

V. I. Vernadsky and the Problems of Social Autotrophy

(150<sup>th</sup> anniversary of the great Russian scientist and philosopher)

A. D. Moskovchenko

Tomsk State University of Control Systems and Radioelectronics

E-mail: [maled@sibmail.com](mailto:maled@sibmail.com)

This paper discusses the metaphysical meaning of autotrophic mankind. The unlimited opportunities of implementation of social autotrophy are demonstrated.

**Key words:**

*Autotrophic mankind, social autotrophy, autotrophic technologies.*

The global scientific community is celebrating the anniversary of a great Russian scientist, biochemist, philosopher, one of the founders of the Russian space movement and the most outstanding naturalist of the 20<sup>th</sup> century.

At the same time, many ideas of V. I. Vernadsky remain unrecognized. This is especially true to the idea of social autotrophy, which is confusing and alarming. On the one hand – the idea is very attractive for discussion of various human activities. On the other hand – it is a source of the entirely new, paradoxical knowledge and perception of the universe.

The concept of an autotrophic mankind is difficult to grasp because in its context, physics (biogeochemistry) and metaphysics (philosophy) closely interlace with one another, and sometimes it is almost impossible to distinguish between them. That is the peculiarity of landmark discoveries in natural and social sciences. The strict rationality of arguments is accompanied by having to go beyond rationality, to the irrational. In his unfinished work “Scientific Thought as a Planetary Phenomenon”, which Vernadsky had been writing for two years (1937 — 1938), the author makes a conclusion which might seem odd in the context of scientific rationalism: “... the greatest discoveries are not brought about by either the scientific or logical thought” [1. P. 152]. That is only one of the many examples of similarly peculiar discoveries of methodology field. This is also true for development of the Vernadsky's concept of social autotrophy, as described in detail in his diaries [2. P. 112—119].

The early 1920 year is marked by civil war. V. I. Vernadsky falls ill with typhoid fever. He becomes delirious and balances between life and death for over a month. From time to time he has moments of clarity, and he calls for his wife and she writes down his reflections for him. The illness brings forth amazing cosmic images in his subconscious. The scientist saw his future life up till the moment of his death, he has found the answers to all of the scientific and metaphysical questions he had been pondering since his youth. First of all he saw the theory of biosphere and noosphere from the perspective of autotrophy. The biosphere (the living substance of planet Earth) has for the first time appeared to him from the bio-autotrophic cosmological point of view as a single planetary and cosmic phenomenon, as a transformer and intensifier of solar and cosmic energy. From this perspective, the biosphere essentially is preserved solar and cosmic energy. Vernadsky's imagination embraces even wider scientific possibilities, where the biosphere and sociosphere begin to develop as a single living intelligent cosmic formation, and autotrophy, the amazing property of living systems, serves as its development mechanism. In the specialized-scientific context, autotrophy is defined as a mechanism of resonant transformation of low-organized energy of inert material into the highly organized energy of the living matter under the influence of solar and cosmic radiation. V. I. Vernadsky rises to the general scientific level of understanding of autotrophy, whereupon autotrophy is seen as a mechanism for transformation not only of inert matter into living matter, but also of living matter into social matter, which results in development of a new autotrophic human being.

V. I. Vernadsky has significantly expanded the scope and content of autotrophic concepts: it is the property of both natural noospheric systems and social systems. In this case, the biosphere and sociosphere (material and production, and spiritual and intellectual human activities), serve as a preservative of solar and cosmic radiations. It appears that the biosphere and sociosphere represent natural historical formation. Therefore, the scientist's idea about the possibility to transform human heterotrophic (parasitic) society into autotrophic (creative) society becomes clear.

As V. I. Vernadsky said, while in this oddly delirious creative condition (he was 57 years old), the Demon of Socrates appeared in him, causing his worldview and methodology to turn around, and triggering his transition to an entirely new psychophysical and spiritual intellectual state. V. I. Vernadsky has discovered that he possessed qualities not only of a scientist, but of an outstanding philosopher as well. His projections have “showed” him the strategy of future scientific activity: 1) establishment of the International Institute for Living Matter Research, 2) the development of the theory of living matter through the prism of autotrophic concepts about nature and society. Moreover, he had to prepare an extensive report and deliver a lecture (accessible to the international community) about the future autotrophic mankind.

