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Dialectic Development Models of Humanity's Destiny

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Abstract

The article discusses the concepts of the biosphere and the noosphere, their stages of evolutionary development. The causes and consequences of environmental problems are analyzed based on scientific and philosophical views. The evolutionary development of human civilization is based on the stages.

Keywords: Biosphere, noosphere, evolution, ecophilosophy, dialectics, development model, moral philosophical aspect, technological futurological aspect, socio-political aspect, evolution, ecological problems.

Introduction

Today, human civilization has reached a new stage in its development, facing such problems as global environmental threats, climate change, and biodiversity loss. The process of transition from the biosphere to the noosphere is of crucial importance for the future of all mankind, and there is a need for a deep analysis of the futurological prospects of this evolutionary change. In this regard, the concept of the noosphere of the Russian scientist VI Vernadsky, the laws of the dialectical development of the fate of mankind, and the ideas of representatives of modern German ecophilosophy are of great importance.

Although the historical roots of the formation of scientific and philosophical views on the evolution of the biosphere-noosphere go back to ancient times, this issue has become even more relevant in the context of today's ecological crisis. The idea of the noosphere, put forward by VI Vernadsky at the beginning of the 20th century, became the theoretical basis for predicting the subsequent stages of development of human history. According to the scientist, the noosphere, which is a higher stage of the evolution of nature, is a new state of the biosphere, formed under the influence of human intelligence (mental labor).

modern environmental problems, the need to create dialectical development models of the fate of humanity is growing. Representatives of German ecophilosophy, including Hans Jonas, Klaus Michael Mayer-Abich and Vittorio Hösle, have created important theoretical foundations in this

direction, explaining the processes of the evolutionary transition of the biosphere to the noosphere from an ethical, philosophical and scientific perspective.

One of the main issues considered in the paragraph is to analyze the futurological prospects of the evolution of the biosphere-noosphere, dialectical development models of human development, the conceptual views of representatives of German ecophilosophy, and to clarify the significance of the idea of the noosphere in the context of the modern ecological crisis. Also, one of the goals of the study is to consider the features of the development of ecophilosophical research in the conditions of Uzbekistan and its participation in solving these issues.

Although the concept of the noosphere was proposed in the early 20th century by French philosophers and mathematicians Edouard Leroy and Pierre Teilhard de Chardin, it is considered to have been scientifically substantiated by the scientist VI Vernadsky. Vernadsky defined the noosphere as "a new state of the biosphere, formed under the influence of human intelligence", and based on this concept explained the processes of transition from the biosphere to the noosphere. Oldfield notes that "Vernadsky's model of evolutionary change, through his work on the biosphere and the noosphere, has made a significant contribution to the understanding of society-nature relations [1]. "

Vernadsky sees the noosphere as the final stage of the evolutionary development of the biosphere, emphasizing the constantly increasing influence of the human factor on it. His concept of the noosphere is based mainly on three biogeochemical principles:

1. The biogeochemical energy of life seeks to encompass the Earth's surface and expand the scope of life;
2. of evolution , the way species live improves and their impact on the external environment increases;
3. Humanity, transforming the biosphere into the noosphere, becomes the geological power of the earth.

A number of German thinkers have made significant contributions to the development of Vernadsky's concept of the noosphere in the methodological foundations of biosphere-noosphere evolution and their interpretation in modern German ecophilosophy. Klaus Michael Mayer-Abich is considered one of the scientists who laid the foundation stone in this area. His concept of "togetherness with nature" ("Naturgemeinschaft") emphasizes the need to re-understand the relationship between man and nature. Mayer-Abich [2]believes: "The separation of man from the biosphere or its opposition to it is one of the root causes of the ecological crisis. "

Mayer-Abich's approach is ecocentric, and it promotes the concept of "community" in the relationship between humans and nature. This view does not separate humans from nature, but rather [3]promotes the idea that "humans are responsible not only for preserving the natural environment, but also for living in harmony with nature. "

Mayer-Abich believes that as humanity moves into the noosphere, nature must be recognized in all its glory. His "philosophy of nature" proposes a radical restructuring of human relations with

