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NATURAL PHILOSOPHY IN THE SYSTEM OF IDEOLOGICAL ORIENTATIONS OF THE INDIVIDUAL

Summary. The paper drawn attention to natural philosophy as a branch of philosophical studies aimed at rational comprehension of the integrity of nature and its fundamental principle. It has been necessary to provide confidence in the knowledge of natural philosophy of modern university students, as this knowledge helps them to understand the nature of a general. That allows the students to understand all things in their unity and in a variety of forms, build a rational and scientific picture of the world, as a whole, from inorganic nature – to life and human life.

Keywords: natural philosophy, natural science, education of students, human life, social philosophy.

FILOZOFIA PRZYRODY METODĄ RACJONALNEGO KSZTAŁTOWANIA JEDNOSTEK

Streszczenie. W pracy omówiono znaczenie i zasady filozofii przyrody, stanowiącej gałąź nauk filozoficznych, dla racjonalnego pojmowania integralności natury i zasad jej funkcjonowania. Koniecznym więc jest przekazywanie tego typu wiedzy studentom wyższych uczelni, gdyż pomoże im ona w lepszym zrozumieniu otaczającego nas świata w powiązaniu z kierunkiem stanowiącym przedmiot ich studiów.

Słowa kluczowe: filozofia przyrody, nauki przyrodnicze, edukacja studentów, życie człowieka, filozofia społeczna.

In the context of globalization and constant dynamic changes in life which demands from us as urgently to bring up the identity of a new type of thinking and outlook, as the person responsible for the continuation of life on the planet, and for its quality. That is why the education system relies on mission renewal approaches to the content and form of education and upbringing of the younger generation to develop a scientific and philosophical understanding of the world required for a possible solution to global problems.

Formation of a new type of personality, in our opinion, is possible using the methodological apparatus and potential opportunities of philosophy of education as a research field of social philosophy, because philosophy reflects the light of the most pressing philosophical concepts of latest achievements of various branches of knowledge, education and best practices involve training and education, and this affects the formation of the inner world of younger generations.

Becoming a new type of personality as an integrated subject of culture involves first the formation of valuable components of its vision, defined understanding of philosophical knowledge as a special spiritual phenomenon and identify its place in the culture, its relationship with other social phenomena (forms of social consciousness) – science, art, religion, etc. It follows that the education system (from the concept to the content of) should be the most responsive and play the specific spirituality: only in this case it can effectively solve the problem of the formation of highly moral and socially responsible individual.

In recent years there is quite a strong downward trend in the humanities disciplines in general and the formal teaching of philosophy in particular. Thus philosophical knowledge presented in short courses for bachelors containing the basics of philosophical knowledge without a specific institution, master the same level of education generally is deprived of knowledge because of the withdrawal of the discipline in the category of items for the choice of the institution or the student, which is often carried out biased, giving priority to various special subjects branches.

The problem of forming a new (practical, planetary space) future outlook of the individual expert has found a better understanding of the philosophical and methodological solutions in the monograph¹, which refers to studying philosophy and training philosophy students – future agronomists, breeders, technologists and processors of agricultural products, environmentalists, builders, cartographers, surveyors, who in the future will work with land and energy resources of the country and the planet (earth, water, air, sun energy), and of their professional competence and values depends their whole life: the natural values (clean air, water, fertile soils, forests); biological vitality values (healthy condition of the body); mental values (elation, love, joy, happiness); social and spiritual values (employment, harmony in society, peace, ideals).

¹ G. Beregova: Osvitno-vykhovnyj potencial filosofskyx znan u systemi vyshhoyi agrarnoyi osvity v Ukraini. Xerson, Ajlant 2012, s. 312.

Theory and methods of teaching, training and learning in higher education (given the need for the formation of ideological orientations of a new type of personality) is the need to use as the basis of educational process a range of philosophical knowledge. It is our firm belief it can be especially knowledge of nature, antropocosmism (idea of the unity of man and the universe) energetics (energy as a unifying principle of nature and the phenomenon of life), etc. This range of philosophical knowledge (usually appears in the form of selective subjects) can be recommended to all types of educational institutions, especially those involved in the natural specialties, as awareness of future professionals, such as natural philosophy, further studies will help to better understand and philosophical problems of biology, zoology, ecology, fish culture, economy, technology and other sciences.

