

*Електронний журнал «Ефективна економіка» включено до переліку наукових фахових видань України з питань економіки (Категорія «Б», Наказ Міністерства освіти і науки України № 975 від 11.07.2019). Спеціальності – 051, 071, 072, 073, 075, 076, 292.*  
*Ефективна економіка. 2023. № 12.*

**DOI: <http://doi.org/10.32702/2307-2105.2023.12.40>**

**УДК: 330**

*N. Bobro,*

*PhD in Economics, Director of the Digital Department, European University*

*ORCID ID: <https://orcid.org/0009-0003-5316-0809>*

## **DEFINITION OF NOOSPHERE**

*H. C. Бобро,*

*к. е. н., директор діджитал департаменту, Європейського університету*

## **ВИЗНАЧЕННЯ НООСФЕРИ**

*The article analyzes the genesis of the definition of the noosphere, examines the issues of its formation and development. It has been studied that the definition of the noosphere was addressed by ancient thinkers, where the main emphasis is on the interpretation of Nous, which defines the noosphere as the World Mind or the Divine Mind in the context of ancient philosophy. An important role in the formation of this concept was played by Anaxagoras, who pointed out that the cosmos did not arise independently, but was ordered by Nous - the mind that manages purposefully. Christian theology considers Nous as the "intelligent" nature of angels and the image of God in man. This interpretation reflects the transition from ancient philosophical concepts to Christian traditions, where Nus becomes an important aspect of the spiritual world. It should be noted that in both traditions: in ancient philosophy and Christian theology, Nus is considered not just the mind of man, but as a higher spiritual*

force with supernatural power. This idea of *Nous* serves as an explanation of the orderliness of the Cosmos, introducing a deep understanding of the role of mind in the creation and management of the universe. In modern scientific literature, the founders of the creation of the conceptual apparatus of the noosphere are considered to be E. Leroy, P.T. de Chardin and V. Vernadskyi. It was established that the further development of science and scientific thought not only contributed to the development of society, these processes transformed the economy and all material things into a new quality, which was called the noosphere, which today is the unity of the biological, geological and intellectual world. The connection between the neosphere and the economy is studied. It is determined that the noosphere reproduces the environment that is the prototype of the collective mind. This becomes the basis for the creation of a new society and economy, because the processes of knowledge and management are closely related and form an ontologically and historically unified process of knowledge development and its transformation into innovation. The main concepts of the study of this phenomenon and its modern understanding are described. It is indicated that the concepts of the noosphere can be classified according to two directions: "natural" and "technocratic". It was concluded that today it is necessary to systematically develop the scientific idea of the noosphere, which allows to form qualitatively new, deeper conceptual ideas about the prerequisites, processes and effects of modern transformations, demanded by science and practice.

У статті аналізується генезис визначення поняття ноосфери, розглядаються питання її становлення та розвитку. Досліджено, що визначення ноосфери зверталися ще древні мислителі, де основний акцент робиться на інтерпретації Нуса, яка визначає ноосферу як Світовий розум чи Божественний розум у контексті античної філософії. Важливу роль у формуванні цього концепту відіграв Анаксагор, який вказав на те, що космос не виник самотійно, а був упорядкований Нусом – розумом, який управляє цілеспрямовано. християнська теологія розглядає Нус як «розумну» природу ангелів та образ Божий у людині. Таке тлумачення відображає перехід від

