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# The Noospheric Concept of Evolution, Globalization and Big History

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*The followers of Vladimir I. Vernadsky's ideas claim that the relevance of the biospheric concept is increasing, as well as the biosphere-noosphere transition, thereby providing public safety and reaching sustainable development. Philosophical, ontological and futurological nationwide recognition of Vernadsky's legacy is proved by including the 150<sup>th</sup> anniversary of Vladimir Vernadsky in the UNESCO calendar of anniversaries under the title 'Noospheric Thinking – the 21<sup>st</sup> Century Thinking'. The author considers the issues of evolution, globalization and Big History from the perspective of noospheric paradigm. The issues deal with future development of the civilization within the Earth's biosphere. In order to take into account ecological threats for citizens in different regions of the planet, the criterion of noospheric approach to globalization challenges was chosen.*

**Keywords:** *biosphere science, biosphere-noosphere transition, the unity of the noospheric nature of Man, noospheric status of an individual, noospheric functions of citizenship in the biosphere, noospheric imperative of humankind viability, noospheric anthropology and psychology, noospheric ethics, pedagogy and futurology.*

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The noosphere is the last of many stages in the evolution of the biosphere in geological history, the condition of our times. The noosphere for me is neither a mystery nor faith creation, but empirical generalization.

I realized yesterday, that human thought is a part of the noosphere, *i.e.* in terms of real life the freedom of thought should equal the economic freedoms of socialism.

I am looking ahead to the future that represents transition to the noosphere.

(V. I. Vernadsky, 1863–1945)

Noospheric Thinking – the 21<sup>st</sup> Century Thinking  
(the motto of the 150<sup>th</sup> anniversary of Vladimir Vernadsky)

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### **The Origins of the Noospheric Realism: The Missed Lessons of Academician Vladimir Vernadsky**

An award-winning journal *American Scientist* published an article of Academician V. I. Vernadsky 'The Biosphere and the Noosphere' in early 1945 which was translated by the author's son, Dr. George Vernadsky (Yale University). In the preface the editor claims that the publication presents the general intellectual outlook of one of the most distinguished scholars of the present century. The frontispiece depicted the photo of the scientist and the quote from his letter to Professor Alexander Petrunkevich, 'I look forward with great optimism. I think that we undergo not only a historical, but a planetary change as well. We live in a transition to the noosphere. Cordial greetings, V. Vernadsky'<sup>1</sup> (Vernadsky 1989: 139–150; italics mine. – V. V.).

The article draws relevant conclusions, 'The noosphere is the last of many stages in the evolution of the biosphere in geological history... Now we live in the period of a new geological evolutionary change in the biosphere. *We are entering the noosphere.* This new elemental geological process is taking place at a stormy time, in the epoch of a destructive world war. But the important fact is that our democratic ideals are in tune with the elemental geological processes, with the law of nature, and with the noosphere. Therefore we may face the future with confidence. It is in our hands. We will not let it go. July 22, Borovoye – December 15, 1943, Moscow' (*Ibid.*: 150; italics mine. – V. V.)

The article gave an account of Vernadsky's book of life entitled *The Chemical Structure of the Earth's Biosphere and Its Surroundings* and evaluation of the confrontation of the Soviet people and countries of anti-Hitler coalition with 'animal ethics' of Nazism. The greeting of the Presidium of the USSR Academy of Sciences (occasioned by the 80<sup>th</sup> anniversary of Academician) ran as the following, '...We admire your unwavering optimism. During the hardest days of the Great Patriotic War you, Vladimir Ivanovich, stated that the one who propagates the wild ideas of the Middle Ages will never succeed. You also mentioned that fascism was doomed and that *reason, goodness and justice should gain victory.* This winter *your prediction is beginning to fulfill. We will be looking forward to the day when mankind starts living in the Noosphere, the sphere of thought after eradicating fascism*' (Vernadsky 2007: 28; emphasis mine. – V. V.).

Giving response to Stalin's greetings, V. Vernadsky sent a telegram, 'Our cause is just and it spontaneously coincides with the advent of the noosphere – a new sphere of life, biosphere – the fundamentals of the historical process, where the human mind turns into a powerful geological force' (Aksyonov 1993: 271–272). Later on Vernadsky sent an article entitled 'What One Should Know about the Noosphere' (*Ibid.*: 271) to editorial board of *Pravda* newspa-

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<sup>1</sup> An explanatory note to the publication mentions the death of the scientist on January 6, 1945.

per and to the Commander-in-Chief. The second telegram ran as follows, '07/27/1943, Borovoye. Dear Joseph Vissarionovich! I am sending you my article, which I have sent to the editors of *Pravda* as well, it would be worthy of publishing due to the fact that I point to the natural process which ensures our ultimate victory in this world war. In the telegram I sent you I point out the value of the noosphere and inform you that I shared half of the prize, named after you, with the Red Army. With deep respect and devotion. V. Vernadsky. I am sending you the article, as I do not know whether it will be published or not'.

Vernadsky made the following diary entry of 4/9/1943 in Borovoye, 'Today I have sent a telegram to Stalin informing him of RUR 100,000 award donation which is meant for defense. In the letter ***I am writing about the noosphere and I am wondering whether I would get a reply.*** This is the first broad statement about the noosphere in real life conditions. I expect it to be published widely. It remains to be seen what happens next' (Vernadsky 2010: 428; emphasis mine. – *V. V.*). The expectations have not been fulfilled.

The article was published in the short-run journal *Advances in Modern Biology* in 1944 (No. 18) in isolation from real-life situations. It had an impersonal title 'Some Words about the Noosphere'. After the victory of the USSR and other countries over fascism, the conclusions of the Academician about the causes of world wars, and the threat of 'animal ethics' of Nazism were relegated to the periphery of political interests of the ruling and those staying in power of the class life of the nations of the world. The time has shown that humanity pays off 'hot' and 'cold' wars of geopoliticians, and as a result we observe the upsurge of fascism in Central Europe, for example in the Ukraine. Here Vernadsky created the doctrine of the biosphere, hatched the concept of development of the biosphere into the noosphere. In 1918 V. Vernadsky organized the Academy of Sciences and was elected its first President.

However, the majority of the analysts of the scientist's legacy consider his life imperative, 'What and Why a Person Should Know about the Noosphere' to be minimized to 'Some Words about the Noosphere'. The danger of neglecting the lessons of Vernadsky is becoming more obvious: the study of the biosphere identifies the imperatives of ecologizing science, knowledge, education of generations, functions and powers of state control in the regions of the world. The study based on the biosphere-noosphere transition allowed devising the theory of sustainable human development. The diary entry of 05/26/1938 drew the following substantive conclusion, '***Science is a natural phenomenon – an active expression of geological manifestation of humanity, transforming the biosphere into the noosphere.*** It mandatorily expresses real correlation between the human living matter – the totality of people's lives and the environment, and primarily the noosphere. The human and his genome can be

removed from the noosphere only mentally. The man ↔ noosphere relationship is inseparable' (Vernadsky 1988b: 81, emphasis mine).

