



DOI: 10.15804/tner.2024.75.1.02

Halyna Berehova

Kherson National Technical University, Ukraine

Fabian Andruszkiewicz

University of Opole, Faculty of Social Sciences, Poland

New Educational Review

Biophilosophy in the System of Higher Education as a Paradigm of the Preservation of Human Culture and Civilisation

Abstract

The article attempts to solve the problem of updating higher education content to form a modern worldview of the individual through the interdisciplinary course “Biophilosophy”.

Biophilosophical knowledge and cognition content is studied at the fundamental and applied levels using methods of description, explanation, and analysis. The obtained results make it possible to formulate conclusions and perspectives regarding updating the content of philosophical knowledge in higher education, where biophilosophy can be a new worldview paradigm for preserving human culture and civilisation.

Keywords: *philosophy of education, biophilosophy, biophilosophical knowledge, cognition, biophilosophical perception*

Introduction

Nowadays, humanity is getting more often and more seriously occupied with its future, the future of the planet and the cosmos (universe), deeply realising community, unity and interdependence between them. In addition, it has a basis behind it. A progressive part of the world’s intellectual and political elite warns us in the report of the Roman club *Come On!*: “The world is in disarray!” In the report, the authors propose to be occupied with “new education” and show face to a holistic world outlook and planetary civilisation (Weizsaecker & Wijkman,

2018). To put it briefly, a new globalised world demands a new world outlook of a new personality! Therefore, to survive and improve the quality of life, humanity needs a new world paradigm to preserve human culture and civilisation. The questions – “how to form a new necessary world outlook? by means of what institutions?” – appear logical. The answer is in the paragraph “Education for a Sustainable Civilization”, where the consensus of leading educators to make radical changes in the system of global education can be found: “...that radical change is needed in the global system of education, in order to meet the new and diverse needs of humanity” (Weizsaecker & Wijkman, 2018, p. 196).

Radical changes in the global education system are a complex and interdisciplinary problem, being in the field of view, first of all, of the philosophy of education, appealed to guarantee a successful civilisation in the modern sociocultural situation, namely via educational institutions to a new generation. However, the content of education (educational material) and the form of its presentation are rarely considered in the philosophical and educational discourse.

Therefore, let us again emphasise the three vectors of the main problem of the philosophy of education: who do we want to teach/educate? – a creative, thinking, non-indifferent, responsible personality; why do we have to teach/educate? – to provide a new generation with successful socialisation, to preserve human culture and civilisation; how to teach and educate such a future personality?; how to form a new world outlook, develop thinking, educate humanism in a personality? Much attention is paid to the content and form of teaching and education in pedagogic, but in the philosophy of education, just the content of education, exactly the content of subjects, forming in total (systematically) a worldwide frame of a young human being – views, convictions, principles, ideals, values, beliefs, life norms and stereotypes, is left with no attention (Berehova, 2017).

Research Context

The content of philosophical knowledge in higher education should be appropriately coordinated with the future profession of the individual. However, philosophical disciplines are often taught according to the old scheme of didactics – formally, without considering the necessary approach of technical or natural knowledge to humanitarian. Among non-traditional philosophical directions, we propose the interdisciplinary course of Biophilosophy, which may include biosophy, bioethics, biopolitics, and biomusic and be united with the course of Ecophilosophy ecoethics, ecology of a human being, ecology of culture, social

ecology, global ecology, etc. The mentioned disciplines may also be optional for a student and a higher educational establishment.

It should be noted that nowadays, bioethics, for instance, is a very popular discipline at the natural and medical faculties of the higher educational establishments in the US and other countries where it is aimed to study moral problems of the theory and practice of modern biotechnology, medicine, philosophy, law, and theology. So, *The Oxford Handbook of Philosophy of Biology* contains articles about the history of philosophy of biology, Darwin's evolutionary theory, spotlights philosophical issues from genomics, animals' behaviour, the philosophy of neuroscience, theology, teleological theories, sociobiology, evolutionary psychology, cultural evolution and moral norms (Ruse, 2008).

Research Methodology

The methodology in the field of humanities is somewhat specific, where general philosophical and general logical research methods are usually used. The study of the specificity and content of biophilosophical knowledge and cognition is qualitative; it is studied at the fundamental and applied levels using methods of description, explanation, and analysis.