We can observe similar phenomena of creative breakthrough to the metaphysics-transcendental world in the views of the outstanding psychoanalyst of the 20th century – C. Jung. In his autobiography (in the chapter Visions) he described an odd mental and spiritual condition that served as a turning point of his future creative activity. In early 1944 he suffered a heart attack. He felt he was close to death. He had a cosmic (according to him) vision where he had observed our planet as an onlooker, and has seen himself as a summary of all the things he had ever said and done. Something changes in Jung after recovery and so his thoughts changed as well, developing in an entirely new way. The most important of his reflections is the planetary-cosmic theory of archetypes. Just like V. I. Vernadsky, Jung had become certain about the universal unity of all matter in existence, where the natural and metaphysical merge into one. This unity is manifested both by **autotrophy** (resonant cosmic synthesis of the natural biospheric and sociospheric) and **archetype** (the unconscious mental planetary-cosmic phenomenon which represents the whole mankind and its destiny). According to Jung, archetype is a psychosphere serving as a transformer and intensifier of psycho-cosmic unconscious process to any of the forms of human culture. In the interpretation of V. I. Vernadsky, autotrophy serves as a transformer and intensifier of solar and cosmic radiation, which results in the inert matter transforming into the living matter, the living matter transforms into the social, and the social evolves into the planetary and cosmic [3. P. 148—151].

Cosmic motifs of V. I. Vernadsky and C. Jung have influenced the search for new guidelines of logics and methodology. V. I. Vernadsky was going to write a major work “On the necessity of critical creation of the logic of natural science”. He had completed only individual notes, where we can see his grand interest towards the oriental philosophy, especially the Indian philosophy [1. P. 196—204]. In his later years C. Jung extensively cooperated with theoretical physicists, especially with V. Pauli, in his research of “logic of quantum mechanics” [4. P. 438—449].

The greatest scientists of the 20th century V. I. Vernadsky and K. Jung were forced (by whom?) to go beyond scientific rationality in extreme situations and move to the metaphysical, obtaining the unique information about other worlds directly influencing the people of Earth, especially scientists, the most thoughtful and inquisitive of them. During the process their organism (as a result of extreme shock) experienced transmutation of all nerve centers that allowed coordinating the energy (vibration rhythms) of the scientists with the Cosmic energy. This vibration synchronization helped them to enter to the cosmic visions they were talking about.

In 1922 V. I. Vernadsky left for France to read a lecture of mineralogy and geochemistry. One of the lectures he read in the Paris University was called “Autotrophic Mankind”, which was published in French a year later, and in 1980 – in Russian among the works of the biochemistry laboratory [4]. It discusses the idea that it might be possible for the mankind to transform from its heterotrophic state into the autotrophic. For the first time the phenomenon of autotrophy had been analyzed from different perspectives: physical (isotopy of atoms) and metaphysical (formation of autotrophic cosmic human being). It attempts to combine the biospheric and sociospheric according to autotrophic positions. The task was very difficult. One example of this is the idea of complementarity of quantum concepts as expressed by N. Bohr, but it does not extend beyond the physical and natural scientific knowledge in general. The problem the Russian scientist had put forward was much grander: it is about formation of a new human being - an autotrophic social cosmic being. In time, the human “will develop from a socially heterotrophic being into a socially **autotrophic** being. Consequences of such phenomenon in mechanism of biosphere would be of paramount importance... for the first time in the geological history of the Earth, an autotrophic animal would develop – an autotrophic “vertebrate” [5. P. 482]. In his report “The concept of noosphere” made to commemorate the 125th anniversary of the great scientist, Academician S. R. Mickulinsky has expressed a remarkable thought that “if Vernadsky was not a geologist he would hardly come to discover these problems. However, he would hardly even create it if he didn’t go beyond geology” [1. P. 487]. The organic combination of the qualities of a polymath

scientist and a philosopher made it possible for V. I. Vernadsky to unite the bio-geo-chemistry of autotrophy and the metaphysics of the future human existence (a great miracle of formation of a new cosmic human).

In his Paris lecture on “Autotrophic mankind”, V. I. Vernadsky had formulated two goals: 1) to change the way of nutrition (autotrophic nutrition); 2) to change the sources of energy (autotrophic energy). Especially interesting is the last chapter (XIX), which discusses in detail the problems of production of artificial nutrition for the future human being. Would the human could be able to get rid of plant and animal food with time? “It is necessary to synthesize the isotopy mixtures (chemical elements) which would correspond to natural condition of chemical elements in living systems... To synthesize nutrition it would be necessary not just to create those chemical elements and its mixtures such as bread, meat, etc., but also change isotopic mixtures in some of chemical elements comprised in the composition of chemical elements. It can be done even now” [5. P. 486].