The concept of the noosphere derives from Édouard Le Roy (1870–1954), 'If we mean to introduce a Human being in general life history without distorting and disrupting his role, it is of vital importance to place a Human being at the top of the pyramid, where he rules. It comes down to the idea that wild-life biosphere finds continuation in human biosphere, the sphere of consciousness, thought, free and conscious creativity, thinking per se, in short: the sphere of consciousness or the noosphere' (Le Roy 1928; Aksyonov 1993: 656). He was attending seminars taught by Vladimir Vernadsky at Sorbonne (Paris 1923–1925) and was familiar with his research.

For V. I. Vernadsky the sphere of thought, labor and the sphere of human mind coincide with the noosphere concept of living generations of Individuals, Citizens in the planetary community, '*The thinking man is a measure of everything*. He is a huge planetary phenomenon' (Vernadsky 1988b: 276). The global geological power of mankind and planetary scientific thought was generalized. Taking into account the universal role of science, Vernadsky managed to establish the Committee for the study of natural productive forces (1915) in the Academy of Sciences and was elected its Chairman. Analyzing the 'imperialist threat of bloody application of scientific achievements' to peoples and states (1914–1915), he explained the strategic role of 'protective and defensive strength of scientific creativity', 'that should be the top priority in order not to bring mankind to self-destruction' (Vernadsky 2003: 545–546). In the article 'The Goals of Science in Connection with the State Policy in Russia' (June 1917) Vernadsky (the member of the State Council and the Provisional Government) makes generalizations expressing the prognostic potential of science, education, the neglect of which reduces the viability of the state, 'Revolution should not lead to the disintegration of Russia. The majority of people do not take into account the fact that **there is a commonality more powerful than the state; there is scientific unity of the territory. Preservation of a unified state and national revival – do not contradict each other, if resolved in a scientific way**. Science significantly contributes to international understanding. It connects people and nations in a non-violent and solid way. It reveals the enormous benefits of the country-continent. For the time being, we are not taking the advantage of it' (Aksyonov 2001: 201; emphasis mine. – *V. V.*)

The research 'Scientific Thought and Work as Geological Powers in the Biosphere' (1937–1938) shows the role of scientific knowledge in socially equitable life of citizens in the state, the necessity to take the knowledge into account while providing welfare and preempting the threat of danger, '**Outbursts of scientific creativity take place and partly, to a certain extent provide transition from the biosphere to noosphere**. However, apart from this, a person has continuous social, individual and material-energetic connection with the biosphere. The connection is uninterrupted and lasts as long as the person



lives; it is no different from other biospheric phenomena' (Vernadsky 1988b: 46; emphasis mine. – *V. V.*).

Human scientific thought, creativity of nations, Academies of Sciences, education system, fields of knowledge, the culture of countries – all of these constitute the noosphere. Thinking man is the subject, factor, and participant in the evolution of the mind of ethnic groups in a global society, the attractor of the culture of geo-civilizational existence. The scientist defined 'the measure' of Man in nature at the new level of knowledge, 'the measure' as Man sees it in terms of the biosphere, offered by Protagoras (490–420 B.C.). Ancient Greek philosopher, the founder of the sophist school claimed, 'Man is the measure of all things: of things which are, how they are, and of things which are not, how they are not. Many things prevent knowledge including the obscurity of the subject and the brevity of human life'.<sup>2</sup>

Carl Linnaeus (1707–1778), natural philosopher, singled out Man from the 'realm of nature' and called him using the noo-name *Homo sapiens*. 20,000 species had been described before Linnaeus started doing his research. He described 4,000 species of animals and 10,000 plants along with *Homo sapiens* in *The System of Nature*. By the epoch of V. Vernadsky, E. Le Roy and P. Teilhard de Chardin the Register of biospecies in regional ecosystems of the Earth's biosphere had exceeded 1,000,000. At the beginning of the 21<sup>st</sup> century 1.7 – 2 million biodiversity species had been described. However, extinction threatens 1/10–1/2 of species. Firstly and foremost it threatens *Homo sapiens* who does not show reasonable attitude to his House. Researching the basics of ecosystem sustainability in the biosphere, describing biodiversity species lags behind the growth of anthropogenic threats, especially those on the borderline of replacing the biosphere by technosphere. The UNO adopted a series of environmental conventions (on biodiversity, climate change, combating desertification, etc.), the 21<sup>st</sup> century agenda, all of these come true in all countries on planet Earth.

Why? The answer is simple: *globalization of human existence proved that Homo institutus, making economic choices, dominates at the level of government bodies and UN officials. Impersonal Homo economicus institutus of a global society acts ethnoecologically, culturologically, under the name of Man, while developing regions of the planet's biosphere, the settlements of mankind, structures of civilization* (Inshakov 2004: 39–44; 2005: 13–14).

As for the concept of *thinking man*, Protagoras, Aristotle, Linnaeus, Smith, Darwin, Marx and other scientists are right. But in terms of real attitude to the biosphere it is not noospheric functions of Man, gained through scientific institutions, education system, culture of generations (nous potential of *Homo sapiens institutus*<sup>3</sup>), that prevail globally, but particular human qualities. The quali-

<sup>2</sup> URL: <http://www.brainyquote.com/quotes/quotes/p/protagoras2055402.html>

<sup>3</sup> Scientific name *Homo sapiens institutus* (the original name of the Man, Personality, Citizen as a reasonable being) expresses a sense of belonging of ethnic groups to the institutions of social ac-

ties express *the measure* of zoological, social, political, military, economic, geological, technical, informational, and other manifestations. Fundamentally, the noo-name *Homo sapiens institutus* expresses: 1) **the ability** of generations to conceive the noospheric nature of Man in the Earth's biosphere, Here/Now; 2) **the competence** to take into account the noospheric nature of Man (adhering to the ethnoecological laws) in relation to the nature of the planet – the environment, thought, citizen activities Yesterday – Today – Tomorrow; 3) **mandatory compliance** with the noospheric functions of science, knowledge, education, culture in life of all people of the Global Community. But the growth of threats, risks, and challenges of globalization for humanity in the House of nature show that scientific *thought has become dependent on the subjects of authorities – authorities of the blind force, but not the power of the mind of generations.*

During the 125<sup>th</sup> anniversary of V. I. Vernadsky at conference in Kiev, Nicholas Polunin (English botanist, environmentalist, educator, 1909–1997) and Jacques Grinevald, a historian (University of Geneva) stated, ‘There is a question whether we should **ponder over ‘Vernadskiansky revolution’ as a term encompassing the entire range of its concepts.** The revolution can effectively lead to progress in education, with regard to the environment, and as a result to improving people's lives. To a certain extent it should have constituted an important and distinctive facet of the global movement for environmental protection’ (Polunin and Grinevald 2000: 550; emphasis mine. – *V. V.*).