Data Analysis

The qualitative research we conducted allowed us to formulate several research questions.

- Why should the interdisciplinary course “Biophilosophy” be included in higher school curricula?
- Why is knowledge of biophilosophy relevant for future generations?
- What does the content of biophilosophical knowledge cover?
- What are the features of biophilosophical cognition?
- How can biophilosophical perception affect the humanisation of human activity?

In this paper, we will try to answer these basic questions from the standpoint of the methodological function of the philosophy of education. In addition, Biophilosophy is a new discipline, and the article's novelty lies in revealing its essence and outlining its content.

Results

To understand why exactly this knowledge is actual for future generations, it is necessary to examine what biophilosophy studies, to draft its problematic circle

and sociocultural context of the functioning of the biophilosophical knowledge, interest in the sciences about living matters and life, whose origins are in the sphere of biology.

Biophilosophy as a Kind of Naturalistic Knowledge

To begin with, it should be mentioned that biology has always been a great interest for philosophers from ancient times up to nowadays, and this interest is getting strengthened in the connection of the enhancement of the world crisis and global problems and, correspondingly, in the connection of the realisation of frailty of human life and being.

As an independent branch of philosophy, the beginning of biophilosophy formation is considered the period of some publications dedicated to this kind of knowledge. In the first place, this is the monograph of the Austrian scientist-evolutionist B. Rensch *Biophilosophy*. Modern specialists in the field of didactics of biology, G. Levitt and U. Hossfeld, note that in the history of science, B. Rensch was “the famous architect of German-speaking synthetic Darwinism ... one of the most successful and influential critics of selectionism ... having created the conception of the panpsychical identism – exotic evolutionary metaphysics among the ‘philosophies’ of other co-authors of the evolutionary synthesis” (Levit, 2010, p. 674).

Another significant work in biophilosophy is the Canadian biologist and philosopher R. Sattler’s publication *Biophilosophy. Analytic and Holistic Perspectives* dedicated to the gnoseological analysis of the mechanisms of the experience of life and determination of biophilosophy’s place in the structure of scientific knowledge. On Suttler’s website, we can find his open books, which the author can change and expand: *Wholeness, Fragmentation, and the Unnameable: Holism, Materialism, and Mysticism, Healing Thinking and Being* (Sattler, 2023).

The American philosopher D. Hull was greatly interested in biophilosophy. In his book, *Science as a Process: An Evolutionary Account of the Social and Conceptual Development of Science*, D. Hull initiated a deeper discussion of science as an evolutionary process (Hull, 2022). His biophilosophical doctrine can be found in many of his books and articles and is based, in general, on Darwinism and its critics: *Philosophy of Biological Science, Philosophy of Biology, Science and Selection, Promises and Limits of Reductionism in the Biomedical Sciences*, etc. (Honenberger, 2023).

The contemporary specialist in the sphere of biophilosophy, M. Ruse, is famous for his works dedicated to evolution, sociobiology and bioethics: *Sociobiology, sense or nonsense?, Evolutionary naturalism: selected essays, Biology and the foundation of ethics, Philosophy after Darwin, Defining Darwin: Essays on the*

History and Philosophy of Evolutionary Biology, and *The Philosophy of Human Evolution*. There is another work by this author about the hypothesis of Gaia, J. Lovelock's revolutionary idea about the planet Earth as a living creature – *The Gaia Hypothesis* (Ruse, 2021).

Nowadays, biophilosophy is quite popular philosophical knowledge in different countries, especially in Europe and the US, as a complex, integrative, biologically oriented interdisciplinary branch of philosophical knowledge, disclosing world outlook and methodical, gnoseological, ontological and axiological problems of the universum existence through the prism of life phenomenon research.

German scientists and university teachers pay special attention to biophilosophical knowledge. In recent years, the works of M. Maner and M. Bunge, K. Kohi, and U. Krokh have been published on biophilosophy. These authors represent different approaches and perspectives in biophilosophy that differ in emphasis, methods, and evaluations. Some of them are critical of biophilosophy, while others see it as the future leading discipline of the century.

Biophilosophy is a variant of the naturalistically oriented philosophy, whose basis, the notion of life in its scientific-biological interpretation, is central and emanating while solving world outlook, moral and epistemological problems.