античних філософських концепцій до християнських традицій, де Нус стає важливим аспектом духовного світу. Необхідно зауважити, що в обох традиціях: в античній філософії та християнській теології, Нус розглядається як не просто розум людини, а як вища духовна сила з надприродною могутністю. Ця ідея Нуса слугує поясненням впорядкованості Космосу, вносячи глибокий розуміння ролі розуму в створенні і управлінні всесвітом. У сучасній науковій літературі фундаторами створення понятійного апарату ноосфери вважають Е. Леруа, П.Т. де Шардена та В. Вернадського. Встановлено, що подальший розвиток науки і наукової думки не просто сприяв розвитку суспільства, ці процеси трансформували економіку і все матеріальне у нову якість, яку назвали ноосфера, що на сьогодні є єдністю біологічного, геологічного та інтелектуального світу. Досліджується зв'язок між ноосферою і економікою. Визначено, що ноосфера відтворює середовище, яке є прообразом колективного розуму. Це стає основою для створення нового суспільства та економіки, адже процеси пізнання і господарювання є тісно пов'язаними і утворюють онтологічно та історично єдиний процес розвитку знань та їх перетворення у інновації. Описуються основні концепції вивчення даного явища та сучасне його розуміння. Вказано, що концепції ноосфери можна класифікувати за двома напрямками: «природним» та «технократичним». Зроблено висновок, що на сьогодні необхідною стає системна розробка наукової ідеї ноосфери, що дозволяє сформувати якісно нові, глибші концептуальні уявлення про передумови, процеси та ефекти сучасних перетворень, затребувані наукою та практикою.

**Keywords:** concept of noosphere, society, human, science, ecology, economy.

**Ключові слова:** концепція ноосфери, суспільство, людина, наука, екологія, економіка.

**Introduction. Problem statement.** The study of the concept of the noosphere is highly relevant in the modern world, as it is a key component of the concept of sustainable development and ecological security. The noosphere is defined as the totality of all intellectual resources and technologies that are important for ensuring the viability and development of human civilization. The current situation in the world is extremely unstable in the economic and socio-political spheres, which highlights the need to study the conditions for the development of humanity, where the theory of the noosphere is the most philosophically founded and scientifically substantiated concept of "sustainable development".

Furthermore, the study of the concept of the noosphere is important for the development of modern science because it allows us to understand the relationship between human activity and the biosphere, and can also help develop new methods and technologies that do not harm the environment. This, in turn, will contribute to the stabilization of the economy through cultural and social connections reflected in the consumption of goods and services, as well as in the production and distribution of resources.

**Analysis of recent relevant research and publications.** Classic works dedicated to the study of the biosphere are available from many researchers: E. Leroy, P. Teilhard de Chardin, V. Vernadsky, R. Balandin, Y. Girusov, V. Girenok, V. Kaznacheeva, M. Kamshilov, I. Kuznetsova, S. Mikulinsky, I. Mochalov, S. Stoika, Y. Trusov, A. Yanshin, F. Yanshin, M. Yaroshevsky, and others. The problems of the formation and development of the knowledge economy and its individual components in the conditions of globalization are highlighted in the works of such scientists as E. Popov, M. Vlasov when conducting institutional analysis of the development of economic knowledge. A comprehensive analysis of the literature and research on the problem allows us to conclude on the certain fragmentary nature and inadequacy of the conducted research and the necessity for further complex and in-depth study of an important issue for humanity.

**Aim and tasks.** The study of the noosphere is important for understanding various aspects of the functioning of human society and the interaction of humans with

the environment. Research on the noosphere is also important for the preservation and balanced development of natural resources, support of biodiversity, and the creation of sustainable development for human society. Since the noosphere affects the economy through its resources and possibilities, it is useful to consider this phenomenon as integrated and interrelated, with impacts on each other, to maintain a balance between them for sustainable societal development.

The aim of this work is to provide a detailed explanation of the concept of the "noosphere", to reveal its modern nature, structure, and the development of human culture, as well as its impact on economic development, the creation of new technologies, and innovations.

***The theoretical backgrounds.*** Historically, the problem of defining the noosphere has been addressed by ancient thinkers. The concept of the noosphere is associated with ancient philosophy, in which *Nous* is interpreted as the World Mind or the Divine Mind, as the beginning of Consciousness and Self-awareness in the cosmos and in humans. Anaxagoras (5<sup>th</sup> century BC) was the first to speak about *Nous*, teaching that the cosmos, as an intelligently functioning whole, did not arise from chaos by itself, but was ordered by the mighty *Nous*. Other ancient philosophers regarded *Nous* as a collection of divine minds that exist above the world for eternity.

In Christian theology, *Nous* is the "rational" nature of angels, the image of God in humans.

