

**EDUCATION OF A PERSON IN VIEW
OF VLADIMIR VERNADSKY**

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ВИХОВАННЯ ОСОБИСТОСТІ КРИЗЬ ПРИЗМУ ПОГЛЯДІВ ВОЛОДИМИРА ВЕРНАДСЬКОГО

Сьогодні ставить перед людством серйозні завдання та виклики, пов'язані, зокрема, із екологічними проблемами, що стали наслідком виснажливого та екологічно небезпечного господарювання. Сьогодні значна частина населення земної кулі потерпає від нестачі питної води. Забруднене навколишнє середовище впливає на здоров'я населення земної кулі. А саме людство перманентно опиняється на межі катастроф: продовольчих, екологічних тощо. У таких складних умовах людина мусить переосмислити наслідки своєї господарської діяльності та взяти на себе відповідальність за все живе, що населяє планету Земля. На цьому наголошував ще великий мислитель кінця XIX – початку XX ст. В. Вернадський. Людина повинна усвідомити необхідність змін у світовідчутті та світобаченні. А це, своєю чергою, ставить нові завдання перед сучасною освітою, яка має сформувати ноосферний світогляд кожної особистості.

Мета статті полягає у висвітленні поглядів Володимира Вернадського на освіту та виховання. Погляди на виховання особистості у творчій спадщині мислителя розглядаються в контексті розвитку ноосфери як етапу еволюції біосфери, вирішальним чинником розвитку якої стає розумна людська діяльність. Доведено, що покращення життя людей може відбуватися внаслідок зростання наукових знань. Для цього важливо змінити систему освіти, постійно удосконалювати, підвищувати роль її і значення. Вона повинна втілювати у собі не лише певну інформацію, якої стає щоразу більше, але й ціннісні орієнтири, серед яких особливої ваги надавав базовим – духовності, моральності, гуманізму.

Виділено ідеї В. Вернадського, актуальні для сучасної освіти. Оскільки, на переконання мислителя, в умовах ноосфери зростає роль людства, яке має стати вирішальним чинником розвитку та збереження біосфери, учений стояв на позиції необхідності різнобічного розвитку кожної особистості. Ціннісне ставлення до людини, що є наскрізним у працях В. Вернадського, спонукає до пошуку виховного інструментарію, який дозволив би вихованцеві відчувати себе повноцінним учасником виховного процесу, у якому враховувалися б його потреби та інтереси.

Доведено, що у процесі виховання має формуватися ноосферне мислення особистості. Аналіз спадщини В. Вернадського дозволив констатувати: людина з розвинутим ноосферним мисленням – це різнобічно розвинена особистість-творець, людина-гуманіст, людина-демократ, яка відстоює ідеали братства і свободи.

Ключові слова: *В. Вернадський; ноосфера; ноосферне мислення; наука; духовність; різнобічно розвинена особистість.*

EDUCATION OF A PERSON IN VIEW OF VLADIMIR VERNADSKY

Nowadays, the humanity faces serious problems and challenges, including environmental problems resulting from debilitating and environmentally unsafe economic activities. At present, much of the world's population suffers from a shortage of drinking water. A polluted environment affects the health of the world's population. And humanity itself is constantly on the verge of disasters: food shortage, environmental catastrophes, etc. In such difficult conditions, people must reinterpret the consequences of their economic activities and take responsibility for all living things that inhabit the planet Earth. This was emphasized by a great thinker of the late nineteenth – early twentieth century V. Vernadsky. One must be aware of the need for changes in worldview. And this, in turn, poses new challenges to modern education, which should form the noospheric attitude of each individual.

The purpose of the article is to highlight the views of Vladimir Vernadsky on education and upbringing. The great thinker's views on the education of an individual are considered in the context of the development of the noosphere as a stage in the evolution of the biosphere, a decisive factor in the development of which is the intelligent human activity. It has been proven that the improvement of people's lives can occur due to the growth of scientific knowledge. For this purpose, it is important to change the education system, and constantly improve and increase its role and importance. It must envision not only certain information, the amount of which is constantly increasing, but also the values, among which a special importance is attached to the basic ones, i.e. spirituality, morality, humanism.