They point out, ‘While developing this all-important concept and comprehending the Earth's Biosphere, it is of vital importance to take into account the historical figure of Vladimir Ivanovich Vernadsky, a far-sighted pioneer. **Yet it is a striking and deplorable fact that Western scientific culture, of which the English language is now by far the most-used vehicle, until recently disregarded Vernadsky's work and much that is symbolized by it’... (*Ibid.*: 551, 548; emphasis mine. – *V. V.*); ‘And now The Biosphere is emerging as a vital overall reality that we need to maintain intact and cherish perhaps even more ardently than any particular part or factor of our planet's terrestrial or aquatic surface’ (*Ibid.*: 551).**

René Descartes (1596–1650), a French philosopher, mathematician, physicist and psychologist expressed the intellectual ‘measure’ of human being in the proposition I think, therefore I am (*cogito ergo sum*). The proposition implies self-consciousness of Man and Personality in terms of nature, society, and civilization. It is also *the measure of our self-determination* among other living beings in the natural habitat on Earth. Vernadsky considers the life of *Homo sapiens faber* on Earth to be a biogeochemical function of the living matter in

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tors' existence in the social and natural reality of the planet, *i.e.* in the biosphere of the Earth, Space and Universe.

the biosphere of nature, cultural biogeochemical energy of the living matter: Man, Person, Citizen in the global existence of society. Therefore, *thinking man is the subject of the noosphere in the Earth's biosphere, the subject of Big Science in generations* (the source of developed and educated mind). Thus, thinking man is the guarantee of abiding by biospheric laws in life, thought, the choice of deeds by ethnic groups Here/Now in the cycles Yesterday – Today – Tomorrow of the Big History in the House of Nature.

Hence, in the *socio-natural reality* – the history of human existence in the regions of the Earth's biosphere, the function of ethno-ecological conscious unity of citizens with the nature of Yesterday – Today – Tomorrow (in terms of the quality of life, thoughts, acts in the institutions of global society) should be implemented. It constitutes the *Big History* of ethno-ecologically reasonable, ontologically, futurologically sustainable development of generations of mankind in the House of Nature. It is written by *minds of the Big Science – noospheric personalities*, world citizens, mastering the basics of noosphere safety (Vasilenko 2007: 657–663). The noosphere imperative of *Homo sapiens institutus* viability in the biosphere of nature is expressed by observing the principle of presuming ethnic-environmental hazard of mankind activity in the regions of the Universe.

The 3<sup>rd</sup> International Congress ‘Globalistics 2013’, held under the auspices of UNESCO and the International Consortium of Global Studies, was hosted to commemorate the 150<sup>th</sup> anniversary of the scientist at Lomonosov Moscow State University.

The participants of the 1<sup>st</sup> section of the Congress discussed the following issue ‘V. I. Vernadsky's Research on the Biosphere and Noosphere: Modern Interpretation and Global Evolutionism’. Within the forums the following issues were discussed: ‘V. I. Vernadsky and the Noospheric Paradigm of the Development of Society, Science, Culture, Education and Economics in the 21<sup>st</sup> Century’ (Subetto and Shamakhov 2013), ‘Scientific Legacy of Vladimir Vernadsky – the Fundamental Basis of Scientific and Educational Revolution of the 21<sup>st</sup> century, and the Global Strategy of Sustainable Development’, ‘Vernadskiansky Revolution in Scientific-Educational Learning Environment of Russia’. The anniversary events in many universities and institutes of the Russian Academy of Sciences were held under the motto ‘Noospheric Thinking – the 21<sup>st</sup> Century Thinking’.

The biographies of V. I. Vernadsky, E. Le Roy, P. Teilhard de Chardin and their contemporary followers show the *ascension to the noospheric mission of man* in science, education, the culture of global society, mankind incentives. They provide real-life examples of citizens' service to the native land and interests of all mankind. Noospheric personalities crystallize noospheric thinking in institutions of society, the consciousness of people, and shape the noospheric ethics, pedagogy, psychology of life that are required for decision-making to

eliminate the threats of globalization. Noospheric personalities of Man, Citizen in socio-being of the peoples of the Earth's biosphere are *the entities, the actors of the noosphere* (after the noo-name *Homo sapiens institutus*), expressing the joint wisdom of mankind in the evolution of nature, co-evolution of nature and society. They consider the noospheric function of the science of generations as of planetary, cosmic (universal) scale within reasonable development of civilization. Therefore, noo-names (the measure of scientific thought of Man, 'the logic of the noospheric phenomena' are to be considered basic for the noospheric paradigm of sciences, the knowledge of mankind. They express the binding nature of biospheric laws in the life of mankind on the Earth.

How can contradictions of mankind development in the House of nature be overcome, if reasonable self is not supported by adequate acts of citizens of the country (strategically, futurologically) and *there is a threat of depopulation, 'reduction' in the number of people?*

### **Noospheric Personality in the Global Society: The Imperatives of Life, Deeds, Choice**

Karl Marx assumed, 'Natural science will in time incorporate into itself the science of man, just as the science of man will incorporate into itself natural science: there will be one science' (Marx and Engels 1956: 596). But his followers and critics have neither proposed the name of the new science, nor identified the topic, subject, object, and the possible limits of the 'competence' of the scientists in the sphere of knowledge expressing the unity of *Homo sapiens institutus* with nature. Marx showed why under the conditions of the class and formation model of social and economic development a Man of social and economic development acts egoistically and unwise (despite the name) in political, economic, social, and other forms of managing people's life.

From the standpoint of the theory of the Earth's biosphere, the concept of the biosphere – noosphere transition, global and planetary conditions of life, thoughts, deeds of the generations of mankind (aggregate *Homo sapiens institutus*) coincide. V. I. Vernadsky noted down on 8.XI.1941, '...The memory of Hitler will stay forever. He was the man who managed to set goals of the world domination of one race and one person prior to the noosphere – the single reign of *Homo sapiens*, created as a result of a geological process' (Vernadsky 2010: 66). A year later (August 20, 1943) he drew conclusions about the nature of fascism and Hitler, the most urgent threats of social darwinism for citizens of the global society of the 21<sup>st</sup> century, 'Scientific thought turned out to be compared with animal ethics of Hitler, Mussolini and their gang' (*Ibid.*: 443).