Both in ancient philosophy and in Christian theology, *Nous* is not the reason of an ordinary person, but a spiritual force that has supernatural power. The idea of *Nous* explains the orderliness of the cosmos, but human society has never been identified with the noosphere because it consciously did not correspond to its conditions.

In contemporary scientific literature, the author of the term "noosphere" is considered to be E. Le Roy (1870-1954), who in the late 1920s called the noosphere the "spiritual envelope" of the Earth, which strives to "separate itself from the biosphere, like a butterfly from a cocoon."

P. Teilhard de Chardin (1881-1955), a Christian philosopher, anthropologist, and paleontologist, and V. Vernadsky (1863-1945), a Ukrainian scientist and founder of

the theory of biogeochemical processes, are recognized as the founders of the study of the noosphere. Both scientists were guided by the principle of evolution, but they interpreted it differently: one in a religious context, which assumes the "reality of the existence at the summit of the world above our heads of someone who loves" (P. Teilhard de Chardin), and the other in a natural-scientific context, which presents the noosphere as one of the stages of the evolution of Nature (V. Vernadsky).

The further development of science and scientific thought has not only contributed to the development of society, but these processes have transformed the economy and all material things into a new quality - the noosphere, which today represents a unity of the biological, geological, and intellectual worlds.

**Research results.** The noosphere is the highest stage of development of the biosphere. It is the sphere of interaction between society and nature, within which intelligent human activity becomes a determining factor in development, including economic development. This sphere is also referred to as the "anthroposphere", "knowledge economy", "thinking envelope" or "sphere of reason".

The emergence of the noosphere is linked to the development of society, which has a profound influence on the processes occurring in nature. The founders of the doctrine of the noosphere are V. Vernadsky and P.T. de Chardin. Vernadsky, adhering mainly to materialistic views on the nature of the noosphere, believed that the noosphere is the biosphere transformed by scientific thought and human labor [1, p.40]; scientific thought is a geological force [1, p.20].

Teilhard de Chardin developed the theological concept of the noosphere. He believed that the noosphere is the Earth's unique thinking layer, composed of countless particles of thought that functionally form "... one great particle of thought on a cosmic scale. Countless individual thoughts are grouped and intensified in the act of one unified thinking" [2, p. 149].

Regarding the specific mechanisms that ensure the development of the noosphere, Teilhard de Chardin points out: "I am thinking, of course, in the first place of the extraordinary network of radio and television communications which, possibly foreseeing a direct tuning of the brain by means of the mysterious power of telepathy

which already links us all in what is known as the 'etherized' universal consciousness. But I am also thinking of the insidious growth of these amazing electronic computers..." [2, p. 150].

In the 1970s and 1980s, the works of both thinkers became widely available, and a whole series of new concepts of the noosphere emerged, which interpreted its nature in different ways. As a result of their development, these concepts of the noosphere can be classified as follows:

I. The "natural" direction. The noosphere is a natural phenomenon that is not a consequence of information and communication or digital technologies:

- ecological approach: the noosphere is the (literal or metaphorical) intelligence of Gaia;
- natural-information approach: the noosphere is the informational sphere of human thought, which has a material carrier in nature;
- theological-teleological approach: the noosphere is the predetermined goal of the development of humanity, the merging of rational humanity with God.

II. The "Technocratic" direction. The noosphere is a part of the technosphere or its consequence:

- reductionist approach: the noosphere is a global network;
- technological-informational approach: the noosphere is a cyberspace or an informational field of mass media and the Internet;
- "technological singularity": the "noosphere" is a human-machine "superintelligence".

Let's briefly outline the ideas of the ecological and two natural-informational concepts:

1. Ecological approach: the theory of J. Lovelock. J. Lovelock developed the ideas of the Earth as a living planet in the theory/hypothesis of Gaia, which can be called "geophysiology". J. Lovelock writes: "The idea is that the Earth is alive and may be as old as humanity. The ancient Greeks gave her the powerful name Gaia and saw her as a goddess" [3, p. 117]. J. Lovelock believed that he revived the viewpoint according to which "...we are on a superorganism and not just on a lump of rock..." [3,

p. 118]. The planet Earth (Gaia) is a superorganism that self-regulates. If the Earth's atmosphere can remain stable, and this is not just a coincidence, it means that "...the planet is alive - at least to the extent that she has shared this wonderful property with other living organisms - homeostasis, the ability to control her chemical composition and keep cool under changing circumstances" [3, p. 118]. In the context of Lovelock's views, the noosphere can be understood as the mind of Gaia, which consists of the totality of the consciousness of humans and other living beings within it.