To understand the nature of philosophy and related sciences in curricula of higher education institutions should introduce special philosophical discipline, as it is carried out, for example, in European science XVII-XVIII century. Specifically Newton taught physics in "Mathematical Principles of Natural Philosophy" (1687), Karl Linnaeus calls his work "Philosophy of Botany" (1751), J. Lamarck wrote the two-volume "Philosophy of Zoology" (1809), E. Geoffroy Saint-Hilaire says the report "Principles of Zoology, philosophy discussed in March 1830 at the Academy of Sciences" (1830) and the article "The philosophy of nature", Robert Boskovic calls his work «Philosophiae naturalis theoria» (1758), and later J. Herschel publishes a book called "Previous considerations to the study of natural philosophy" (1830). Completion of the philosophical understanding of the nature of Voltaire were "Fundamentals of Philosophy of Newton" (1736), Diderot "Thoughts to explain the nature" (1770) and P. Holbach "System of Nature" (1770), which is associated with universal nature, simple, identical, immutable laws that constitute the necessity, of matter and motion of the mass and energy of the chain of causes and effects, operating at different levels of nature.

Natural philosophy as a form of speculative knowledge

Natural philosophy is now seen as part of a philosophy that includes speculation knowledge about nature, built with the help of deduction. The term "natural philosophy" emerged long ago and coexisted together with the equivalent terms "metaphysics of nature" and "speculative physics".

History of natural philosophy as a form of speculative knowledge A. Ogurczov submitted by period explaining how to change the understanding of natural philosophy based on an interpretation of nature: 1) set of all changing and sustainable, 2) anything contrary soul, history, culture, freedom, 3) internal the principle of things, 4) regular field of cause-and-

causally necessary². The historical development of natural philosophy should summarize possible, by submitting the historical stages of its development:

- cosmological natural philosophy – defining fundamental principles of all things;
- creationist natural philosophy – nature created by God from nothing, natural phenomena – symbols of a certain relation of God to man;
- pantheistic natural philosophy – understanding the nature of a substance, there is important, and potentially combining and matter and form;
- natural philosophy as a general theory of higher level – philosophical and theoretical analysis of the nature, identical to natural science, especially physics;
- dynamic natural philosophy of German idealism – understanding the principles of science, a combination of historicism and systems principle, is closely related to the doctrine of logical categories embodiment of whom are nature and science;
- natural philosophy XIX–XX centuries – criticism of natural philosophy by speculative infertility and the development of science;

In particular, Aristotle considered natural philosophy as the doctrine of nature (physics). Dividing matter how vague principle of all things and the universal principle of origin, changes and movements of the form as a source of particular items of certainty, Aristotle put forward the doctrine of the four types of causes (material, formal, current and target) and the five elements that are important for his philosophical concepts nature³.

It should be noted that in Roman philosophy, the emphasis shifts from natural philosophy on ethical issues, though this philosophy was divided into moral and natural (*philosophia naturalis*) in Epicureans, ethics, natural philosophy and epistemology of the Stoics. Natural Philosophy, in turn, separated them in the doctrine of the bodily and incorporeal things.

In the Middle Ages nature is seen as wrought by God from nothing. The doctrine of creation in six days was the basis of the description of natural phenomena and creatures. This doctrine is interpreted in different ways: either as a symbolic simultaneous creation the variety of nature or creation of a consistent day after day. Natural phenomena are interpreted as symbols of a certain relation of God to man.

In European science XVII–XVIII century interpretation of natural philosophy reigned as the general theory of higher level, which is conceived as a philosophical and theoretical analysis of the nature, identical to natural science, especially physics and contrasted natural-historical description. In R. Bacon, along with natural philosophy (speculative knowledge of nature) there is empirical science. At its top is physics because it examines the findings of other sciences on experience and searches its own mysteries of nature⁴.

² Antologyya myrovoy fylosofyy. V 4-x tomax. T. 1 ch. 1 y 2: Fylosofyya drevnosty y srednevekovya / red. kollegyya V.V. Sokolov (red.-sost. pervogo toma y avt. vstup. staty y dr.). – M.: Mysl, 1969, s. 936.

³ G. Beregova: Osvitno-vykhovnyj potencial filofsokyyx...

⁴ Myr fylosofyy: Knyga dlya chtenyya. V 2-x ch. Ch.1. / Ysxodnye fylosofskiye problemy ponyatyaa y pryncyipy; [Sost P.S.Gurevych y V.Y. Stolyarov]. – M.: Polytyzdat, 1991, s. 672.

P. Gassendi thinks natural philosophy or physics, part philosophy, which should reach "a clear understanding of the nature of things"⁵. R. Dekart physics calls the science of how the whole universe formed, what is the nature of the earth, nature plants, animals and humans, emphasizing that we should strive "to avoid theological disputes and refrain within natural philosophy", even in the matter of the immortality of the soul⁶. G. Leibniz considers nature as a continuous staircase beings, emphasizing the gap between the metaphysical world of monads spiritual and physical world of extended bodies, and thus – the gap between physics, overcome defined harmony. For natural philosophy X. Wolf identical cosmology, it is conceived as a philosophical and theoretical analysis of nature, identical to natural science, especially physics and contrasted natural-historical description.