If one tailors his assessment to realities of life in the 21<sup>st</sup> century, 'scientific thought turned out to be weak', as citizens of the countries are still divided by class organization of socio-economic development. Professor O. V. Inshakov expressed capital centrist tendency of the global political economy of



countries: *Homo sapiens* is the institutional Man (*Homo institutus*), making economic choices – *Homo economicus institutus* (Inshakov 2004: 39–44; 2005: 13–14). Subordination of the works of scientists, science development, education, and society to the interests of the market contradicts ‘the logic of the noospheric phenomena’, capable of providing ethnoecological safety of citizens in the regions of the biosphere.

The interests of *Homo economicus institutus* prevailing in the countries and the UN structures aggravate the danger of selfish approaches of the subjects of the capital and authorities to life in countries of the Earth. Therefore, ideological, institutional, prognostic issues of the noospheric nature, the noospheric status of *Homo sapiens institutus* are at the forefront. The status functions in the noospheric mission of Man, Person and Citizen in native lands of the global society. ‘Vernadskiansky revolution’ (experienced by the author of the biospheric science, biosphere-noosphere evolution) in the worldview, consciousness of the people and aims of creative people are crucial for eliminating ethno-ecological danger to generations, overcoming threats of class-formation confrontation in the global society.

Vernadsky pointed out, ‘The biosphere of the 20<sup>th</sup> century is turning into the noosphere, created primarily by the growth of science, scientific understanding, and social labor of mankind that is based on it. I will turn hereinafter to **the analysis of the noosphere**. Currently it is of vital importance to emphasize **the inextricable connection of its creation with the growth of scientific thought, which is the first prerequisite of the creation. The noosphere can be created only under this condition**’ (Vernadsky 1991: 37–38; emphasis mine. – *V. V.*). Exploring the planetary function of the aggregate Man (generations of mankind) in the regions of the Earth's biosphere, he drew the following noospheric conclusion, ‘*An outburst of scientific creativity occurs and partly, to a certain extent, creates the biosphere transition into the noosphere*’ (*Ibid.*). But, apart from this, man in his individual and social aspect is closely connected (in a natural, material and energetic way) with the biosphere. This connection lasts as long as man exists and is no different from other biospheric phenomena.

Summing up these scientific and empirical generalizations:

1. Man, as he is observed in nature, like all living organisms, and like every living substance, is a *function of the biosphere* in specific space-time.

2. Man, in all kinds of manifestations, is an integral part of the biosphere structure.

3. ‘An outburst’ of scientific thought in the 20<sup>th</sup> century was stipulated by the history of the biosphere and has deep roots in its structure. **The noosphere – the biosphere, processed by scientific thought** and prepared by hundreds of millions or probably billions of years **(by the process creating *Homo***

*sapiens faber*), is not a short-term and transient geological phenomenon (Vernadsky 1991: 39–40; emphasis mine. – *V. V.*).

Vernadsky, researcher of the planet (geochemist), sees his participation in the ‘outburst’ of scientific thought in the 20<sup>th</sup> century, considering the global geological force of mankind (natural phenomenon), a planetary phenomenon of scientific thought of man (noospheric factor of the scholar in the Earth's biosphere) as a functional dependence on the environment, thoughts and deeds of generations:

1) *Homo sapiens faber* – a spontaneous factor of the aggregate humanity functioning in the Earth's biosphere (the environment of the social type of thinking man, *Homo sapiens*) in the nature;

2) *Homo sapiens faber* – a rational factor of man in the noosphere of generations, *i.e.* developed by science, education, culture and creativity in the global society;

3) *Homo sapiens faber* is to transform into an institution, a tool, a mandatory mechanism taking into account biospheric laws in terms of ethno-ecological laws of life of the citizens of the Earth – into the noospheric function of *Homo sapiens institutus*.

This means that in the life of nations abiding by the scientific name *Homo sapiens institutus* of the global society must be confirmed by the potential of the noosphere of Human nature, the noosphere status of an Individual, the noosphere function of the Citizen in the world. According to Vernadsky, a thinker, a researcher, a figure in the generations is the subject of the noosphere in the biosphere, function-factor of cultural biogeochemical energy of the living matter in the nature of the planet. It is in this sense that a scientific thought of Man, Person and Citizen in the generations of the native land is the measure of everything, the measure of intelligent life, thoughts, deeds in the regions of the planet, the institutions of governance within the state. That is why he paid attention to the ‘traps’ of ‘divorcing’ philosophers from the realities of human existence, society in nature, ‘Philosophers proceeded from free ideas (as it seemed to them), searching for the tormented human mind, human consciousness and not accepting the reality. People, however, built their ideal world inevitably within the violent surrounding nature, the environment of life, the biosphere. Man did not and does not conceive the deep connection with it (independently of his will)’ (*Ibid.*: 30).

The analysis of the biography and scientific legacy of V. I. Vernadsky, a thinker, researcher, planetary-scale personality, suggests that the scientist ascended from *Homo sapiens faber* status in geology to understanding the noospheric mission of Man, Person and Citizen in the institutions of science, education, the authorities of the countries of the world. Therefore, the nature, the phenomenon, substance and the top mission of ‘Vernadskiansky revolution’ in the consciousness of mankind, its significance for humanity cannot be under-

stood apart from the creative biography of a person, bringing about a revolution in. He was devoted to developing institutions of science, education system, and enhancing their role in the native land. That means he lived 'in tune ... with the laws of nature, corresponding to the noosphere'. This allowed him 'to look forward to the future with confidence', with no fear of losing it.

Here are the key noospheric generalizations of the scientist from recent works – they are the criteria of noospheric thinking, consciousness, civil acts of a Person in the biosphere. They constitute *the core of the noospheric paradigm* of knowledge among generations of mankind.

The noosphere we live in is the major result of my understanding the environment (Vernadsky 2010: 27).

The noosphere is the last of many stages in the evolution of the biosphere in geological history, the condition of our times (*Ibid.*).

The noosphere for me is neither a mystery nor faith creation, but empirical generalization (*Ibid.*: 53).

Democracy means *the freedom of thought* and faith (*Ibid.*: 41).

I realized yesterday, that human thought is a part of the noosphere, *i.e.* in terms of real life the freedom of thought should equal the economic freedoms of socialism (1941) (Vernadsky 2007: 119).

I am looking ahead to the future that represents transition to the noosphere (1942).

Our cause is just and it spontaneously coincides with the advent of the noosphere – a new sphere of life, biosphere – the fundamentals of the historical process, where the human mind turns into a powerful geological force (excerpt from V. I. Vernadsky's telegram to I. V. Stalin, 1943).

Being the part of the living matter of planet Earth we feel the mystery of life instinctively and unconsciously vividly, our existence and the existence of life. I would say that the most profound manifestation of consciousness happens when the thinking man tries to find his place not only on Earth, but in Space. In a scientific empirical way he comes to understand the unity of all living things – from bacteria (and even viruses) to man – and to the impossibility of doubting the existence of microbes and such manifestations of consciousness that we identify in a scientific way (from infusoria, invisible to the naked eye, to man). There has been an unresolved mystery for thousands of generations, but the mystery of life is solvable (1943) (Vernadsky 1987: 141).