2. Natural-informational approach: E. Laszlo on the noosphere as the Akashic Field or simply the A-Field. According to E. Laszlo, the noosphere discussed by Teilhard de Chardin [4, p. 105] is the A-Field, which he formulated based on the Sanskrit word akasha (ākāśa), which in Indian philosophy means the environment that contains everything that exists, a very subtle and all-pervading matter, the exemplary analogue of the ancient Greek ether. Akasha is immutable, eternal, indivisible, infinite, homogeneous; all things in the Universe are permeated by it [5, p. 373]. According to E. Laszlo, objects in the real world are related not only by flows of energy, but also by flows of information. The A-Field informs everything about everything, which explains the phenomena of quantum nonlocality and quantum entanglement observed at the quantum level. The A-Field cannot be observed directly, but it produces effects that can be observed. Our brain, like any other objects in space and time, creates vortices that carry information, in other words, our brain "creates waves"; "the waves propagate through the vacuum and interfere with waves created by the bodies and brains of other people, generating complex holograms" [4, p. 150].

The A-field is universal: it connects not only the brain and mind of people in the sociosphere, but also cells in the body, organisms in the Earth's biosphere, as well as quanta and galaxies in the physical universe. The noosphere is a super-hologram in which the collective holograms of a tribe, community or culture and the super-hologram of all people connect and connect. A collective hologram consists of a collection of individual holograms of people who leave their holographic traces in the A-field generation after generation. These traces do not disappear, but are forever stored in the A-field.

It is worth emphasizing that the noosphere reproduces the environment that is the prototype of the collective mind. This becomes the basis for the creation of a new society and economy, because the processes of knowledge and management are closely related and form an ontologically and historically unified process of knowledge development and its transformation into innovation.

***Conclusions and prospects for further research.*** The conducted analysis showed that the concept of "noosphere" is being transformed to this day. Summarizing the research of scientists, the noosphere can be considered as a system endowed with a certain energy that generates other types of energy and is involved in a complex process of energy transformation occurring in space. Through the prism of the idea of the noosphere, the authors consider the key problem nodes and contradictions of modern transformations, evaluate the effects arising at different levels of these processes, and offer practical means for solving the problems that arise. The development of technologies and innovations is also related to the development of the science of the noosphere. Further research into the noosphere can contribute to the introduction of new technologies and innovations in production, which can have a positive impact on the country's economy.

***Prospects for further research.*** The definitions of the concept "noosphere" presented in this article have shown that today it is currently necessary to systematically develop the scientific idea of the noosphere, which allows for the formation of qualitatively new, deeper conceptual understandings about the prerequisites, processes and effects of modern transformations, demanded by science and practice.

### **Література**

1. Вернадський В.І. Наукова думка як планетне явище. Наука, 1991. 271 с.
2. De Chardin P.T. Formation of the Noosphere; A Plausible Biological Interpretation of Human. Future of Man. New York, 1959, pp. 149-178.
3. Lovelock J.E. Gaia as Seen through Atmosphere. The Earth as a Living Organism. The Biosphere and Noosphere Reader : Routledge, 1999, pp. 115-120.