A new stage in the development of natural philosophy – a dynamic natural philosophy of German idealism, where natural philosophy begins to be seen as a reflection of the principles of natural science (especially Kant), overcome the gap between natural philosophy and natural history, as natural philosophy is dynamic and historic combining the principle of systems and historicism, philosophy of nature is closely related to the doctrine of logical categories embodiment of whom are nature and science.

In Kant's natural philosophy – a "metaphysics of nature", which reveals the existence of things and laws a priori structures of science, as opposed to empirical natural sciences. Metaphysics is the nature of transcendental philosophy and doctrine of private nature, which includes rational physics and psychology. Stressing that "in accordance with the proper maxim of natural philosophy, we should avoid any nature will explain the arrangement of a higher nature"⁷, Kant defines nature as the totality of all objects of experience, obeying the necessary laws.

According to Friedrich Schelling, natural philosophy is not philosophical principles applying to the empirical sciences – its task is "philosophically generate science"⁸.

Decisive principles of natural philosophy, developed G. Hegel, are as follows: 1) natural philosophy views nature in its entirety as an organic, evolving entity; 2) natural philosophy in contrast to the natural sciences is not analytical, and synthetic and seeks to comprehend the overall natural bodies and processes that concept; 3) nature is presented in a sequence of levels – mechanics, physics, body, other than the internal principles of organization; 4) these levels are not reducible to each other, and the transition to a higher level by using qualitative leap or transition; 5) impossibility of construction to the amount of organic whole parts of organic life to the physical and chemical processes; 6) deployment organic integrity made a transition from the abstract to the concrete step of the unity of diverse and unilateral points where each next higher stage and presented as truth earlier and raises them by emanations;

⁵ P. Gassendi: Sochynenyaya v 2-x t. Tom 1 / Per Gassendy. – M.: Mysl, 1966, s. 431.

⁶ F. Bekon: Sochynenyaya v 2-x t. T. 1 / F. Bekon. – M.: Mysl, 1977, s. 567.

⁷ Y. Kant: Prolegomeny Sochynenyaya v 6-y t. T. 4 (1) \ Y. Kant. – M.: Mysl, 1965, s. 544.

⁸ F.V.J. Shellyng: Ydey k fylosofyy pryrody / F.V.J. Shellyng. – SPb.: Nauka, 1998, s. 520.

7) in nature is realized process of individuation – from its minimal form in the mechanics of his own higher forms of existing organisms; 8) nature is seen as alienation and self-expression of the spirit, it must be seen in nature "just a mirror of ourselves, to see the reflection in nature free spirit"⁹. The approach to nature as spirit exclusion allowed G. Hegel categories apply logic to the understanding of nature.

Natural philosophy in the middle of the nineteenth century. lost its influence primarily because it did not meet the achievements of natural science and mathematics, which formed new concepts and theory (the creation of non-Euclidean geometries, the discovery of the law of conservation and transformation of energy, building on the principles of historicism and evolutionism new theories of geology, biology, cosmology). Important role in the rejection of natural philosophy among scientists mid-nineteenth century. played and positivism, which denied natural philosophy and the philosophy of limiting generalization of data science.

In modern philosophy A. Ogurczov identifies the following trends in the interpretation of natural philosophy: 1) natural philosophy as a philosophy and methodology of science (B. Dubislav, M. Shlik, H. Morhenau); 2) concept of natural philosophy as an explanation of the nature of the last, limit, theistic reasons as opposed to natural history and revival doctrine of the four causes of Aristotle (A. Dempf, V. Bruhher, K. Raner); 3) ontological interpretation of natural philosophy N. Hartmann, which are different modes of being and natural philosophy, associated with analyzing physical and organic material and of being, breaking into three types according to three categories; 4) natural philosophy in the interpretation of the concept of emergent evolution (S. Aleksander, A. Whitehead), where each level of the universe has a distinctive quality that is not limited to others based organic philosophy of nature and cosmology, the subject of the study were different kinds of processes¹⁰.

Recently, with the development strategy synergetic synergy emerging understanding of nature, which emphasizes the nonlinearity, instability, self-organization and nonequilibrium natural processes (I. Prigogine, H. Haken), and nature appears as an open system of nonlinear dynamic processes of or changes which "choice" is defined way point of bifurcation and attractors. In recent years, with the developed environment, especially global ecology and social ecology, with the realization of alternative ontological models that use science, the development of systems research, with the increasing role of global evolutionism principles recognized the lack of logical thinking and methodological grounds and natural treatments. Science found ways to build natural philosophy based on the principles of co-evolution, evolutionism, consistency, synergy.