The ideas of V. Vernadsky, relevant for modern education, are highlighted. Because, according to the thinker, in the noosphere, the role of humanity is growing, which should be a decisive factor in the development and preservation of the biosphere, the scientist stood on the position of the need for a universal development of each individual. The value attitude to the human being, which is pervasive in the works of V. Vernadsky, encourages the search for educational tools that would allow the pupils to feel competent participants in the educational process, which would take into account their needs and interests. It is proved that in the process of education the noospheric attitude of a person should be formed. An analysis of V. Vernadsky's legacy revealed that a person with a developed noospheric attitude is a multifaceted personality, a creator, a humanist, a democrat who supports the ideals of brotherhood and freedom.

Key words: V. Vernadsky; noosphere; noospheric attitude; science; spirituality; universally developed personality.

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Introduction

The present situation poses serious challenges for humankind. They are, in particular, related to environmental problems resulting from debilitating and environmentally unsafe economic activities. The human intervention in nature nowadays leads to complex consequences that will be felt for decades and even centuries (Kern, 2020). Scientists are alarmed by the growing degradation of the environment. They draw attention to the significant pollution of water and soil, deforestation, the use of substances that negatively affect the ozone layer of our planet, etc. At present, much of the world's population suffers from a shortage of drinking water. A polluted environment affects the health of the world's population. As a result, scientists estimate that the number of children with physical and/or mental disabilities or other health restrictions has increased several times in recent decades. And the humankind itself is constantly on the verge of disasters: food shortage, environmental catastrophes, etc.

In such difficult conditions, people must rethink the consequences of their economic activities and take responsibility for all living things inhabiting the planet Earth. This was emphasized by a great thinker of the late nineteenth – early twentieth century V. Vernadsky. One must be aware of the need for changes in worldview. And this, in turn, poses new challenges for modern education, which should form the noospheric attitude of each individual.

According to S. Ivanov (2004, p. 46), the main features of the noospheric attitude include the following: it is based on the leading ideas of the philosophy of cosmism (total unity, anthropocosmism, panethics, active evolution, etc.); the integrity and integrativity of different branches of knowledge (scientific, humanitarian, religious, philosophical); people's awareness of themselves and their place in the world, their purpose; following the norms of socio-natural (noospheric) ethics, their practical observance in one's actions. A search for sources of noospheric attitude leads to the scientific legacy of V. Vernadsky. In his works we can find answers to questions about the sense of human life, the ways to form a new type of personality capable of living and acting in the noosphere.

An analysis of recent research and publications. V. Vernadsky's ideas, important for education and upbringing, have been studied in the works of M. Diachenko-Bohun, M. Poliuzhyn, A. Sova, O. Stoliarenko, and others.

In particular, A. Sova identifies the prerequisites for the creation of the noosphere, which, in our opinion, have an impact on education. These are, in

particular, the following ideas: the humankind has become a single whole; transformation of the means of communication and exchange; discovery of new energy sources; increase of the welfare of the people; equality of all people; exclusion of wars from the society. The essence of the noosphere is formulated by the scientist as follows: “if the coherence of processes occurring in inanimate nature is provided by self-regulation mechanisms, the coherence of environmental characteristics can be achieved by reason and will” (Nevmerzhytska, 2013, pp. 49–50).

The belief in the omnipotence of man, which is basic in the worldview, asserted by V. Vernadsky, is noted by O. Stoliarenko. The researcher writes that V. Vernadsky became one of the first scientists in the twentieth century, “who substantiated a new view of the scale of human activity, according to which humans are more organically inscribed in nature than previously thought, and the mind is not just a mirror-like appendage of nature, but also one of the factors of cosmic evolution of the world” (Stolyarenko, 2002, p. 28). “The Anthropocene has emerged as the paradigm of rupture, materiality, and warning; the Noosphere as the paradigm of development, mind/culture, and hope” (Shoshitaishvili, 2020).

M. Poliuzhyn states: V. Vernadsky’s ideas “are reinterpreted in the system of noospheric education, upbringing, physically and morally healthy human development”. The noospheric education takes into account everything – the socio-economic situation in the country, the specifics and characteristics of regional education, the resources for education. Taking into account the socio-political, economic, pedagogical conditions of education, making the most of the available resources and opportunities, the noospheric education can provide the best result for the specific conditions of its implementation (Polyuzhyn, 2011, p. 354).