I am optimistic about the future. ***The noosphere is a real thing*** (2.II.1944) (Excerpt from the letter to B. L. Lichkov. Vernadsky 1989: 242; emphasis mine. – *V. V.*).

There is a tendency to the unification of mankind in history, to the noosphere – the future unity of the human organization as a single planetary efficient structure (16.II.1944) (*Ibid.*).

For me it is obvious the noosphere is a planetary phenomenon, a historical process taken in a planetary scale, a geological phenomenon as well (11.IV.1944) (from a letter to Vernadsky's son).

I am glad you expressed my idea of the noosphere as the synthesis of natural and historical process vividly and clearly (11.VII.1944) (from a letter to Vernadsky's son; *Ibid.*).

He saw the highest meaning of Faust's life in the mastery of nature with the help of the power of science for the benefit of the masses, in creating the noosphere (using the term of the 20<sup>th</sup> century) with the help of the science. He perceived it as the main mission of any state, the mission which had been non-existent for the statesmen of his time (1938–1944) (Vernadsky 1988a: 251).

I am putting the archive in order and preparing the storyline of '*Experienced and Thought over*'<...> I am eager to finish this work and live in the noosphere for a longer period of time ... (13.IV.1944). (From a letter to his daughter, N. V. Vernadsky-Toll) (Vernadsky 1945: 242).

In terms of growth of ethnoecological threats to generations, the moral imperative of Vernadsky 'to live in the noosphere for a longer period of time' expresses confrontation of the noospheric Person, Citizen of the global era with the myopic consumerism of market entities whose interests dominate over the institutions of the countries of the world. In the monograph *Scientific Thought as a Planetary Phenomenon* section 'Scientific thought and scientific work as a geological force in the biosphere' showed the relationship between the deepest manifestations of the scientist personality and the main motives of his scientific work, 'It would be impossible not to mention the newly emerging types of scientific fraternity – *non-state run forms of international scientific environment ... which will have a great future*. Establishing Gosplan in our country used to be the structure of a similar kind (by idea, not by performance). The idea of "scientific think tank" has been proposed by life'. **The issue of planned, consistent activities for mastering nature and proper distribution of wealth, connected with acknowledging the unity and equality of all people, the unity of the noosphere**, is on the agenda' (1938) (Vernadsky 2007: 302, 303; emphasis mine. – *V. V.*).

Understanding the unity of the noosphere is expressed in noonyms of Man, Person, Citizen and is *the basis of the noosphere anthropology*, the core of citizenship noospherology, noosphere futurology, and other sections of mankind noospherology. *Noospherology* is an integral science, formed on the basis of development the doctrine of the biosphere, evolution of the biosphere into the noosphere, studying the origins of the noosphere, the origins of nature in Man in the biosphere, the structure, characteristics of the noosphere status of an Individual, noospheric functions of the Citizen, forms of development, and implementation of citizenship mission for the generations of people in the countries of the world. In philosophical, scientific and applied value, the scientific

name *Homo sapiens institutus* recognizes the unity of the noospheric nature (starting point) of Man, the noospheric status (role) of Personality, the noospheric function (mission) of the Citizen in the Earth's biosphere, society (native land), which is implemented in the noospheric function of geocivilizational mankind. The language of noospherology of ethnic groups identifies understanding of *the unity of Big Science and Big History as a unity of the noosphere*, implemented as a reasonable interaction of society with nature.

Here we come to the problem of *noospheric futurology*, which constitutes the core of the *noospheric globalistics*, – the science of intelligent, harmonious interaction of mankind generations with the biosphere of nature Here/Now, in the relay Yesterday – Today – Tomorrow civilization. *Noospheric globalistics* (a new scientific area, the subject of research, the area of knowledge, education) is being formed nowadays (Ursul A. D., Kaznacheyev A. I., Subetto A. I., Vasilenko V. N., Ilyin I. V., Smirnov G. S., Chumakov A. N. and others). I distinguish ideological, conceptual, and applied aspects in it. The aspects express the relevance of taking into account the noospheric nature, noostatus, noofunction of Man in cooperation of the subjects of a global society with the nature of the planet. In the report for the summit on sustainable development 'Rio+20' (Rio de Janeiro 2012) 'Viable planet for viable people: the future that we choose' the experts admitted, 'The current model of global development is unsustainable. We can no longer assume that our joint actions will not reach the critical point with indicator threshold of environmental condition rising. It creates a risk of causing irreparable damage to ecosystems and human society'. But Vernadsky's conclusions on functional non-replaceability of the biosphere in the human destiny, during transition from the biosphere to the noosphere, the necessity of 'Vernadskiansky revolution' in the minds of citizens are not generally accepted. They are not accepted in terms of assessing the processes of globalization, bearing threats, risks, challenges to the biological species of the biosphere, calling themselves sapiens (*Homo sapiens institutus*).

The scientific ternary Space – Time – Life in the biosphere of mankind generations, discovered by V. I. Vernadsky (the author of the biospheric science, noospherologist-empiricist), is ethnoecological space-time of life, thoughts, deeds of Man, Personality and Citizen in a global society. The choice of measures of the quality of our lives should be adequate to the noospheric nature, noostatus, noofunctions of *Homo sapiens* and *institutus* in the Biosphere, History, Civilization of the planet.

### **Noospheric Mission of Man, Citizen in Culture, Civilization, History**

For V. I. Vernadsky the sphere of thought, social labor, the sphere of *Homo sapiens institutus* mind coincide in the concept 'noosphere of mankind in native land'. Therefore, the history of science, history of knowledge is the history

of ‘the greatest creative power of *Homo sapiens*. It is the history of being a free personality, one of the greatest manifestations of cosmic forces’ of mankind thoughts (Vernadsky 1988b). In his opinion not only a scientific thought of a free creative personality, but also the institutes of the Academy of Sciences and the knowledge system constitute the structure of the noosphere. Hence, the history of scientific knowledge of generations is *the history of forming the noosphere of mankind*. Vernadsky as a personality ascended to perceiving himself as the subject of the noosphere in the Earth's biosphere, to understanding the scientific work of *generations* of Citizens in the institutions of science and also as the factor of scientific thought in the structure of the noosphere of mankind. If ‘the correlation people-noosphere is inseparable’, ‘a thinking man is the measure of everything, a huge planetary phenomenon’, it means that it is *WE*, who are the generations of nations are the entities in the biosphere (Vernadsky 1988b). We should comply with security fundamentals of settlements in the life of a global society. *It comprises ethnoecological substance, measure, the noospheric vector of ‘Vernadskiansky revolution’ in science, education, deeds and institutions, managing citizens of a global society.*