Thus, natural philosophy (philosophy nature) – a branch of philosophical research that tries to rationally understand the integrity of nature and its fundamental principle, its knowledge helps the person (future professionals) understand the nature of a general, the

⁹ Y. Kant: Prolegomeny Sochynenyaya v 6-y t. T. 4 (1) \ Y. Kant. – M.: Mysl, 1965, s. 544.

¹⁰ Novaya fylososfskaya 'encyklopedyya; [elektronnyj resurs] / Ynstytut fylosofyy Rossyjskoj akademyy nauk. – Rezhym dostupa: <http://iph.ras.ru/lib2251.html>.

threshold concept that defines the basic scheme of understanding and explanation of certain things like regulative idea that allows us to understand all things and all things in their unity and in a variety of forms, build a rational and scientific picture of the world, completing natural science data and identifying the internal and determination of the interaction between things, reveal different levels of nature as a whole – from inorganic nature to life and human life.

It should be added that the philosophy of nature can only begin the study of the spectrum of philosophical knowledge aimed at the formation of ideological orientations man of the future, and this is the beginning of an organic extension that can be represented as tentative:

Systematic relationship "nature–man" and so on.

So, the knowledge of natural philosophy is only the first step to understanding the system "man–nature", that is part of something greater within the meaning of philosophical knowledge and philosophical generalizations about people, society and the world, which if necessary can be supplemented by other thematic blocks necessary for reflection of the man (society) regarding its existence and future.

Therefore, the current period of global community marked aggravation of globalization and the urgent need to solve the problems of human survival and preservation of civilization, requires new approaches to higher education with a focus on social and educational results, a variant of which can be learning philosophy and training philosophy which is built on the principles of outlook-forming potential of philosophical knowledge and aims to develop a worldview of modern facilities with individual moral and ethical elevation and the mandatory level of spirituality.

Bibliography

1. Beregova G.: Osvitno-vykhovnyj potencial filosofskyx znan u systemi vyshhoyi agrarnoyi osvity v Ukrayini: Monografiya / Galyna Beregova. Xerson: Ajlant 2012.
2. Antologyya myrovoj fylosofyy. V 4-x tomax. T. 1 ch. 1 y 2: Fylosofyya drevnosty y srednevekoviya / red. kollegyya V.V. Sokolov (red.-sost. pervogo toma y avt. vstup. staty y dr.). – M.: Mysl, 1969.
3. Myr fylosofyy: Knyga dlya chtenyya. V 2-x ch. Ch.1. / Ysxodnye fylosofskiye problemy ponyatyya y pryncypy; [Sost P.S.Gurevych y V.Y. Stolyarov]. – M.: Polytyzdat, 1991.
4. Gassendy P.: Sochynenyya v 2-x t. Tom 1 / Per Gassendy. – M.: Mysl, 1966.
5. Bekon F.: Sochynenyya v 2-x t. T. 1 / F. Bekon. – M.: Mysl, 1977.
6. Kant Y.: Prolegomeny Sochynenyya v 6-y t. T. 4 (1) \ Y. Kant. – M.: Mysl, 1965.
7. Shellyng F.V.J.: Ydey k fylosofyy pryrody / F.V.J. Shellyng. – SPb.: Nauka, 1998.
8. Novaya fylosofskaya 'encyklopedyya; [elektronnyj resurs] / Ynstytut fylosofyy Rossyjskoj akademyy nauk. – Rezhym dostupa: <http://iph.ras.ru/lib2251.html>.

Omówienie

W pracy omówiono historyczny rozwój filozofii przyrody, stanowiącej integralną specjalność w dyscyplinie „filozofia”, oraz znaczenie tej specjalności dla lepszego zrozumienia otaczającej nas rzeczywistości. Z przedstawionej w niniejszej pracy analizy wynika istnienie ujemnego sprzężenia zwrotnego pomiędzy istniejącym stanem wiedzy w obszarze nauk ścisłych i technicznych a poglądami głoszonymi przez filozofów. Sprzężenie to powoduje, że wraz z rozwojem nauk ścisłych rozwija się filozofia przyrody, której ewoluowanie z kolei często inspiruje postęp nauk technicznych i przyrodniczych. Z powyższego wynika więc pośrednio konieczność nauczania filozofii przyrody na większości kierunków studiów, co szczegółowo zostało omówione w przypadku studiów rolniczych w cytowanej w niniejszym artykule pozycji.