[1] Oldfield JVI Vernadsky and the noosphere concept: Russian understandings of society-nature interaction. Geoforum. 2006; 37(1): 145-154.
[2] Meyer-Abich KM Revolution for Nature: From the Environment to the Co-Natural World. Cambridge: White Horse Press; 1993. p. 75.
[3]Meyer-Abich KM Praktische Naturphilosophie. Erinnerung an einen forgetsenen Traum. Munich: CHBeck; 1997. p. 95. https://doi.org/10.15496/publikation-45605

nature. Dieter Birnbacher, on the other hand, takes a different approach to the concept of the noosphere. He develops a theory of the ethics of future generations, putting forward the view that "human actions have long-term consequences, and these consequences must always be taken into account." According to Birnbacher, "Given that the damage done to nature is irreversible, we must take on the obligation to preserve the natural resources of the present for future generations [4]. "

In the past decade, Marcus Voigt has attempted to broaden the understanding of the noosphere. In his work Universal Human Values and the Value of Nature, he argues that "protecting nature is important not only for the future of humanity, but also for the preservation of the intrinsic values of nature itself." Voigt, developing Vernadsky's concept of the noosphere, [5]argues that "the task of ecophilosophy is not only the survival of humanity, but also the formulation of a just approach to the entire biosphere. "

The methodology of dialectics is of great importance in analyzing the philosophical aspects of the evolution of the biosphere-noosphere. The theory of dialectical development developed by Hegel, that is, the doctrine of the transformation of a phenomenon into its opposite, serves as a methodological basis for explaining the process of the transition of the biosphere to the noosphere. The dialectical contradiction and unity between the biosphere and the noosphere occur in accordance with the law of the unity and struggle of opposites in the transformation of nature.

German ecophilosophy at the beginning of the 21st century paid great attention to the issues of biosphere-noosphere evolution. Hans Jonas's ethics of responsibility is one of the main conceptual approaches in this direction. Jonas analyzed the ecological problems arising from the development of technological civilization from an ethical point of view and put forward the "principle of responsibility". This principle includes humanity's responsibility to nature, responsibility to future generations, and responsibility for the continuation of life in general.

Modern trends in German ecophilosophy develop the concept of the noosphere mainly in three aspects:

1. The moral and philosophical aspect is responsibility to future generations and recognition of the inherent value of nature;
2. Technological and futurological aspect - development of strategies for solving problems arising from the development of technology and engineering;
3. The socio-political aspect is to implement the institutional and value system changes necessary to overcome the ecological crisis.

If we analyze the above aspects in a broader way, the moral-philosophical aspect considers the evolution of the biosphere-noosphere within the framework of the moral responsibility of man. The most important idea in this direction is the principle of responsibility to future generations. Since the actions of humanity today affect the survival opportunities of future generations, decisions made must take into account long-term consequences. This aspect also requires the recognition of the independent value of nature - nature is not just a resource used to satisfy human needs, but a system with its own value. The moral-philosophical approach emphasizes the need to

[4]Birnbacher D. Verantwortung für future Generationen. Stuttgart: Advertising; 1988. p. 42.
[5] Voigt M. The concept of intrinsic value and the integrity of nature. Journal of Agricultural and Environmental Ethics. 2021; 34(2): 1-18.

move from anthropocentrism to ecocentrism, in which man is considered not superior to nature, but as a part of it.

A futurological approach is important in studying the processes of biosphere-noosphere evolution. By creating and analyzing future scenarios, we can predict the prospects for humanity and anticipate possible risks. Further research by Carlsen and co-authors explores a variety of global scenarios and notes [6]that "the SSP scenario set explores alternative futures up to the year 2100, placing five distinct events in two-dimensional space."[7]

In modern futurology, the main scenarios of biosphere-noosphere evolution include:

1. Sustainable development scenario

According to this scenario, humanity will find a way out of the ecological crisis through the rational use of the biosphere's potential. The development of the noosphere will occur in harmony with nature. The article by Kuiper and co-authors entitled "The Future of the Biosphere: A Database of Socio-Ecological Scenarios" outlines possible paths for such a scenario. According to it, a new online database has been created to collect and identify scenario studies from around the world, focusing on scenarios that clearly express the interaction between natural and social systems.