Noospheric hypostasis of the life of ethnic groups of mankind in the nature are represented in the noo-name *Homo sapiens institutus* – scientific self, social identity, political self-identification of Citizens of the states in the regions of the Earth's biosphere. In its turn the noo-name of Man, Person, Citizen in the countries of the global society expresses the following:

1) belonging of the social species of biodiversity – *Homo sapiens* (Lat.) to those with the highest form of reason, developed by the system of education. This Personality implements the value of knowledge in the quality of life of generations in the nature (biosphere of the planet Earth), society (country), civilization of mankind; society of intellect, Personality, realizing the value of knowledge in the quality of life of generations in the nature (biosphere of the planet Earth), society (country), civilization of mankind;

2) the noo-name acknowledges the ternary of the noospheric nature, noospheric status, noospheric function of *Homo sapiens institutus* in the Earth's biosphere – environment, thoughts, citizen actions, non-replaceable for the vitality of mankind generations in the nature;

3) the noo-name *Homo sapiens institutus* (Person-individual in the family, ethnic group, society) consolidates understanding of the basics (foundations) of the rational nature in the ecosystems of the biosphere of the planet. The term implies potential belonging of the Individual to the subjects of the realm of the mind (the subjects of the noosphere in humanity generations), able to recognize, develop, and implement individual noospheric status of a Citizen in the family, society, nations of the world;

4) the noo-name *Homo sapiens institutus* recognizes the presumption of environmental hazards, economic, and other types of human activity; its princi-

ple (measure) in the nature, country, states of the global society. The measure acts as the noospheric imperative of generations' viability.

*The noospheric hypostasis of a Citizen of the Native Land is implemented in the core of status-functional interaction of ethnic groups' generations with the biosphere in the regions of the planet.* The terms 'Citizen' and 'Native Land' are capitalized, as they express basic aspects of Man, Personality in the life of the subjects of a global society. Belonging to *Homo sapiens institutus*, *WE* can qualify for Surname (by family, generations), Name, Patronymic, which give the grounds for citizenship in the countries of the Earth's biosphere. And the noo-name of *Homo sapiens institutus* generations has no constitutional, legal (lawful), or other forms of recognition, status confirmation in the institutions of society.

The threat of species depopulation, calling themselves *sapiens* (*Homo sapiens*), raises the following questions:

– Do the living peoples of the planet have a Past, but perhaps no Future History?

– If *WE are INTELLIGENT*, why do we not force the mind to increase the vitality?

– What basis makes it possible to overcome the irrationality of the current model of global development of society, generations of mankind in the Earth's biosphere as a whole?

During the evolution of *Homo sapiens faber* of ethnic groups in *Homo sapiens institutus*, the global philosophical problem of the transition from unsustainable (unstable) global development to ontologically reasonable, futurologically sustainable is resolved. Hence, the scientific name *Homo sapiens institutus* of the global society should be seen as a *means of recognizing* the functional unity of the noosphere of Human nature, the noospheric status of an Individual, the noospheric function of the Citizen. They are to be implemented in cooperation of the population of states with the nature of biospheric regions of the planet.

Disregard of the noospheric bases in the biospheric nature is expressed by the fact that *WE*, the population of the native land, take into account the stability of ecosystems in the regions of the Earth, inadequate to threats of life and health. The threads of processing the inert expand (up to 50 tons per year per person, out of these 1 per cent to 0.5 per cent is beneficial, the rest pollutes the territory of the settlements). Civilization technosphere turns from local to regional, global and cosmic, poisoning the hydrosphere, atmosphere, soil and suppressing all living things. One should use a preemptive tactic in considering the fundamental connection between social and biological, ecology, biology, genetics and health of generations. 'Public health has always been regarded as the indicator of well-being of the nation and the backbone factor that links cul-

ture, economy, ecology, education, policy, bio- and noosphere' (Shevchenko 2004: 399).

By the beginning of the 21<sup>st</sup> century clinical medicine (23.53 per cent) had been ranked first in the structure of scientific knowledge, it is followed by physics (12.16 per cent), chemistry (11.89 per cent), engineering (9.03 per cent), biology and biochemistry (8.12 per cent), the science of plants and animals (6.47 per cent), neurosciences (3.89 per cent), materials technology (3.52 per cent), molecular biology and genetics (3.05 per cent), geosciences (2.60 per cent), pharmacology (2.38 per cent), agronomy (2.38 per cent), microbiology (2.35 per cent). 2.31 per cent of publications account for works devoted to the problems of environmental protection (Marshakova-Shaikevich 2000: 139–149). The World Health Organization recognized the connection between the quality of life, health, longevity and the environmental condition of the regions of the Earth's biosphere. The top ten scientific breakthroughs of the 20<sup>th</sup> century: recognition of ethno-ecological criteria of viability of generations: 50 per cent of health depends on lifestyle, 20–25 per cent on the quality of the natural environment, 15–20 per cent – on state genetic and immune potential of the people, 8–10 per cent – on status, access to health care for the citizens of the state. According to noospheric anthropology, it is a formula of *ethnoecological viability* of mankind generations of the native land in the Earth's biosphere. Its indicators are in poor demand in science; forecasts for civilization development: by the 21<sup>st</sup> century there had been unfavorable ratio of human knowledge in the structure of science about the past (95 per cent), about the present (4 per cent) and about the future (up to 1 per cent). The ratio of citizens' knowledge on the environment of life is more disturbing: scientific knowledge of the subjects of the society on inanimate nature make up 95–98 per cent; on the nature of the living matter – 2–5 per cent; on the nature of Man (*Homo sapiens institutus*) in the biosphere – less than 1 % (Spasibenko 2007: 3).

In the era of globalization the moral responsibility of the Individual and Citizen is the noospheric imperative of ethnoecological security of humanity in the biosphere of nature. It is the imperative of evolution, globalization and the Big History of the Earth, in which Man, educated by institutions of science, culture, and power, is a Measure of noospheric co-evolution of society and the biosphere, the planetary entity, factor, attractor of Universal History.