The biophilosophical knowledge is the unity of the three components: the philosophy of biology, the philosophy of life and axiology. Such a broad definition of the philosophy subject means the engagement of researchers from many branches of knowledge – psychologists, physicists, chemists, ethologists, ecologists, philosophers, and biologists; in a word, all the specialists studying the life phenomenon.

Accordingly, biophilosophy includes such branches of research:

- 1) the philosophical problems of biology, or philosophy of biology, whose subject of the scientific perception is the specificity of life;
- 2) the biological foundations of a human being and human culture based on modern general molecular and populational genetics and the synthetic theory of evolution (and other biological disciplines, especially neurobiology of the human brain), where the rise of such disciplines as biopolitics, bioethics, bioaesthetics, sociobiology, evolutionary epistemology, etc. is quite natural;
- 3) life phenomena are studied in separate scientific directions (cybernetics, synergetics) and within complicated natural, social, and cultural systems involving the Universe framework.

The ways of solving problems in these branches of biophilosophical knowledge produce different concepts and models of the “self-organised Universe”, “global evolutionism”, and other variants of modern universal structures and

world schemes, whose sources contain the results of the scientific analysis and philosophical comprehension of life phenomenon quite expectedly.

Specificity of the Biophilosophical Knowledge

It should also be said about the specificity of the biophilosophical knowledge that means the complex of natural-humanitarian concepts about the uninteruptible unity of nature and society and their mutual conditionality.

Since biophilosophy studies the biological knowledge structure (1); nature, the peculiarities of the scientific perception of living objects and systems (2); the ways and methods of the biophilosophical perception (3); the ethical questions of the universe's existence through the prism of research of life phenomenon in biology and medicine (4); it should be said, first of all, about the epistemological (gnoseological), metaphysical (ontological), methodological and axiological grounds of biophilosophy through the lens of the analysis and explanations of the objective laws of the development of the main directions of the complex of disciplines about living material (the mentioned questions demand separate profound research).

The components in the modern system of biophilosophical knowledge forming the world outlook cannot be left without attention. Undeniably, knowledge is the core of the personal world outlook paradigm (convictions, appraisals, views, principles, the programme of behaviour and activity). The knowledge of a biophilosophical character contains the possibility to form within a human being the world perception with the prevailing ideas of life value and importance, giving a deep understanding of the human being and living nature unity. The basis of such unity is the genetic unity of living material of Earth's biosphere, a corporal organisation of a person providing organic involvement in the biosphere and the world structure in general.

To our mind, biophilosophical knowledge exposes life essence on all levels and itsgnoseological, ontological, methodological and axiological foundations upon which the biological picture of the world is created. In this way, biophilosophy plays the role of the world outlook paradigm aimed at preserving human civilisation and culture. So, biophilosophy as an educational discipline in higher school is successfully able to fulfil one of the most important educational tasks: to form a modern biological conception of the world in young people's consciousness.

Modern researchers in the sphere of biophilosophy (D. L. Smith, D. Dene nett, A. Rosenberg, P. Churchland, D. Papineau, K. Neander, Ph. Kitcher, J. Dupre, R. N. Boyd, etc.) are sure that one of its top-priority tasks of the applied character is the human nature research, finding out of the biological and

social mechanisms of the world apprehension by a human being and his or her socialisation (Smith, 2016).

In this connection, it is possible to emphasise the main functions of biophilosophy:

- 1) the gnoseological function which embraces the structure of the biophilosophical knowledge, its renewal and accumulation, finding out the specificity of the “subject-object” and “subject-subject” relations in the mechanism of the knowledge development of the living material and life itself, etc.;
- 2) the prognostic one, directed to life in the future and connected with the creation of the biophilosophical grounds of the future civilisation;
- 3) the projecting-methodological function, connected with the social-practical and, first of all, ecological and aesthetic needs of a person, that is, with the solved question of how to come out from the recessionary ecological situation with the help of biophilosophical target-oriented programmes of the development of science, politics, economics, education, and so on.

In a word, we are firmly convinced that nowadays, society demands a new world outlook paradigm targeting to preserve human culture and civilisation; biophilosophy can become exactly this paradigm in the nearest future (from the point of its interdisciplinary character) upon the condition of its popularisation through establishments of higher education.

