrinal, quasi-scientific, anti-scientific, and pseudo-scientific [Shermuhammedova, p. 464]. Subsequently, it is appropriate to use the term "scientific knowledge" in the concept of science. In general, science could be a system of logical knowledge that has a social character (belonging to a human society). Precisely the system, because science studies each event, process, event, and reality in a hierarchy (a division of parts) that's inextricably linked from simple to complex.

The Main Findings and Results

Before covering our own issue, we have to be compelled to clarify another issue. The systematization handle takes put not as it were inside a specific teach but, moreover, between disciplines.

Systematization is carried out within the sciences, just as geosystems in Geography or ecosystems in Ecology are divided into large and small taxonomic units. The biggest framework of sciences [Sciences, p. 182] is separated into bunches such as natural, humanities, technical, social. The natural sciences, in turn, are partitioned into branches of science: exact, Earth sciences, and so on. Earth knowledge is divided into such disciplines as geology, geography, biology, ecology, soil science. Based on the system of geographical sciences, it is divided into two - the system of normal and social (since the economy is also a social category) [Nigmatov, 2019, pp. 378-387] geographical sciences.

The Systematization of the Sciences Shows That the Geographical Sciences Are Developing from The Natural Sciences

Geography is not part of the social sciences. On the off chance that we proceed to systematize the sciences, at that point the natural sciences will be divided into such disciplines as Natural Geography, Landscape Science, Geo-ecology, Hydrology, Oceanology, and Geo-botany. This division pecking order is bound to be further subdivided into smaller disciplines. Because as time progresses and changes, it is natural for new sciences to be created.

In this article, we want to focus on the unique methodological basis of the Geographical Science Network in the system of natural geographical sciences.

Methodology

The Greek word "metodos" is a set of words called "logos" doctrine. It can be summarized as a set of teachings on the methods of scientific knowledge from a scientific point of view, or rather a system here. Because the parts of the methodology listed below are systematized in a specific sequence and hierarchy.

The methodology is not a strategy and, in differentiation, can alter in an evolutionary or non-evolutionary way, depending on circumstances and time. The method does not change, new ones are created and they are used only in scientific knowledge instead of the old ones. The systematization of strategies is based on a certain social, political, economic, environmental, spiritual, and educational situation. For example, in the USSR, the methodology of almost all sciences, including geographical sciences, was adapted to the political system based on the idea of building idealistic communism of Marxism-Leninism (A.S. Soliev, Y.G. Saushkin, A.G. Isachenko). Natural geography is no exception. The arranged economy, the utopia of achieving equal social security for all, the biological approach to not slacking behind the United States at the cost of natural resources, the methodology of spiritual and enlightenment purposeful publicity reflecting the idea of a single nation are clear examples of this. No scientist can deny such a situation.

After the collapse of the USSR and the emergence of autonomous states, a sensible address arises as to what methodological premise the natural geographical sciences were outfitted with. In the autonomous states, each of which has entered its own path of development, there is a "methodical vacuum", as in numerous disciplines, and it is still purged. Because we cannot say that the geographers of Uzbekistan, who got freed from the USSR, conducted in-depth research on theoretical and methodological issues of science. President Islam Karimov said: "*We must not allow a vacuum to appear in politics, social life, and science. That is, in case you do not have your own idea, an idea from abroad will dominate your country. In this sense, if we do not have independent-minded people, if we don't reestablish the history of our state, our people, our country, if we don't compose it equitably, others will type in it differently. If it is restricted to composing, it will try to guide us, the younger generation, and even our scientists* [Karimov].

Subsequently the demeanor to the existing methodological foundations of the natural sciences, in specific, the common geographical sciences; we want to express some of our own considerations that can meet today's requirements.