### **Noospheric Imperatives of Evolution, Globalization and Universal History**

**An interdisciplinary and synergetic approach** to finding scientific methods of 'softening' the growing threats, risks, challenges of civilization to the present and future generations of *Homo sapiens institutus* dominates in conference proceedings of the International Congress 'Globalistics' which was held in 2009, 2011, and 2013, the anthology *Universal and Global History. The Evolu-*



tion of the Universe, Earth, Life and Society', in collection of articles *Where does the Age of Globalization Go?* and other publications devoted to the urgent issues of mankind development. The noospheric concept of globalization allows us to deliver futurological predictions for the science base and 'remove' the problem of the future shock (Toffler 2001: 23–24, 501). From the standpoint of the noospheric anthropology and applied noospherology, the causes of the future shock are disregarding the noospheric principles (nature) of Man in the biosphere, the noospheric status of the Individual, the noospheric mission of citizenship in society. All of these allow to increase the viability in nature, life of the country, civilization of the global era. Ontologically WE are not the victims of the future shock, but the hostages of the past knowledge, 'lagging behind' the processes of science globalization, education of citizens. From the standpoint of the noospheric futurology WE are the victims of a cosmopolitan, ethno-ecological impersonal attitude of the subjects of state authorities, UN entities of the planet to strategic decision-making.

Performing a biospheric function, *Homo sapiens institutus* is involved into ethno-ecological processes of the planet while implementing the biospheric function of *Homo sapiens* in the nature, noospheric status of Human being who is rational in the institutional sense (bearing wisdom of nations). It is necessary to understand in order to overcome our ethno-ecological and civil impersonal attitude to the biosphere in the following aspects of generations' existence.

1) In terms of social and natural reality of a global society we are included in the core of *status-functional interactions* (SFI) on life support of mankind – the triad 'ecological functions of the biosphere – ecological reproduction of ethnic groups – the viability of civilization'. The SFI triad 'ecology of the region of the planet – ecology of ethnic groups – ecology of civilization' performs *ethnoecotechnopolis functions of life* of the population on the territory of the state in the global community (the UNO). *Ethnoecotechnopolis* 'the Earth's biosphere – ethnic groups of mankind – ecology of civilization' performs biosphere-ecological, ethnoecological function of the unity of the people with the state. The noospheric measure, ethnoecological criteria for the safety of the citizens of the native land are expressed by *the formula of generations' viability* in the regions of the biosphere (50 per cent – 20–25 per cent – 14–20 per cent – 8–10 per cent).

Territories of the states of the global society should be simultaneously taken into account in their life supporting, viable and life arranging functions:

a) The noospheric potential of Human nature, Person and Citizen (scientific name *Homo sapiens institutus*), implemented during the longevity of the generations of the native land in the regions of the biosphere;

b) the noospheric status of Personality performing eco functions of Citizens in the countries of the world;

c) the noospheric mission of citizenship in institutions of culture, civilization, environmental management in local, regional and planetary scales of society.

Vernadsky showed that the biosphere of the planet is the living environment, environment for thoughts, acts and solutions. The latter can and/or cannot take into account the laws of nature for life, life activity of the state population. *The presumption of ecological risk* principle threatening economic and other kinds of activity implies the necessity of taking into account the foundations of the biosphere theory. Along with the above mentioned, *ethnoecological norms* (ethnoecotechnopolis requirements) of citizens' settlements on the planet should be followed. Assessing the *presumption of ecological risk* principle implies the scientific (environmentally conscious) unity of ethnic groups on the planet. Therefore, it is of vital importance to take into account the standards of environmental safety within the process of exchange between Man and nature with substance, energy, information (nature management functions of society).

Noospheric imperatives of ethnoecological safety of mankind generations (within the core of status-functional interactions) determine the need of overcoming *social selfishness of class relations* in the life of the countries where short-sighted interests of the property entities and state authorities prevail.

The noospheric potential of ethnoecological security of the Man, Personality, Citizen is implemented in the core of local, regional, planetary, cosmic scale of status-functional interactions of *Homo sapiens institutus* and the ecosystems of the nature's biosphere Here/Now, the vector of Yesterday – Today – Tomorrow of humanity. Irreplaceability of the biosphere is confirmed by human mastery of space technology and access to the Space.

The subjects of the noospheric anthropology are those of *the noosphere in the planet's biosphere* – the living environment, environment of thought, deeds of all generations of Man, Personality, and Citizens of states. Therefore, they are subjects of the evolution of *Homo sapiens institutus* of the biosphere into the noosphere. But this is only possible in favorable social conditions, revealing the noospheric ability of peoples within generations. The main priority of society is developing the noospheric ethics, pedagogy, psychology of Personalities. This science is capable of forming the noospheric potential of citizens, that is designed to create conditions for implementing the noospheric imperative of vitality Here/Now and in the succession Yesterday – Today – Tomorrow of the civilization.

2) Status-functional interactions on providing life support of mankind generations in the Earth's biosphere are controlled in the triad of status-functional institutions (SFI) of world states, 'noospheric institutions of civil society – noospheric institutions of the native land – the noospheric institutions of the civilization'. Regional, planetary and other governing bodies (subjects of the UNO) constitute the noospheric institutions of civil society. The noospheric personality of the citizen of the native land (source, subject, nationality) is a

generic beginning of society, state institution, managing function of territorial authorities. The noospheric development potential, the highest values of life quality, way of thinking, and the power of creativity of citizenship subjects constitute the genetic core, the cultural code of noospheric civilization representatives in the native land among generations of peoples. The noospheric values of the subjects of civilization are formed due to *noospheric education of Personality, implementation of the foundations of the noospheric ethics, pedagogy, and psychology* in civil institutions.

From the standpoint of noospheric anthropology, general and applied noospherology primarily aim at compliance with ethnoecological requirements of citizens in the institutions of government, governance structures of states of the planetary society. Formation, development of noospherology, its applied areas determine the level of realizing the potential of the noospheric anthropology – *noospheric imperative* of mankind viability in nature. The triad, SFI ‘noospheric institutions of civil society – noospheric institutions of the native land – the noospheric institutions of civilization’ requires formation of *the structures for noospheric monitoring of generations*. The process aims at determining the direction of proactive strategic planning, forecasting, risk management, risks of globalization.

In the global era there is a prior issue for advanced development of science, knowledge, education, proactive ethno-ecological threats, risks, and challenges for citizens of the states in the biosphere Here/Now, in the succession Yesterday – Today – Tomorrow. This is the top priority of preventing ‘irreparable harm to ecosystems and human society’, set by the UN report ‘Resilient People, Resilient Planet: A Future Worth Choosing’.

3) If the noospheric level of ethnoecological threats to generations is chosen within status-functional interactions (the core of SFI ‘the Earth’s biosphere – ethnic groups of mankind – ecology of civilization’), and the noospheric imperatives of civilization viability are controlled by the status-functional institutions (SFI triad ‘noospheric institutions of citizenship – the noospheric functions of power – noospheric institutions of civilization’), then the actual reasonable control should be achieved in the system of *status-functional relations* (SFR) of the constituent entities of the state: ‘generation of Citizens in the country – the authorities of the sovereign territory of the subjects of the Russian civilization’.