Therefore the actual problem was singled out. It is becoming more and more relevant: is it possible to create artificial nutrition (first in laboratory and then in industrial conditions) with the constitution of atoms close to natural aliments? The solution of the problem cardinally changes the physical – chemical and psycho – mental human qualification. In the matter of fact, the question is about transmission of physical and mental sphere of human activity into autotrophy, whereupon human being becomes an organism independent from living and natural systems (plant and animal systems). Modern science and technology (biogeochemistry and genetic engineering) ascertain that is possible due to modern technologies of production and food preparation, in pharmaceuticals, process of production of polymeric materials when artificial proteins, fats, glucose are obtained from oil. It’s especially important for astronauts.

But in this case our purpose and reason for existence changes completely. Transition to social autotrophy changes the traditional world outlook and methodological views. Questions about the meaning of life come to the forefront. Is the purpose of life to eat to stay alive, to have clothes to cover the body? After all, it is the main activity for the majority of population: work, make money to satisfy its natural needs. That is total ideology of the consumer society which international globalists impose upon us [6].

V. I. Vernadsky’s idea about autotrophic mankind proclaims that it is necessary to change our life orientation: the main thing is creativity for the benefit of all human beings living on the Earth, resulting in passage to space. And the problems of nutrition will fade into insignificance with time. The number of breatharians is growing. They have changed the way of life and nutrition into autotrophic aliments. Little by little they stopped consuming meat and then even plant food, and made sure to pay more attention to the creative spiritual and moral life. This, however, is a solution for the extreme people, while the main problem is that the nutrition for million people must be cleaned of artificial isotopy mixtures incompatible with natural isotopy mixtures [7]. By solving this problem, we will be able to transit to the state of breatharians.

V. I. Vernadsky’s autotrophic ideas brought him to a completely new understanding of philosophy and culture. He emphasized that unfortunately “modern philosophy is living in the past... that it largely ignores the fundamentally changing field of biological and geological sciences. It didn’t analyze new revealed phenomena” [1. P. 259 – 257].

Traditional philosophy, mainly west – European, does fall behind the development of science and technology. V. I. Vernadsky noticed: “The time of philosophy is in the future. It’ll come when philosophy revises huge volume of growing scientific material of science – established facts and scientific empirical generalizations” [1. P. 275]. Close cooperation of scientists, especially of biogeochemists and metaphysicians (sophists), is the necessary condition. Free philosophical search for the truth should be based on foundation of strict scientific facts. This is the key to creation of new philosophy developed on the bio-autotrophic and cosmological basis [8 – 10]. This “irregular” philosophy is getting more and more attractive for modern young researchers [11]. The peculiarity of the bio-autotrophic and cosmological philosophy that was formed in the sphere of Russian space thought consists of planetary cosmic outlook on all spheres of human life through the prism of socio-autotrophic cosmic human being, which would be formed for many decades. Those instinct (heterotrophic) qualities (with the help of genetic and cultural engineering), that force human being to murder and eat everything that is alive. This is the way to execute ancient and Christian dispensations: do not kill, do not steal, etc. The socially harmonious community that the scientists and philosophers have been dreaming about throughout the history of humanity will come to be.

The meaning of ideas of autotrophy is great and overarching. First of all to solve such global problems of mankind as: *ecology* (autotrophic environment and autotrophic technologies), *food* (autotrophic production of food and cooking), *energy* (alternative energetics: solar, nuclear-hydrogen, cold fusion, etc), *geopolitics* (organic connection of the western and eastern ideologies), *economy* (bio autotrophic innovative economy), *culture and development* (healthy autotrophic way of life), *education* (autotrophic educational technologies), *state and politics* (social autotrophic communities), *science and technology* (autotrophic of genetic and social engineering) etc. [12].

So why is the idea of social autotrophy expressed by V. I. Vernadsky remain unrecognized by the scientific community in Russia and worldwide? There is a number of very serious reasons:

- 1) global stranglehold of transnational companies and transnational banks following ideology of “the Golden Billion”, which is destructive for all mankind that has its own aims connected with people enslaving through the system of global ruling and control [13]. The main idea of this ideology is creation of consumer society. All innovative technologies of autotrophic aspect are blocked. The necessary measure is transition from consumer’s civilization of the West to autotrophic, when independent, optimal and harmonious qualities of human communities become the principal component of our life. It’s time for establishment of international institution of autotrophic problems and creation of noospheric autotrophic processes in public production [14, 15];
- 2) the idea of autotrophy requires a panoramic (holographic and transdisciplinary) mentality with passage to the infinite Space. For modern people it consists of too many factors, presses too forward to the future. The minority is able to infiltrate to this depth of knowledge. It’s already metaphysical field (philosophic and mystic-esoteric). That is the limit of our knowledge and revelations. From these points of view, it’s necessary to rebuild up-bringing and education, especially high education, integrating it with bio autotrophic – cosmic origin;
- 3) perception of autotrophic social ideas required a special sophiologic unity of human life activity connected with heart ruefulness for everything that happens on the Earth and in Space. However, sophiologic unity is possible under the condition of socialistic communal manufacture. It was impersonate in the “Philosophy” of common affair by N. Fedorov, and although in works of F. M. Dostoevsky, L. N. Tolstoy, V. Solovyev, N. Berdyayev, P. Florensky;
- 4) the catastrophic gap between the philosophic and cultural communities and the demands and challenges of time. The governmental educational and cultural strategy is an essential component, with the consideration of Vernadsky’s ideas about autotrophy, where natural-scientific and human-scientific aspects of educational process are rolled into one. Disciplines of bio-autotrophic cosmological problems must be set on the forefront.

