

Philosophical Aspects of Global Environmental Issues

Tatyana V. Lazutina^a and Vladimir N. Baksheev^a

^aTyumen Industrial University, Tyumen, RUSSIA

ABSTRACT

The relevance of this paper is determined by understanding of global environmental problems in the context of social ecology. The purpose of this paper is the analysis of main modern environmental global problems created by the equipment representing a public and social basis for the practical transformation of public relations and also the development of ways out of the crisis in culture. The principal approach to a research of this problem is the system approach allowing considering global environmental problems as a system object, and also an axiological approach, applied to the social ecology that promotes understanding of valuable components of relations in the system "person-equipment" and leads to understanding of the personality as a supreme value of culture. It is established that among global environmental problems the special value belongs to problems functioning at the "science-nature" level where the person creating techno-knowledge is a peculiar intermediary between these worlds that allows performing the forecasting of rates of instrument improvement. It leads in turn to the effective application of high technologies and implementation of resource-saving technologies, promoting progressive development of humanity. Materials of this paper can be useful to understanding of the nature of environmental global problems, and as well as development of the way out strategy in the situation of the ecological crisis in a modern civilization.

KEYWORDS

Philosophical aspects; environmental issues; public and social basis; axiological approach; person-equipment; science-nature; social ecology

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Introduction

The environmental component of the social system is currently a topic of particular interest to scholars exploring present-day culturology. The idea of the unity of all living things, which traces its origins to ancient philosophical thought and crystallizes in A.G. Tansley's (1935) ecosystem concept, continues its development today as part of social ecology, the branch of science concerned with the mechanisms underlying the interaction of man (society) and the environment.

CORRESPONDENCE Tatyana V. Lazutina ✉ lazutinatv@yandex.ru

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Special attention in present-day culturology is devoted to the analysis of the impact of anthropogenic factors on ecology. In this regard, in science, which is the system of society's cognitive activity intended to meet its need for the production of new knowledge about nature, society, and thinking, there currently is growing interest in the socio-humanitarian aspects of ecology, including the study of the nature of the anthroposystem (Gaisina et al., 2015; Golichenkov, Ispolinov & Kadyшева, 2014; Huang, 2011). As a consequence, placed in the foreground in today's research is the issue of seeking out ways to overcome the current environmental crisis (Ivanter & Kurhinen, 2015; Keenan, 2015; Lazutina & Lazutin, 2015; Mel'nikova & Pokazeev, 2014; Moiseenko, 2011), which is due to aggravated discrepancies in interrelationships within the "man–nature" system.

The priority to the ecology of man is the issue of the impact of natural phenomena on man (society), whilst social ecology is focused mainly on the role of social-economic factors. A cognizing subject is viewed in this paper as not just an individual engaged in cognitive activity but also a group of scientists and the scientific community as a whole.

It appears that global environmental issues lend themselves to classification. Let us suppose that by urgency of the need for human intervention environmental issues can be divided into primary and secondary. Accordingly, issues like freshwater resource depletion and the so-called "greenhouse effect", which are among society's major global environmental concerns, should be regarded as primary, since humans fundamentally need water and oxygen to survive.

This work reveals that of special significance among today's global environmental issues are those functioning at the "science–nature" level, with man, who creates techno-knowledge, acting as a sort of mediator between the two worlds.

The paper establishes that the progressive development of human civilization can be ensured through the ability to forecast the pace at which machinery should be perfected, efficiently apply science-driven technology, and implement resource-saving technology.

Special attention in present-day scientific thought is devoted to the analysis of social and ethical issues accompanying the course of scientific-technical progress, which require attention if humans *are* to make further cultural progress.

In this regard, the development of a social-ethical agenda realized within the system of interaction between science and society is entering now into in the foreground of scientific discussions, where special attention is devoted to uncovering the mechanisms underlying the emergence of global environmental issues and working out ways to overcome the current crisis.

From this follows the need to become aware of the specificity of the technical worldview, which is a collection of views, assessments, principles, and notions that determine the most general vision and construal of machinery.