Since the research of modern scientists focuses mainly on the study of Vernadsky’s personality as a researcher in the natural sciences, as well as the history of science, or on the development of the basic principles of the noospheric education based on the scientist’s views on the noosphere, we consider it appropriate to focus on education of a personality through the prism of the ideas of the outstanding scientist. After all, it is in this perspective that the legacy of the thinker is insufficiently studied.

The purpose of the article is to highlight the views of Vladimir Vernadsky on education and upbringing.

Volodymyr Vernadsky (1863–1945) was an outstanding thinker whose ideas were based on the idea of the world as a whole, the active and creative nature of the evolution of the wildlife, the society, and the human civilization. Although he was born in St. Petersburg, his life is closely connected with Ukraine. It was here, in the Poltava Province, that the Shishaky hamlet belonging to the Vernadsky family was located, to which they had moved from Vernadivka. During the rule of Hetman P. Skoropadsky he was elected the president of the newly established Ukrainian Academy of Sciences (1918). At the same time he lectured

at the University of Kyiv. And the next year he moved to the Crimea to lecture at the Tavriya University in Simferopol. Already in 1920 he was elected the rector of the university. The scientist later returned to Petrograd and his further life was connected with Russia.

Vladimir Vernadsky: views on the education of an individual in the context of the development of the noosphere

The central idea of V. Vernadsky's works is the idea of the unity of the biosphere and humankind. While solving it on a philosophical level, the scientist wrote: in an era of an exceptional flourishing of scientific thinking, the close and deep connection of science with other currents of the human spiritual life is often forgotten; hence we have to hear about the contradiction between the scientific and the religious, between the scientific and the philosophical, and even between the scientific and aesthetic worldviews. Sometimes we hear that the role of the philosophical worldview and even the creative and nourishing role of philosophy for humanity has been lost and must be replaced in the future by science. Never before have we observed in the history of mankind the science without philosophy and, studying the history of scientific thinking, we have always seen that philosophical concepts and philosophical ideas included as a necessary element that permeates the science throughout its existence ([Vernadskiy, 1988b, p. 58](#)).

An important concept that became system-forming in the works of V. Vernadsky was the "noosphere", which he considered as a stage in the evolution of the biosphere, a decisive factor in the development of which is the intelligent human activity. People by their work and their conscious attitude to life change the earth, i.e. the geological area of life, the biosphere. It translates it into a new state: by their work and consciousness the biosphere transforms into the noosphere ([Vernadskiy, 1994, p. 428](#)).

The noosphere is determined by the development of civilization, consistent with the nature and the cosmos, as well as with the human responsibility for their own life and that of future generations. The scientist was one of the first to consider living organisms in unity with the environment: people, like all living things are not an environmentally independent natural object ([Vernadskiy, 1999, p. 13](#)). Moreover, all life on Earth is also interconnected: from microbes (and even viruses) to humans ([Vernadskiy, 1997, p. 141](#)). In fact, we are even now facing a situation where the pandemic of corona virus infection has influenced not just individuals, but entire countries or even continents. People live in nature. It, on the one hand, affects them, and on the other – depends on them.

Therefore, people are fully responsible for the result of their activities in the environment. At the same time, in the notion of the "noosphere", Vernadsky emphasized the humanistic aspect, believing that it was a branch of human culture and a manifestation of human thought ([Vernadskiy, 1997, p. 428](#)).

The thinker was convinced that values and ideals are created by the masses, and therefore produced by life itself. In a letter to V. Vodovozov, he wrote: and

this work [of a set of individual units – N. O.] produces the forms of poetry, so incomparable, wonderful; this work achieves a well-known social knowledge, which is expressed in other laws, in other customs, in other ideals; it develops the concept of beauty and many others, which we accept (Vernadskiy, 1988a, p. 398).