The upcoming natural and social changes in the world will bring the mankind to a completely new energy and informational phase of cosmic development. The forthcoming threats to the mankind can be more serious than we can imagine. At the same time, the human essence resists the necessary changes. At the beginning of the past century, V. I. Vernadsky expressed the outstanding saving idea of autotrophic mankind. All we have to do is to grasp it and bring it to life.

## References

1. Vernadsky V.I. Philosophy of naturalist’s thought. – M.: Science 1988. – 520 p.
2. Vernadsky V.I. From the diary // Prometheus. Historical biographical almanac “Life of extraordinary people”: redactor G. P. Aksenov. – M.: Young guards, 1988. – 352 p.
3. Moskovchenko A.D. Esoteric enlightenment in works of V.I. Vernadsky and K. Jung (comparative analysis) // Methodology of study : materials of Russian national seminar. – Tomsk : publishing office of Tomsk State University, 1997. – Part 2. – 320 p.
4. Vernadsky V.I. Works of biochemical laboratory. – M.: Science, 1980. – 320 p.
5. Vernadsky V.I. Autotrophic mankind // Works. Memories of contemporary. Assertions of descendants: redactor G. P. Aksenov. – M.: The Contemporary, 1993. – 462 – 486 p.
6. Ursul V.I. Neonazism in global processes of modern age // Newsletter of military university. – 2007. - №3. – 20 – 29 p.
7. Pechurkin N.S. Energy and life. – Novosibirsk : Science. Sib. department, - 1988. – 190 p.

8. Moskovchenko A.D. Russian cosmism, autotrophy, human being of the future. – Tomsk : Ensign of peace, 1986. – 72 p.
9. Moskovchenko A.D. The problem of integration of fundamental and technological knowledge. – Tomsk : Tomsk State University of Control Systems and Radioelectronics, 2001. – 192 p.
10. Moskovchenko A.D. Autotrophic strategy of survival // Newsletter Russian Philosophic Community. – 2011. - №1. 112 – 116 p.
11. Kharlamov S.Yu. Evolution of the conception of autotrophic mankind of V.I. Vernadsky // Scientific newsletter of Belgorod State University. Edition: Philosophy. Sociology. Law. – 2008. – T.12, № 5. – 12 – 21 p.
12. Moskovchenko A.D. Autotrophic mankind – global phenomenon of modern of modern culture // Proceedings of Tomsk Polytechnic University. – 2012. – T. 320, № 6. – 81 – 84 p.
13. Koleman D. Committee 300 (The secret of world government). – M.: Vityaz, 2003. – 320 p.
14. Moskovchenko A.D. Philosophy of autotrophic civilization. Problems of integration of natural, human and technical sciences. – Tomsk : Tomsk State University of Control Systems and Radioelectronics, 2010. – 263 p.
15. Moskovchenko A.D Russian cosmism. Autotrophic mankind of the future. – Tomsk : Tomsk State University of Control Systems and Radioelectronics, 2012. – 146 p.

**About the author:**

**Aleksandr Dmitrievich Moskovchenko**, year of birth 1944, Doctor of Philosophy, professor of the Department of Philosophy and Sociology of the Faculty of Human Sciences, Tomsk State University of Control Systems and Radioelectronics.

**Phone:** +7 (3822) 70-15-13

**E-mail:** [maled@sibmail.com](mailto:maled@sibmail.com)

**Academic interests:** philosophy of science, enigneering, technology, engineering education, systemic methodology of Russian cosmism.

Moskovchenko A. D.

**V. I. VERNADSKY AND PROBLEMS OF SOCIAL AUTOTROPHY**

This article describes the metaphysical meaning of the idea of auxotroph humanity. It shows the unlimited opportunities of practical implementation of social autotrophy.