The noospheric human nature and the noospheric status of an Individual are formed by noospheric ethics, pedagogy and psychology. Noospheric education of citizens contributes to this process as well. The above mentioned concepts are implemented in the values of the noospheric cultural life of the subjects of a global society. The noospheric function of the Citizen (noomission of the citizenship) is implemented in the social sphere, cultural institutions and governing structures of society. The noospheric mission of governmental civil functions should contribute to the safety purpose of human generations,

the strategy of sustainable development of society. These problems are solved by the methods of noospheric futurology (Vasilenko and Imanov 2010).

*The biospheric core* of status-functional interactions, institutions, relations of citizens in the processes of globalization contains the noospheric potential of *Homo sapiens institutus* viability in ecosystems of the regions of the planet. The generations of *Homo sapiens institutus* of the global society are *the subjects of the noospheric civilization* in the biosphere. The latter should enhance vitality potential of Man, Personality, and Citizens of states in the regions of the Earth. The criterion used to noospherically monitor strategic planning, forecasting, and management is in compliance with the noospheric imperative of mankind security, sustainable development of states in a global society.

*The noospheric core* of status-functional interaction of the biospheric subjects, the noospheric triad of status-functional institutions, the noospheric regulatory principles of status-functional relations of individuals imply understanding of *Big Science and Big History unity* in the biosphere.

In times of ethnoecological threats, risks, challenges of globalization to the fundamentals of peoples' lives in the regions of the Earth's biosphere, the noospheric concept of status-functional interactions, status-functional institutions and status-functional relationship allows to remove the trap of class models of states. These traps are controlled by the owners of world capital and create the patterns of noosphere formation, therefore it is essential to establish *noospheric structures* that will ensure the safety of generations, sustainable development of civilization. In accordance with the motto 'Noospheric Thinking – the 21<sup>st</sup> Century Thinking', foundations of 'Vernadskiansky revolution' in science, education, government institutions, management of global society, there is a need for *ethno-ecological examination (interpretation)* of the UN report at the Summit on Sustainable Development (Rio de Janeiro 2012) 'Resilient People, Resilient Planet: A Future Worth Choosing'. The relevance of the noospheric expertise is confirmed by the fact that in the final UN document at the summit Rio+20 'The Future We Want' (designed to implement the goals of the Millennium Declaration), did not include the problems of depopulation. The document lacked designs, recommendations and projects of scientists representing the noospheric schools of Russia.<sup>4</sup>

The first group of theses (13 out of 283) of the final document 'The Future We Want', adopted by the participants of Rio+20 Conference, expressed the following common vision:

'1. We, the Heads of State and Government and high-level representatives, having met at Rio de Janeiro, Brazil, from 20 to 22 June 2012, with the full participation of civil society, renew our commitment to sustainable development and to ensuring the promotion of an economically, socially and environ-

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<sup>4</sup> Over 110 countries took part in drafting the UNO final document.

mentally sustainable future for our planet and for present and future generations.

2. Eradicating poverty is the greatest global challenge that the world faces today and an indispensable requirement for sustainable development. In this regard we are committed to freeing humanity from poverty and hunger as a matter of urgency.

3. We therefore acknowledge the need to further mainstream sustainable development at all levels, integrating economic, social and environmental aspects and recognizing their interrelation, so as to achieve sustainable development in all its dimensions'.<sup>5</sup>

The final thesis of the conceptual section in the final document at the Summit on Sustainable development which was held in 2012 describes obligations of the member entities of the United Nations:

'We recognize that people's opportunities to influence their lives and future, participate in decision making and voice their concerns are fundamental for sustainable development. We underscore that sustainable development requires concrete and urgent action. It can only be achieved with a broad alliance of people, governments, civil society and private sector, all working together to secure the future we want for present and future generations'.<sup>6</sup>

From the perspective of the noospheric approach, 'providing people with opportunities to influence their lives and their future, participate in decision making and voice their concerns' is essential at the UN institutions level and institutions of states. It is crucial to acknowledge ideological, institutional, the noospheric nature (fundamentals), the noospheric status (role), the noospheric function (mission) of *Homo sapiens institutus – noospheric citizenship* in the family of humanity in the Earth's biosphere. Ethnoecological involvement of *Homo sapiens institutus* into life-sustaining functions of regions of the Earth's biosphere expresses the ontological and futurological irreplaceability of habitat, thoughts, actions of citizens in the nature of the planet. From the perspective of the biospheric approach, evolution of biosphere to noosphere, we are the citizens of sovereign UN Nations – noospheric subjects, ethno genesis factors in the biosphere genesis in local and regional conditions of life of the Earth's countries. Therefore, we should realize that *we are noospheric personalities* in the families, institutions of power, management of settlements and we must comply with ethnoecological restrictions, regulations in life realities, acts of the subjects of a global society.

Thus, the noospheric potential of individuals in families, generations of the native land – reasonable subjects of ethno genesis in biosphere genesis

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<sup>5</sup> See e-almanac 'Noosphere of the 21<sup>st</sup> Century' at URL: // <http://www.socionauki.ru>; <http://www.vgi.volsu.ru/>

<sup>6</sup> *Ibid.*

of the planet – should be aimed at ensuring the safety of citizens of sovereign states, *their sustainability in Big History of Humankind and the natural House (the Universe)*. Vernadsky, being several generations ahead, pointed out that as long as citizens do not acknowledge the doctrine of the Earth's biosphere and the evolution of the biosphere into the noosphere, mankind has no future. In his diary dating back to 1940 he identified an alternative to social Darwinism in geopolitics, ‘the 20<sup>th</sup> century is the age of the noosphere’ (Vernadsky 2007: 109). The motto ‘Noospheric Thinking – the 21<sup>st</sup> Century Thinking’ is considered to be ideological, conceptual, institutional recognition of the doctrine of the biosphere, evolution of the biosphere into the noosphere, relevant to human nature. If the 20<sup>th</sup> century was the age of the noosphere, the 21<sup>st</sup> century is to become the age of the noospheric forestalling of ethnoecological challenges of globalization to citizens, transition to sustainable development of civilization.

Russia, the USSR, Russian Federation – the naturalistic birthplace of the theory of the biosphere and evolution of the biosphere to the noosphere. Together with China, India, Euroasian, G20, SCO partners and other neighbors, it has the necessary civilization potential to initiate the preparation, host the UN Summit on Sustainable Development, RIO+25 in 2012 and accept the futurologically valid political strategy.

In conclusion, ontologically and conceptually crucial finding for the peoples of the Earth: implementation of *the noospheric mission of Big Science in Big History* of the global society is possible due to compliance with the criteria of noospheric anthropology, the principles of basic and applied noospherology, the imperatives of noospheric futurology of mankind.

The noospheric approach allows to find relevant measures of the conflict resolution in the Ukraine the citizens of which appeared to be the victims of social Darwinism in geopolitics, the theory imposed by the adherents of capitalistocratic lifestyle in states of the Earth.

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