At the same time, the scientist was aware that unfavorable living conditions lead to the creation of anti-values that will negatively affect both the public life and the educational process. Thus, during the turbulent revolutionary years, V. Vernadsky wrote in his diary: all the villages are full of debris from looting. Adolescents are involved in robberies, and we have very serious consequences as a result. Syphilis and disease, debauchery and justification of robberies – the ground on which a new generation is built (Vernadskiy, 1994, p. 50). A year and a half later, a diary entry about educational ideals appears: looking closely at young people, we see in many of them the loss of an ideal without replacing it with a new one. Will business be an ideal? (Vernadskiy, 1994, p. 136). And as a conclusion, we come across the phrase: a strange irony of fate – what the Russian liberation movement has come to – a complete disregard for human conditions of existence. There is more and more hatred, indifference to life, and dull despair within the society and among the people. The wild instincts of self-preservation are rising. It reminds us of what cultural peoples and societies had to go through when they were captured by other conquerors, with a different ideology (Vernadskiy, 1994, p. 136).

In the process of finding ways to improve the life situation of people, V. Vernadsky came to the conclusion that the growth of scientific knowledge can serve this purpose. To do this, it is important to change the education system, constantly improve, increase its role and importance. It must embody not only certain information, the amount of which is constantly growing, but also the values, among which he attached special importance to the basic ones, i. e. spirituality, morality, humanism. In his opinion, they should become an alternative to technocracy and scientism (Nevmerzhytska, 2013, p. 163).

Moreover, the scientist did not consider the knowledge a factor in education. After all, the latter can be based on a religious basis, as well as on a humanitarian or civic basis, because one of its tasks is to understand the sense of life, and the purpose of life must go through education. This goal can be provided by religion (in a broad sense), by the work for the benefit of mankind, can be put forward by the civil society. And in conclusion, the thinker says: I think it should be an axiom: education of a person can be based only on the study of life, ideas, and the human history. Without denying the natural sciences, he, however, argued that education can not be organized solely on their basis (Vernadskiy, 2000, p. 12).

According to the philosopher, the humanization of education is one of the means of developing high morality, new universal ideals and values. V. Vernadsky's credo, as noted by M. Drobzhev (2009, p. 189), was that the living

conditions of the people could be dramatically improved by raising the cultural level of the masses, the level of democracy, the spiritual development of an individual, the totality of meaningful actions of the humankind.

The scientist valued every person, emphasizing the need to protect and respect every free human personality. He realized that the man is not only related to the nature, but also to the society. Therefore, he wrote that education should prepare people for life, create a personality in the society (*Pisma N.E. Vernadskoy*, 1991, p. 111).

Everyone's task should be to bring the greatest possible benefit to others. In particular, they must be involved in the creation of spiritual values that emanate from a human person, and not from any form of state or social life (*Vernadskiy*, 1994, p. 90). Their happiness lies, according to the philosopher, both in the intellectual and artistic outlook, and in the material welfare; the intellectual outlook is the science; the artistic outlook is the arts, poetry, music, painting, sculpture and even religion – the world of human imagination, the world of ideals and the most pleasant dreams; the material welfare is needed to a lesser extent, because it recedes into the background, but its necessity is quite great and it is impossible to do without it (*Vernadskiy*, 2000, p. 113).

Challenges of modern education in the context of Vladimir Vernadsky's ideas

V. Vernadsky believed that over time, humanity will learn to live in harmony with the nature, and such shameful phenomena as war, murder, barbarism will be excluded from the life of the society. He was convinced that the common sense, as well as the rational will, would still win. However, the present realities indicate that the humankind has not reached the level of development that the great thinker wrote and dreamed of. It is obvious that this state of affairs actualizes the development of the theory and practice of education, which, in particular, can and should be based on the views of V. Vernadsky. Because, according to the thinker, in the noosphere, the role of humankind is growing, which should be a decisive factor in the development and preservation of the biosphere, the scientist stood on the position of the need for a versatile development of each individual. This idea remains relevant for the modern pedagogy.

Within the noosphere, according to the scientist, the role of the human mind is growing, the development of which is impossible without a full-fledged intellectual education of the individual. In this context, it should be noted that V. Vernadsky was strict to himself. He outlined a program of his own life, which included the strengthening of character (he referred to such traits as openness, courage in expressing his own opinions, defending his own views, independence) and the development of intelligence (learning philosophy, mathematics, music, arts, etc.). The best opportunity to build one's own life is the opportunity to be independent. And for this one needs to have a powerful intellect, know-

ledge, talents. He also valued the sincerity and integrity of the human personality (Vernadskiy, 2000, pp. 217–218).