Biophilosophical Cognition

The intellectual-mental component of personal knowledge (among the others, about the alive) is the basis and source of the responding cognitive processes (of biological cognition), the condition of its correction and, accordingly, the further enrichment of new knowledge. In turn, knowledge is the result of cognition and based on a personality’s spiritual-creative and sensitive-subject activity.

People’s spiritual life depends on their level of biophilosophical knowledge. Existing knowledge produced with the psychological-moral prescriptions dominating in society and with the culture of communication pushes a thinking personality to apply it (knowledge) in practice – to transform the sphere of personal experience, skills, abilities, etc.

This idea about biological cognition can be traced. Views, concepts, and theories of biology are oriented to further elaborate and specify the general theory of biology to get knowledge with exactly an applied meaning. To the latest, one can refer to the knowledge about possible means, ways, forms, methods, conditions of production and representation of a specific useful result: the

biological means of life and rise of working capacity, new kinds of biologically active material, medicamentary and diagnostic preparations to be used in medical business, industry, agriculture, everyday life and experimental activity with the objects of living nature.

It should be added that the content of biophilosophy is traditionally presented at the fundamental and applied levels. So, the fundamental level is the philosophical reflection of life, its origin, place and role in the universe (just here, the connection of biophilosophy and natural sciences can be seen). The applied level of biophilosophical knowledge embraces practical and aesthetic attitude to the living nature, penetration of the theoretical biophilosophy to the level of empirical and everyday knowledge, its realisation in the social practice; in other words, it means the exit of biophilosophy out from the limits of the fundamental knowledge into the sphere of the concrete desobjectivation and objectivisation of the content of its conceptions and ideas in ethology, bionics, biotechnics, bioaesthetics etc.

Discussion

Biophilosophy or Philosophy of Biology

How to call this specific field of knowledge – biophilosophy or philosophy of biology? To date, a consensus on this issue has not been reached among researchers of the philosophy of education.

In the term “biophilosophy” (in contrast to the notion of “philosophy of biology”), the element «bio» is the most essential, coming from the ancient Greek (βίος) meaning “life”. Just that is why the category of “life” is important in biophilosophy.

The problematic field of biophilosophy as a whole remains debatable today. However, it is worth saying that modern scientists are partially interested in this interdisciplinary direction.

Thus, Roberto Esposito’s philosophy about biology and new currents in biophilosophy, particularly biopolitics, are of interest. An entire scholarly review of Esposito’s interaction with philosophy, philosophy of biology, and biopolitics is devoted to this topic (Rajan, Calcagno, 2021). A thesis on the biophilosophy of bioart was also completed at Linköping University’s Faculty of Arts and Sciences (Radomska, 2016).

The integrative nature of biophilosophy inspires scientists to create entire projects of biophilosophical research to show the deep relationships between philosophical and biological knowledge (Köchy, 2022). All this indicates the growing interest of the scientific community in biophilosophy.

Of course, biophilosophy covers many controversial issues, but in our article, we highlighted only the main aspects of this discipline – those that, from the point of view of the philosophy of education, should be paid attention to by teachers of philosophical disciplines.

Conclusions

Thus, this article used the strategic mission of modern philosophy of education, which proposes: a) changing the format of teaching philosophical knowledge to form a modern worldview of future specialists; b) requires an outline of the content of this new philosophical knowledge. With this in mind, the proposed new interdisciplinary course “Biophilosophy” may have the following content.

1. Biophilosophy is a variant of the naturally oriented philosophy whose conceptual nucleus is life; the context of the biophilosophical knowledge embraces the philosophy of biology, life, and axiology.
2. The main problems of biophilosophy rotate around the philosophical comprehension of the living world; and the definition of “life” gains the status of the polysemantic philosophical category and the main principle of understanding the world’s essence and mankind’s existence in it – comprehension of questions of man’s origin, his development and existence in the natural world, peculiarities of the relationship with this world explain the aim of life and its values.
3. Biophilosophy is complex and integrative knowledge, where philosophy brings a valuing moment about the man’s meaning and role in nature into the biological cognition, and this determines greatly the inducing motives of the man’s behaviour – stipulates the man’s creative behaviour, stimulates humanisation of his/her activity widening these relations upon the world of living and non-living nature. The harmonisation of human relationships appears by means of changes in people’s attitudes to the surrounding world. In addition, it should be emphasised that biophilosophy (as a discipline of “new education”) is able to bring such necessary radical changes into the system of education and the global one.