In philosophy, ***nature*** refers to an objective being, that is, a variety of different forms and types of the material world that do not depend on our consciousness or behavior. In hone or within the natural sciences, it is seen as an object that's a source of fulfilling the fabric and otherworldly needs of people. A philosophical see of nature is more accurate. Because cosmic objects - the sun, stars, planets, the sky, and its infinite scopes - originated and are natural without human intercession. It isn't always possible for human action to reach them as a subject of logical knowledge. In any case, people use nature specifically or indirectly in their everyday activities. As for usage increments, new scientific angles emerge.

Natural science *could be a system of sciences centered on the scientific knowledge of nature* [Nigmatov, 2002, p. 4]. Its purpose is to study events, happenings, and processes that exist in nature, alter and affect human life. We allude to the definition of natural science by Professor, the great philosopher O. Fayzullaev, that is, "Natural science consists mainly of mechanics, physics, chemistry, and biology, which are fundamental sciences. Numerous branches of knowledge, such as astronomy, geology, medical sciences, agricultural sciences, designing, and technological sciences, ecology, are determined from these fundamental sciences [Fayzullaev, p. 15]. Because, first of all, the fundamental sciences for a few reasons did not incorporate pure characteristic sciences such as Biology, Geology, or Geography. By what criteria are these sciences isolated into fundamental natural sciences? On Volume 9, pages 182-183 of the National Encyclopedia of Uzbekistan, they separated the sciences into natural, humanities, technical, social bunches, and the research into two - fundamental and connected research. He acknowledged that research, not science, could be given a "fundamental" status.

Secondly, Mechanics, Chemistry, and Physics ponder not as it were natural, but also strategies and technologies (social processes specific to humans).

Third, why agricultural sciences are included in the same category as sciences such as Geology, Biology. Wouldn't it be appropriate if the creator compared the Soil sciences with the agricultural sciences? The system of rural sciences includes such pure social sciences as agro-accounting and agro-economics.

Fourth, one of the oldest normal sciences, Geography (introduced to science by Eratosthenes in antiquity, 275-195 BC) [Muketanov, p. 237], has been neglected by the creator. After all, Geography is continuously included in the normal sciences; it ponders the relationship between nature and society wider and deeper than other natural sciences!

The 4 principles listed above have led us to think independently from a philosophical point of view towards the natural sciences. ***Natural science is a set of sciences aimed at the scientific knowledge of the processes and events that occur, occur and can take place in nature independently and their laws and laws in relation to human life***. The sciences are not a system because the structured sciences of the natural sciences are inseparable. Natural science is not an independent science, but participates in the educational process as a course of study. The sciences related to the scientific knowledge of nature are divided into groups of natural sciences [Sciences, p. 182].

To begin with, in the philosophical gathering of sciences, Geography (again, Geography) is included within the list of characteristic sciences. Does the question arise Social geographer? It too stands within the framework of common sciences. Unlike the social sciences, the social geographical sciences (Economic Geography, Geopolitics, Geo-demography, Agrarian Geography, Social Geography, etc.) - interpreted the relationship between nature and human society through the crystal of social marvels and

processes. ***If the social geographical sciences don't consider the state, process, and occasions in nature as a "key calculate" in their research, they will connect the group of "pure social sciences", that's, "take off" geography***. An in-depth theoretical analysis of this issue is one of the current problems of modern social geography.

In this regard, it once again proves to introduce the subject "Theory of Geography and History of Doctrine" as an autonomous science and course in geography. The object of natural geographical sciences is natural complexes, geosystems, or components of nature within the geographical crust. The contrast between them can be the question, the subject or both. In any case, the natural geological sciences must reflect the complex, regional and periodic features of normal and natural-social phenomena, processes, and situations within the three main subjects of geology - the geological outside. That is when the research acquires a geographical character.

From the point of view of philosophical doctrine, the methodology of ***natural geographical sciences*** *is a system of methods for scientific knowledge of natural, natural-social processes and events taking place in the geographical crust in certain social, economic, political, ecological conditions*. Some scholars (S. Soatov, 2001; B. Turaev, 2003,) also very generously call it the "method of knowledge". We approach the broader philosophical meaning of the methodology and include:

√ *taking into account social, economic, political, environmental, spiritual and educational conditions;*
√ *not to go beyond the geographical crust;*
√ *study of natural and natural-social events, processes and phenomena;*
√ *selection of methods necessary for scientific knowledge of the above cases;*
√ *We cite requirements such as systematization of selected methods*.