At present, machinery exercises, through material production, decisive influence over society's spiritual development. What is more, the role machinery plays in shaping the political picture of the world is growing incontestably significant.

It can be admitted that machinery currently determines world policy, since it impacts on society's economic sphere, reforming the world of value orientations and shaping the choice of value orientations dealing with the resolution of the global issues facing mankind. As a consequence of a change in the world's technical picture, the cultural environment has been exposed to radical changes in the area of science, education, and arts. In terms of the significance of machinery in people's everyday life, it is capable now of facilitating the emergence of new forms of art, influencing human culture directly.

Among the most significant issues in the philosophy of science and technology is that of interrelationships within the "machinery–nature" system (Ingarden & McCormick, 1985).

Currently, there are two principal approaches in the philosophical literature to construing the homogeneity of the phenomena of "machinery" and "nature".

The first approach helps view machinery as a means of influencing nature. In other words, machinery is construed as a means of altering man's (society's) natural habitat – it emerges in accordance with the laws of nature and in it these laws are realized.

The second approach construes the natural as an attribute of the material, for which reason everything that is common to machinery and nature is viewed from the standpoint of commonality with respect to other artificial and natural formations as well.

Thus, machinery acts as a specific material means of human activity; it is a collection of artificial systems which are used as means of diverse human activity and in which labor functions and human knowledge are materialized.

Furthermore, machinery is a variety of man's practical treatment of nature, acting as a means of material transformation of nature.

Thus, machinery is the societal-social basis for the practical transformation of the existing relations of society.

Results and Discussion

The present-day philosophy of science, particularly its branch science ethics, is aimed at not just the analysis of norms of morality, whose ambit covers identifying and reconciling inconsistencies in the operation of the "scientist–society" system, as well as the structure of the scientific community, which is in imminent danger of facing a range of social-ethical issues that are getting aggravated due to the heady development of technology (i.e., a collection of technical devices and systems associated with the various types of the technical activity of man), but also the exploration of the issue of fostering the ecology of consciousness (Bakhtin, 1988; Brudnyy, 1998; Dilthey, 2010; Vygotskiy, 2012; Piaget, 1953).

As disciplinary issues, environmental concerns faced by human civilization can be viewed as a systemic object whose elements are arranged in a tiered fashion and interact with each other as part of the whole.

The complexity of the structure of global environmental issues and the dynamicity of their development suggest the need for these issues to be explored comprehensively by researchers specializing in the various branches of scientific



knowledge (ecologists, economists, culturologists, philosophers, linguists, etc.). Thus, for instance, eco-linguistics, which is part of the ecology of culture (the branch of science concerned with the practical preservation of culture), explores issues in the ecology of language and that of speech as attributes of culture, facilitating the creation of the so-called “system of linguo-ecological security” of language (Zakirova, 2006).

The ecology of the logosphere is aimed at identifying and preserving the mechanisms underlying cultural memory, which are crucial to the conservation of traditions (Derrida, 1997; Bahtin, 200; Lotman, 2010; Leontyev, 2005).

A special role in fostering a harmonious interrelationship between humans and the environment is played by eco-aesthetics, which seeks to ingrain in the public consciousness the principles of harmony, symmetry, and proportionality, a process that involves creating an ideal of beauty and putting it into action in the life of a specific person in images of art. The issue of the esthetic organization of man’s habitat appears to be of particular relevance these days, with residents of cities experiencing an acute need to live in unity with nature.

Currently, the domain of architecture is witnessing positive dynamics toward the harmonization of the practical and esthetic principles, as is evidenced by the latest research into the language of design. Thus, for instance, T.V. Lazutina and N.K. Lazutin (Lazutina & Lazutin, 2016, p. 3412) have pointed out that design can be construed as “a special type of activity that is aimed at projecting the esthetic features of industrial products (“styling”)” and can also be viewed as “an outcome of activity that involves an indissoluble, mutually conditioned relationship between aesthetics and technology, wherein aesthetics governs the content of a thing or a process and technology governs their form” (Lazutina & Lazutin, 2016, p. 3412).