2. Technological determinism scenario

In this scenario, the development of new technologies allows humanity to create man-made solutions to environmental problems. However, this approach is criticized by Hans Jonas, because "the trust built on technology reduces responsibility for solving environmental problems [8]. "

Within the framework of the technological determinism scenario, the rapid development of science and innovative technologies will allow humanity to create effective man-made solutions to the complex problems of the global environmental crisis. According to this scenario, the integration of advanced technologies such as nanotechnologies, bioengineering, renewable energy sources, artificial intelligence and quantum computing systems will allow us to dramatically increase the efficiency of natural resource use, create waste-free production chains, absorb carbon dioxide from the atmosphere, recycle plastic waste in the oceans and manage climate change. Within this approach, environmental problems are not a limiting factor for human progress, but rather a catalyst for a new technological revolution. However, for this scenario to be realized, global cooperation, equal access to technological resources, significant investments in scientific and research, and a preliminary assessment of the new environmental problems that man-made solutions themselves can create will be necessary.

[6]Shared Socioeconomic Pathways (SSP) are a set of global scenarios developed for climate change research and policy analysis. They describe five main pathways for how the world could develop over the course of the 21st century.
The SSP scenarios are arranged in two dimensions: the first dimension is the difficulty of adapting to climate change, and the second dimension is the difficulty of mitigating climate change. These five scenarios describe alternative paths for factors such as population, economic growth, education, urbanization, and technological development up to 2100.

[7] Carlsen H. et al. Diversity in global environmental scenario sets. Global Environmental Change. 2024; 85: 102805.

[8] Jonas H. Toward a Philosophy of Technology. Hastings Center Report. 1979; 9(1): 34-43.

3. Values Transformation Scenario

In this direction, humanity seeks to solve environmental problems by changing its value system. Hösle believes that such a transformation is necessary. According to Hösle, to overcome the ecological crisis, it is necessary to change not only the technological, but also the philosophical paradigm.

The scenario of transformation of values is based on the conscious rejection of consumer culture by humanity and a fundamental change in the attitude towards nature. In this approach, the anthropocentric view of the human desire for unlimited increase in material wealth and seeing nature only as a source of resources is criticized as the root cause of the ecological crisis. In this scenario, society moves from values such as individualism, utilitarianism and pragmatism that emerged in the modern era to ecocentric values - living in harmony with nature, economical use of resources, minimalism, preservation of biodiversity, a sense of responsibility towards future generations and the formation of a sense of common planetary citizenship. This transformation is carried out by restructuring the education system, promoting ecological values in the mass culture and information space, and revising ideas about the quality of life. As a result of a shift in social consciousness, indicators such as the human happiness index, ecological sustainability, and social justice will take precedence over economic growth and GDP indicators, and new institutional structures and social practices will be formed aimed at living in harmony with nature.

4. Global collapse scenario

In this scenario, the ecological crisis deepens on a global scale and human civilization faces decline. In their study, Lauer and co-authors analyze the ideological foundations of 993 global ecological scenarios, noting that some scenarios indicate the possibility of a "destructive future."

The global collapse scenario is the most tragic outcome of the ecological crisis, in which the damage caused by humanity to the environment reaches an irreversible limit and the ability of planetary systems to regulate themselves is disrupted. In this scenario, climate change will accelerate sharply, extreme weather events (floods, droughts, forest fires) will become more frequent, rising sea levels will make coastal areas uninhabitable, massive loss of biodiversity will undermine the stability of ecosystems, and shortages of fresh water and food will intensify. This situation will lead to mass migration, competition for resources, social unrest and increased conflicts between states. As a result of the collapse of infrastructure, the spread of pandemics, the collapse of economic systems and the erosion of social institutions, human civilization will lose its current form. The surviving population will be divided into local communities and forced to survive with simple technologies, most scientific, technical and cultural achievements will be lost, human development will be set back by several centuries or millennia, the number of people on Earth will decrease sharply, and the emergence of a new civilization will take a long time.

5. Noosphere Transformation Scenario

According to this scenario, humanity, through its intellectual activity, will influence the biosphere, transforming it into a new state - the noosphere. According to Vernadsky's prediction, the noosphere will form as a stable system, ensuring harmonious relations between humanity and nature.