He emphasized the importance of work, on which the development of the noosphere largely depends. It is obvious that the formation of the work culture and diligence is ensured by the labor education. It is important that the scientist has repeatedly emphasized the importance of creativity in both physical and intellectual work. V. Vernadsky's reverent attitude to the nature is well known. Today, we are often faced with consumer attitudes towards natural resources, environmental pollution and so on. Therefore, the need for the ability to pursue economic activities competently in the environment actualizes the need of economic education of an individual. He stated the need for the development of human traits, and thus supported the ideals of moral education. As V. Vernadsky's contemporaries mentioned, he was also characterized by decency, modesty, sincerity, kindness, respect for others, unpretentiousness, etc.

He attached considerable importance to arts, believing that the Tretyakov Gallery could give much more than thousands of people for the development of a free personality. He loved classics and Ukrainian folk songs, he appreciated painting, sculpture, and literature. His daughter N. Vernadskaya-Toll mentioned that he loved the works of Mozart, Bach, Beethoven, but a new tone of Bartok's work was alien to him. He appreciated the Ukrainian poetry, in particular, the works of Taras Shevchenko. He loved the theater and Italian opera (Vernadskiy, 2000, pp. 156, 161). Thus, it can be argued that V. Vernadsky proved the relevance of aesthetic education by his own life.

His ideas about the interconnectedness and interdependence of all living things on the planet Earth, the impact of humans on nature, habitat and human ecology, and thus the global processes taking place on our planet, allow scientists to understand the relevance of the environmental, valeological and physical education. He himself, according to his daughter's recollections, was extremely reverent to all living things – animals, flowers, forests, feather grass, steppe, sky and stars. He did not perceive and very painfully experienced the senseless destruction of life and the living, and taught the children to love and treat all living things with care (Vernadskiy, 2000, pp. 158–159).

The idea of a versatile and harmonious development of personality is still extremely relevant today. And the views of a number of Ukrainian teachers are in agreement with the ideas of V. Vernadsky. In particular, the ideas expressed in the works of I. Anosov and M. Elkin (2013), I. Bekh (2006), E. Holoborodko (2015) and others are very interesting.

The value attitude to the man, which is pervasive in the works of V. Vernadsky, encourages the search for educational tools that would allow the pupils to feel like competent participants in the educational process, which would take into account their needs and interests. Obviously, the modern pedagogy is based

on a subject-subject approach to education. And in this it agrees with the views of the thinker. However, in our technocratic era, it is necessary to continue the search for educational tools for the development of human qualities in man, the crystallization of absolute eternal values as important life landmarks of an individual. This, in particular, is emphasized by I. Bekh (2006), M. Zhurba (2015), G. Soroka (2002) and others.

In the process of education the noospheric attitude of an individual should be formed. Therefore, people must be able to comprehend natural, humanitarian, philosophical, religious, environmental and moral problems, and solve them based on a holistic worldview. A person with a developed noospheric attitude should be aware of the relationship between the physical and the spiritual, the human and the animal, because this is an important condition for the development of responsibility for one's actions and deeds. The ability to self-reflection and self-realization, the awareness of one's own role and place in the world should become extremely important for people. In their actions and deeds, they must be guided by the principles of morality, spirituality, humanism and democracy. The active commitment of an individual to the universal culture should not be limited to consumption. They must be able and strive to create individual patterns. A person with a developed noospheric attitude is a multifaceted creative person, a humanist, a democrat who defends the ideals of brotherhood and freedom.

Conclusions

An analysis of V. Vernadsky's views shows their importance in the subject field of pedagogy, in particular the theory of education. Although the researcher was primarily interested in the problems of natural sciences, as well as the history of pedagogy, he expressed valuable ideas useful for improving the modern education. The ideal of humanity formulated by him – humane, democratic, tolerant, which does not accept violence, war and barbarism – even today remains unattainable. Thus, the ideas of educating the values of a person, their versatile development, the subjective attitude to each person, which leaves its mark on the educational tools remain relevant for the modern pedagogy and can be very productive not only for the theory but also the practice of education.

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