In the strategy of the natural geographical sciences, taking under consideration the social conditions, it is necessary to take under consideration the socialization of investigating, that's, the assimilation by man of a framework of knowledge, norms and values that permit him to live in society [Philosophy, p. 147]. This implies that within the scientific knowledge of Philosophy, Sociology in the development of social affiliations (for example, the advancement of peoples and countries is specifically related to their topographical area [Philosophy, p. 147]), Brain research in the mental state of people, the periodic alter of history, Ethnography must take into account the laws and laws of local life. For example, in the scientific knowledge of the ways of geo-ecological optimization of Chirchik-Ahangaron district to make a philosophically accurate choice of research methodology, system of methods and subject, to take into account the ecological consciousness and culture of the local population; it is necessary to pay attention to the traditional historical methods of using the nature of the region, to study the ecological mental state of the population. Otherwise, the research results may not yield their theoretical and especially practical results.

A similar methodological requirement is reflected in the political, economic, legal, educational and spiritual relations of the Chirchik-Ahangaron region. As an example, 5 principles in the development of the Republic of Uzbekistan: the priority of the economy over politics; being the main reformer of the state and the initiator of democratic changes; the rule of law; suffice it to list the priority of strong social policy [Kholboev, pp. 140-146].

The particular way of improvement of our independent state in the field of domestic policy is radically different from the socialist, planned, the ideological domestic policy of the Uzbek SSR, which is based on the idea of Marxism-Leninism. Presently the Chirchik-Ahangaron characteristic geographical area is moving absent from the rule of utilizing the USSR as a "asset nation" within the division of labor, and energizes the local population to see it as a "living space."

The second methodological prerequisite is to guarantee that natural topographical research does not go past the topographical crust, which is the question of geography [Nigmatov, 2006, pp. 11-15].

The third methodological prerequisite is the logical information of normal and common social occasions, forms and wonders. This implies the study of the comparison of climatic, hydrological and geodynamic, organic forms happening within the lower climate, hydrosphere and upper layer of the lithosphere without human action and as a result of human movement. Since amid the logical and innovative transformation, the effect of human movement on numerous occasions and forms in nature is extraordinary.

The fourth and fifth methodological prerequisites are the choice of field-expeditionary, chamber-laboratory, information-communication strategies, which are essential for the logical information of the necessities recorded over. These strategies are not self-selecting. First of all, the existing strategy of normal geological sciences must take into consideration the legal basis, political circumstance, financial opportunity, and social conditions, spiritual and instructive levels. For illustration, a new cartographic strategy is the study of the Chirchik-Ahangaron range utilizing geo-information strategies, utilizing computerized cartographic strategies. This strategy is exceptionally costly, and it specifically depends on the level of political communication and financial opportunity of Uzbekistan with the nations that have satellites around the Earth.

We will have to apply a systematic or orderly approach in selecting inquiries about strategies [Systematic analysis, pp. 398-399]. This implies that the method of logical information requires beginning from speculation, concept, arrange, to create or characterize the hypothetical premise, and to carry out the strategies of down-to-earth application on the premise of a certain progression. The word framework in Greek implies “systeme” - parts, investigate parts that have a whole, that is [13, p. 398], a single entirety.

Conclusion

In natural geographical research, this methodological requirement empowers the use of methods, for example, first to determine the circumstance within the Chirchik-Ahangaron range, then field-expeditionary, camera-laboratory methods, and after those analytical-analytical methods.

The rectify choice of the cutting edge methodological basis within the theory of natural geographical sciences and its application in research work means the legitimacy, validity, and practical significance of the results obtained.

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