In the context of the global ecological crisis, it is vital to understand the dialectical development models of human destiny. These models express the interdependence, contradictions, and development directions of the complex relationship between humanity and nature. Based on the dialectical approach, the following models of human development can be distinguished:

Anthropocentric model: This model places humans above nature and recognizes the right to unlimited use of natural resources. However, this approach faces a dialectical conflict - humanity, striving to subjugate nature, is faced with the depletion of natural resources and environmental degradation.

this model date back to the European Enlightenment, when philosophers such as Descartes and Bacon interpreted nature as a mechanism and put forward the idea of human "dominion over nature". In the industrial and post-industrial era, this view was strengthened by the capitalist production system and consumer culture, causing a global ecological crisis. The anthropocentric model is characterized by the absolutization of human needs in the worldview, the recognition of only the instrumental value of nature, technological optimism (the belief that all problems can be solved with the help of technology), the disregard for long-term ecological consequences for short-term economic gain, and the failure to take into account the possibilities of nature's self-recovery. The current global ecological crisis - climate change, biodiversity loss, soil erosion, pollution of water resources and other problems - is the practical result of the anthropocentric worldview, which shows that this model is a path of development that is self-destructive and contradicts its goals.

Biocentric model: Biocentrism recognizes the equal dignity of all living beings and protects the rights of animals and plants along with humans. The dialectical development of this model leads to the search for mechanisms for resolving conflicts between nature and human interests. According to Mayer-Abich, "man, as part of the natural world, must also take into account the interests of other living beings [9]. "

The biocentric model found its conceptual foundation in the works of thinkers such as Aldo Leopold, Peter Singer, and Tom Regan in the second half of the 20th century, and gave rise to socio-philosophical movements such as "deep ecology" and the "animal rights movement." This model rejects the dualistic view of anthropocentrism that separates humans from nature, and emphasizes that every living being has its own purpose and that all forms of life have moral value. In practice, biocentrism underlies such movements as vegetarianism and veganism, limiting animal experimentation, legislation aimed at preserving endangered species, protecting natural areas, and expanding the habitat of other creatures on the planet. However, extreme forms of biocentrism face problems in practical application - equal consideration of the interests of all living beings creates difficulties in forming a hierarchy of actions and can lead to conflicts with human developmental needs. Nevertheless, biocentrism provides the conceptual framework necessary for

[9] Meyer-Abich KM Revolution for Nature: From the Environment to the Co-Natural World. Cambridge: White Horse Press; 1993. p. 89. https://doi.org/10.1017/S0030605300028581 .

preserving biodiversity, fostering eco-innovation, and leaving a habitable planet for future generations, as an essential component of an ecological worldview.

Ecocentric model: This model focuses on preserving the integrity of the biosphere, recognizing the value of entire ecosystems, not just humans and living things. The ecocentric approach does not dialectically view humans as separate from nature, but as an integral part of the global ecosystem.

The ecocentric model was put forward by ecophilosophers such as Arne Ness, Holmes Rolston, and Gary Snyder, and is based on the concept of understanding the planet as a whole organism. Unlike biocentrism, this approach emphasizes the sustainability of ecosystems, landscapes, natural processes, and ecological relationships, rather than individual organisms. In the ecocentric model, humans are seen as part of nature, not as the "master" of it, and therefore human activity should be consistent with maintaining the stability of local and global ecosystems. In practice, this model leads to solutions based on "partnership with nature", a bioregional approach, ecological restoration technologies, taking ecosystem services into account in landscape planning, and modeling natural processes. Ecocentrism promotes the primacy of ecological criteria in economic decision-making, the concept of the "ecological footprint", setting limits on resource use, and the principles of a circular economy.

Noosphere model: Based on Vernadsky's concept of the noosphere, this model recognizes the power of human intelligence to transform nature and emphasizes the need to use this power wisely. The noosphere model represents a higher stage of human development, in which human activity is in harmony with the evolutionary development of nature.