- 4 Laszlo E. Science and the Akashic Field: An Integral Theory of Everything. Vermont : Inner Traditions, 2004, 205 p.
5. Jacobs M., Mazzucato M. (ed.) Rethinking capitalism: Economics and policy for sustainable and inclusive growth. Chichester, West Sussex : Wiley-Blackwell, 2016, 224 p.
6. Долгий А., Старікова Г. Виклик цивілізації: ноосфера та сталий розвиток. *IV International Scientific and Practical Conference «SCIENTIFIC PRACTICE: MODERN AND CLASSICAL RESEARCH METHODS»*, Collection of scientific papers "ΛΟΓΟΣ", Boston, may 26, 2023, pp. 246-248.
7. Кузнєцова А.Ф. Ноосфера. Ноосферна (еволюційна) освіта: завдання і принципи їх реалізації. *Духовність особистості: методологія, теорія і практика*, 2012, № 5 (52), С. 139.
8. Корсак К.В., Таланчук П.М., Давиденко Г.В. та ін. Нові наукові відкриття і поліпшення перспектив формування в Україні гуманітарної ноосфери XXI століття. *Modern Scientific Method*, 2022, № (1). URL: <https://ojs.scipub.de/index.php/MSM/article/view/180> (дата звернення 10.09.2023).
9. Ткаченко І., Краснобокий Ю. Ільніцька К. Вчення про ноосферу як основа вивчення природничих наук. *Věda a perspektivy*, 2022, № 6 (13). С.50-57.
10. Marinoff L. Philosophical Practice During the Pandemic: Dancing in the Noosphere. *Revista Internacional de Filosofía Aplicada HASER*, 2023, № 14, С.129-157.
11. Olechowski A., Wiśnicki J. Competition between China and the USA in the noosphere. *Reality of Politics*, 2023, № 23, p. 99-115.

### References

1. Vernadsky, V.I. (1991), *Naukova dumka iak planetarne iavysche* [Scientific thought as a planetary phenomenon], Science.
2. De Chardin, P.T. (1964), *Formation of the Noosphere: A Plausible Biological Interpretation of Human. Future of Man*, Image Books Doubleday, New York, USA.

3. Lovelock, J.E. (1999), Gaia as Seen through Atmosphere. The Earth as a Living Organism. *The Biosphere and Noosphere Reader*. Routledge, London, UK.
4. Laszlo, E. (2004), Science and the Akashic Field: An Integral Theory of Everything. Inner Traditions, Vermont, USA.
5. Jacobs, M., and Mazzucato, M. (2016), Rethinking capitalism: Economics and policy for sustainable and inclusive growth. Wiley-Blackwell, Chichester, West Sussex, UK.
6. Dolgiy, A., and Starikova, G. (2023), "Challenge of civilization: noosphere and sustainable development", *IV International Scientific and Practical Conference «SCIENTIFIC PRACTICE: MODERN AND CLASSICAL RESEARCH METHODS»*, Collection of scientific papers "ΛΟΓΟΣ", Boston, USA, may 26, 2023, pp. 246-248.
7. Kuznetsova, A.F. (2012), "Noosphere. Noospheric (evolutionary) education: tasks and principles of their implementation", *Personal spirituality: methodology, theory and practice*, vol. 5(52), available at: [http://nbuv.gov.ua/UJRN/domtp\\_2012\\_5\\_17](http://nbuv.gov.ua/UJRN/domtp_2012_5_17) (Accessed 10 Sept. 2023).
8. Korsak, K.V., Talanchuk, P.M., Davydenko, G.V., and others. (2022), "New scientific discoveries and improved prospects for the formation of a humanitarian noosphere in Ukraine in the 21st century", *Modern Scientific Method*, vol. (1), available at: <https://ojs.scipub.de/index.php/MSM/article/view/180> (Accessed 10 Sept. 2023).
9. Tkachenko, I., Krasnobokyi, Yu., and Ilnitska, K. (2022), "The doctrine of the noosphere as a basis for the study of natural sciences", *Science in perspective*, vol. 6 (13), pp. 50-57.
10. Marinoff, L. (2023), "Philosophical Practice During the Pandemic: Dancing in the Noosphere", *Revista Internacional de Filosofía Aplicada HASER*, vol. 14, pp. 129-157.
11. Olechowski, A., and Wiśnicki, J. (2023), "Competition between China and the USA in the noosphere", *Reality of Politics*, vol. 23, pp. 99-115.

*Стаття надійшла до редакції 12.12.2023 р.*