So, biophilosophy can now become an important point of further expansion of scopes and intensification of the complex interdisciplinary researches, strengthening of interest towards a biological component of a new person’s world outlook, creative reevaluation of former conceptions of life and substantiation of new ones, determination of the place of biology in the formation of a new (modern) world outlook paradigm in a new globalised world regarding the preservation of human culture and civilisation.

References:

- Berehova, H. (2017). Philosophy of Education: Main Methodological Vectors of Moulding the Person of the Future in Higher Education. *Future human image*, 8, 14–29.
- Honenberger, P. (2022). *Hull, David Lee. 1935–2010*. https://www.academia.edu/11916901/HULL_David_Lee_1935-2010
- Horn, E., & Bergthaller, H. (2022). *Introduction to the Anthropocene*. Junius.
- Hull, D. L. (2023). https://en.wikipedia.org/wiki/David_Hull
- Integrative biophilosophy*. (2020). The project led by Professor C. Kohi. Kassel University. <https://www.uni-kassel.de/fb02/en/institute/philosophie/schwerpunkte/integrative-biophilosophie>
- Köchy, K. (2008). *Biophilosophy for introduction*. Junius.
- Köchy, K. (2022). Biology as an understanding science. *General Journal for Philosophy*, 251–281.
- Krohs, U., & Toepfer, G. (2005). *Philosophy of biology. An introduction*. Suhrkamp.
- Lemke, T. (2013). *Biopolitics for introduction*. Junius.
- Levit, G., & Hossfeld, U. (2010). The Selectionist Turn of Bernhard Rensch (1900–1990) through the Prism of Panpsychistic Identism. *Charles Darwin and Modern Biology. Nestor-Historia*, 674–683.
- Martin, M., & Mario, B. (2000). *Philosophical foundations of biology*. Springer.
- Radomska, M. (2016). Uncontainable life: A biophilosophy of bioart. *Linköping Studies in Arts and Science*, 666. <https://www.diva-portal.org/smash/get/diva2:916178/FULLTEXT01.pdf>
- Rajan, T., & Calcagno, A. (Eds.). (2021). *Roberto Esposito: New Directions in Biophilosophy*. Edinburgh University Press. <http://www.jstor.org/stable/10.3366/j.ctv21pts93>
- Rolf Sattler on Wilber's AQAL map*. (2023). http://www.beyondwilber.ca/about/rolf_sattler.html
- Ruse, M. (Ed.). (2008). *The Oxford Handbook of Philosophy of Biology*. Oxford University Press.
- Ruse, M. (2021). https://en.wikipedia.org/wiki/Michael_Ruse
- Smith, D. L. (Ed.). (2016). *How Biology Shapes Philosophy. New Foundations for Naturalism*. Cambridge University Press. DOI: <https://doi.org/10.1017/9781107295490>.
- Smith, D. L. (2023). *Introduction: Biophilosophy*. <https://www.academia.edu/21835682/Biophilosophy>.
- Stephens, C. (2019). Biophilosophy. *The Journal of Mind and Behaviour*, 40(2), 159–172. <https://www.jstor.org/stable/26778377>
- Thacker, E. (2023). *Biophilosophy for the 21st Century*. http://ctheory.net/ctheory_wp/biophilosophy-for-the-21st-century.
- Weizsaecker, E., & Wijkman, A. (2018). *Come On! Capitalism, Short-termism, Population and the Destruction of the Planet*. Springer.

AUTHORS**HALYNA BEREHOVA**

Doctor of Philosophical Science, Professor,
Department of General Educational Humanities and Natural Sciences,
Kherson National Technical University,
Berysavske shosse, 24, Kherson, 73008, Ukraine
E-mail: gberegova7@gmail.com
<http://kntu.net.ua/>
ORCID: <https://orcid.org/0000-0002-2418-7178>

FABIAN ANDRUSZKIEWICZ

Doctor hab., Professor,
University of Opole, Faculty of Social Sciences
45-040 Opole, pl. Kopernika 11a, Poland
E-mail: fabian@uni.opole.pl
<https://www.uni.opole.pl/>
ORCID: <https://orcid.org/0000-0001-5318-3793>