According to the noosphere model, humanity will enter a period when, through rational activity, it will change nature and live in a new harmony with it. This does not deny the impact of humanity on the biosphere, but rather suggests a conscious management of this impact - human reason, scientific knowledge and technology will serve to protect nature and its sustainable development. At this stage, humanity will be able to understand and rationally manage global ecological processes, and the use of nature will move away from a spontaneous nature and be based on modeling, forecasting and systematic planning. The noosphere model offers high-level scientific and technical solutions to modern environmental problems: biomimicry (the application of solutions from nature to human technologies), precision agriculture (optimal use of resources), green energy, taking into account the economic value of ecosystem services, global monitoring systems and planetary cooperation. The formation of the noosphere requires not only technological innovations, but also a global change of consciousness based on new cultural and ethical principles.

Integrative-coevolutionary model: This model is based on the co-evolution of humanity and the biosphere. According to NN Moiseev's idea of co-evolution, the harmonious development of humanity and nature is possible and necessary. The dialectical aspect of this model is that it seeks ways to overcome the contradictions between nature and society. Klaus Hauschild believes in his

research that "the co-evolutionary model reveals the complex dynamics of the interaction and co-development of all living systems [10]. "

All of the above models reveal the dialectical development aspects of human development. In particular, the evolutionary transition of the biosphere to the noosphere proceeds according to the law of unity and struggle of opposites, in which the solution to the problems arising from human influence on nature undergoes a process of dialectical negation of itself.

As a result of analyzing the futurological prospects of biosphere-noosphere evolution and dialectical development models of the fate of humanity, the following conclusions can be drawn:

First of all , VI Vernadsky's concept of the noosphere has not lost its methodological significance even today, and his doctrine of the biosphere and the noosphere serves as an important theoretical basis for understanding modern global environmental problems and finding their solutions. In Vernadsky's words, "man and humanity are an integral part of nature" and their fate develops in a dialectical relationship. Today, through the development of Vernadsky's ideas, it is possible to gain a deeper understanding of the philosophical and methodological foundations of the processes of evolutionary transition from the biosphere to the noosphere.

Secondly , representatives of modern German ecophilosophy (Hans Jonas, Klaus Michael Mayer-Abich, Vittorio Hösle) enriched the concept of the noosphere from the perspective of a new ethical paradigm, cooperation with nature and the transformation of human consciousness. They explained the evolution of the biosphere-noosphere as a dialectical process and proposed models of the development of the fate of humanity. The rationality of German ecophilosophy is that it has not only theoretical, but also practical significance, identifying ways to solve the global ecological problems facing humanity.

Thirdly , the futurological prospects of biosphere-noosphere evolution are analyzed based on various scenarios, among which the sustainable development scenario, technological determinism, value transformation, global collapse and noosphere transformation scenarios occupy a special place. These scenarios are an important tool for forecasting the future of humanity and developing necessary measures.

Fourth , dialectical development models of human destiny include anthropocentric, biocentric, ecocentric, noosphere, and integrative-coevolutionary models. Each of these models illuminates the relationship between humans and nature from different perspectives, and it is important not to give priority to any of them, but to ensure their dialectical unity.

Fifth , dialectical models of biosphere-noosphere evolution and the fate of humanity require an interdisciplinary approach. The integration of ecological philosophy, futurology, natural sciences, social sciences, and technical sciences will serve to increase the effectiveness of research in this area.

Sixth , research on the evolution of the biosphere-noosphere and ecophilosophy is also developing in Uzbekistan. The work of Uzbek scientists in this area is focused on issues of ecological culture, ecological ethics, and sustainable development.

In conclusion, by analyzing the futurological prospects of the evolution of the biosphere-noosphere and the dialectical development models of the fate of humanity, we contribute to the

[10] Hauschild C. Coevolutionary Dynamics in Social-Ecological Systems. Ecological Economics. 2020; 177: 106791.

creation of the theoretical and methodological foundations necessary for the preservation and sustainable development of human civilization in the future. In this process, the development of spiritual and moral values, the promotion of scientific thinking, and the formation of global ecological responsibility are of great importance. The creative assimilation of the ideas of modern German ecophilosophy and their application in the conditions of Uzbekistan provide opportunities for the development of national ecophilosophy.