Put differently, design is seen as a sort of “universal determinant” underlying the system of spiritual coordinates of city life and helping the subject orient himself within the diverse world of esthetic values. It is a sign system that facilitates fostering in man a comprehensive understanding of reality and of esthetic values operating in him via the instrumentality of specific means of artistic expression (representation).

Via a specific language construed as a special form of symbol creation, i.e. the process of imparting symbolic meaning to esthetic phenomena governed by a cultural-historical context that conveys a world of values, featured at the level of design activity (Lazutina & Lazutin, 2016, p. 3412), design, according to the logic of the present-day philosophy of art, constructs the space wherein man resides.

Present-day design appears to accord with the principles of the ecology of the environment surrounding man (society). Furthermore, we are witnessing greater attention today in the area of the theory of modern urban landscape design toward issues related to materializing environmental values in the urban environment (Aplin, 2007).

Thus, it can be concluded that drawing the attention of the scientific community toward the importance of upholding an eco-friendly consciousness globally has to do with the need to resolve the current conflict between man and the environment, caused by the ever-increasing impact of the anthropogenic factor on ecology.

Human civilization, which is construed in this paper as the social organization of society, is characterized by the universal link between individuals and social communities interacting with a view to producing social wealth – and is, in turn, exposed to impact from nature.

Through the use of machinery and technology, present-day mankind wields decisive influence over the world of natural objects

The dialectics of the interaction between them are reflected in the emergence of global issues, which triggers the need to analyze and resolve the existing global crises caused by the anthropogenic factor.

The issue of locating the causes of global issues is one of interest in a national philosophy of ecology (Karsavin, 2010; Ozerskii & Shchekanov, 2011; Zolotareva & Podgaevskaya, 2012; Leontyev, 2007), as it helps uncover the nature of global issues and the mechanisms underlying the increased risk of a major environmental catastrophe.

Among the factors behind the emergence of global environmental issues, of the greatest significance are natural and anthropogenic dangers and risks alike.

The crucial factors in determining the global environmental issues include:

1) the worsening of the state of the ecosphere, caused in a natural way (e.g., forest fires, volcanic eruptions, and wind erosion);

2) the growing role of the anthropogenic factor (e.g., deforestation, ozone layer depletion, littering the environment, especially near cities).

What is more, the current degradation of the ecosphere has been aggravated by an increase in man's, or society's, consumption of natural resources, which becomes possible as a consequence of the introduction of new technology and expansion of existing production capacities.

This process leads to the various deformations of natural ecosystems (e.g., pollution of the world's waters, ozone layer thinning, etc.). What is more, each environmental problem that arises gives rise to another one, which, in the end, affects the entire ecosystem as a whole. As an example, the destruction of woodlands may lead to declines in flora and fauna levels in the system of life on the planet.

Furthermore, human civilization is faced with the process of degradation of man's (society's) value world, which leads to the emergence of the so-called "atēsphere" (the sphere of delusion and folly), which is the dialectical opposite of the "noösphere" (the sphere of mind or intellect).

The value world of present-day society needs reforming toward the augmented role of universal (panhuman) values. Universal values are construed as those formed around universally significant, generic, benchmarks, like the truth, the good, and faith.

This kind of "humanization" will help preserve the world of culture, which serves as a sort of "shield" protecting humans from the impending danger of degeneration threatening them.

Thus, world culturology is witnessing a rise in the relevance of the issue of fostering so-called "planetary ethics", as a fundamental component in the system of solutions to global problems. The practice of humanizing all spheres of life in



society will help avoid the aggravation of the existing global environmental issues and help prevent the emergence of new ones.

Before one sets about working out a strategy for the conduct of activities aimed at improving the existing environmental situation, one needs to get a proper idea of the essence of these environmental issues. This may require classifying them.

Global environmental issues lend themselves to classification

At present, philosophy employs the following classification of global issues:

issues related to interrelationships within the “man–man” system – so-called “inter-social” issues.

Examples of these include the issue of preventing military conflicts and that of establishing a fair international economic order; issues arising in connection with interaction within the “society–nature” system. These imply acknowledging the environment’s limited capacity to withstand anthropogenic impact.

Here we can think of the issue of mankind being supplied with fuel, energy, and clean air; issues related to the “man–society” system. These are mainly characterized by having to do with a particular individual and depend on society’s ability to provide real opportunities for personal development.

Philosophy’s traditional roster of global environmental concerns has included the following issues:

- 1) development of the greenhouse effect, which entails negative effects in the form of increases in the Earth’s average temperature;
- 2) pollution of the world’s waters;
- 3) ozone depletion;
- 4) soil erosion;
- 5) declines in biological diversity, i.e. the gradual impoverishment of the world’s flora and fauna;
- 6) depletion of freshwater resources;
- 7) declines in natural resources;
- 8) technogenic disasters;
- 9) acid rain, etc.

Despite the differences between them, most of the global environmental issues share a number of common characteristics. Firstly, being of a planetary nature most of them cut across the life interests of all humanity.

Secondly, resolving most of the global environmental issues requires the concerted effort of all nations.

Thirdly, most of these issues are placing human civilization under the threat of demise (or regression).

Thus, the global environmental issues require immediate measures be taken to resolve them, which, first, signals the need to reflect on the specificity of relationships within the “man–machinery–nature” system, and, second, provides a rationale for a consolidated effort on the part of science and morality in resolving technical objectives.

In other words, the global environmental issues can be resolved through the development of the technical and moral components of the strategy for the development of society.

If the first need can be met through the implementation of the latest technology, like waste-free production, the use of alternative sources of energy (e.g., sun, water, wind, etc.) and creation of resource-saving technology, resolving the second one is possible only through transforming the existing system of values.

Although science has, for the most part, been variously referred to as a pool of knowledge, a type of activity, a form of public consciousness, a social institution, and a system of academic preparation of human resources, it has turned into and acts today as an actual productive force that influences society and the life activity of any specific individual.

The study of science, as a complex phenomenon in culture, is in the focus of interest of the various disciplines. Thus, for instance, philosophical gnoseology explores the operation and organization of scientific cognition.

The use of the methodology of gnoseology can provide an insight into the specificity of knowledge and the mechanisms underlying the formation of scientific knowledge, as well as the criteria for it.

The central issue in the sociology of science is viewing science as a special social institution whose activity is aimed at obtaining scientific knowledge.

The psychology of science is attracted to exploring issues arising in the course of scientific cognition, while the history of science demonstrates an interest in identifying and describing the socio-cultural context of situations under which it is possible for scientific discoveries and technical inventions to emerge in a particular historical period of time.

Today, the philosophy of science explores scientific knowledge and the way it is produced; it studies the principles of organization and operation of scientific knowledge.

The present-day philosophy of science has produced two principal viewpoints as to the mutual influence of science and technical progress on morality:

- 1) science is responsible for the use of technical achievements for good, peaceful purposes for the benefit of humanity;
- 2) science, as the primary driver of social progress, helps free man (society) from delusions.

Thus, according to the logic of present-day researchers, the relationship that science and morality are in is one of mutual complementation. In other words, science produces knowledge, while morality is oriented toward the cultivation of the value of good.

Of special significance in resolving global environmental issues is the scientist's awareness of the responsibility for the results of his activity he has to the scientific community and society as a whole. The so-called "social responsibility of a scientist" is construed in this paper as the obligation to follow humanistic values, one of each individual scientist and the scientific community, as a whole, to society.



The professional responsibility of a scientist is predicated on a particular value system.

Presently, among the value orientations formed in the scientific consciousness the way is led by the inherent value of truth and the value of novelty, which finds its concrete expression in the formation of the ideals and standards of present-day scientific cognition. These values constitute the specificity of the organization and operation of scientific knowledge.

Furthermore, the scientific environment has witnessed an increasing focus on constant growth in the body of knowledge, which is associated with the acknowledgement of the objective nature of scientific knowledge and expresses the values of universalism and collectivism, reflecting, in turn, the ideals of scientific creative work. Thus, the concept of the cumulative development path of scientific knowledge has retained its relevance.

Tackling issues of this kind has translated into a growing interest within present-day science in the recent trend in society toward the reappraisal of spiritual values, which, in turn, has led to a steady interest among science methodologists in the development of the “ethical neutrality of science” principle.

For the sake of fairness, it is worth noting that the essence of this kind of modernized ethical neutrality expresses the idea that science by itself is neither good nor evil. In other words, it is the actual technical, technological, and social application of scientific products that is evil or good.

Consequently, it can be affirmed, first, that science plays a key role in the development of present-day technogenic civilization and, second, that, despite science’s current status as the “driver of progress”, it can also be implicated as among the key drivers of the global crises faced by human civilization.

Thus, in the context of dialectics science can be viewed as an inconsistent phenomenon.

Conclusions

Today, science is viewed as a dominant social value. What is more, science is central to man’s life activity, as it governs changes that occur at all levels of the social system.

Present-day culturology is characterized by a dual attitude toward the determination of the role of science and machinery in the history of our civilization. On the one hand, science and machinery help attain a whole new quality of life for man (society). Yet, on the other hand, they can also cause human civilization serious problems. This is how we get global problems, a complex of stark social-natural contradictions cutting across the entire world as a whole, and specific regions and countries in particular, as well as the lives of specific humans interacting in numerous ways with the natural world and the sphere of culture.

Today, human civilization, which exercises decisive influence over the world of natural objects through the constant enhancement of its machinery and technology, finds itself in a situation where it needs to analyze and resolve the existing global crises caused by the anthropogenic factor.

Man, as a biosocial creature, is characterized by being a part of nature, i.e. a living entity among other living entities. What is more, according to the

philosophy of anthropology, man is linked with the world of nature, i.e. his habitat (nature being construed in this paper as a collection of natural conditions for the existence of man (society), which predate and exist independent of him, a self-regulating system), not just genetically but functionally as well, since he makes use of natural objects by means of technical devices. So it appears that machinery actually stimulates the emergence of the world of culture.

Man's relationship with nature is dialectically inconsistent. Man is not just a social creature but a natural one as well. He is organically linked with the world of nature and cannot exist without it. Yet, at the same time, man can also withstand nature, putting to his use its forces and substances, transforming them, and adapting them to his needs.

Consequently, there ensues a disharmony between man and nature, which worsens due to the use of a wide range of technical devices, leading to the disruption of natural processes in the world.

An analysis of today's global issues has revealed the defining role of environmental concerns. In addition, it has been established that among the global environmental issues of special significance are those functioning at the "science–nature" level, where man, who creates the sphere of techno-knowledge, is a regulator of relations between the two systems.

It has been shown that machinery, as a socio-cultural phenomenon, has special value for culture, and its role can be viewed as positive or negative depending on the way it is used by man (society).

It has been established that the contradiction between nature and society is resolved in the course of the technical-production activity of humans.

This study has established that the progressive development of human civilization can be ensured through the ability to forecast the pace at which to perfect machinery, efficiently apply science-driven technology, and implement resource-saving technology.

Social ecology helps uncover the mechanisms underlying human (societal) impact on natural ecosystems, which furthers the understanding of interaction within the "man–nature" system. From this follows the objective in science (social ecology, in particular) to work out a system of methods that would be efficient in ensuring the harmonious operation of the global ecosystem.

In this regard, the development of methods for resolving global environmental issues is the obligation of the scientific community as a whole and of any individual researcher in particular. In the end, a scientist should develop a sense of personal responsibility for the effects of theoretical research he conducts.

Thus, there is a need to resolve, without delay, the environmental and cultural crises of the modern world, mutually governing each other, which requires the scientific community take all appropriate measures to that end.

From this follows the objective to raise a generation who are capable of ensuring the proper intellectual and technological development of human civilization going forward.

Disclosure statement

No potential conflict of interest was reported by the authors.



Notes on contributors

Tatyana V. Lazutina - Doctor of Philosophy, professor of Tyumen Industrial University, Tyumen, Russia.

Vladimir N. Baksheev - Doctor of Engineering, professor of Tyumen Industrial University, Tyumen, Russia.

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