

**BRINGING FORWARD THE PHILOSOPHY OF UNIVERSAL SCIENCE:
A COSMIST CONCEPT**

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ABSTRACT

In this paper I attempt to introduce a novel trend of fundamental thinking - Metanaturalism. This area assumes the integration of *a posteriori* and *priory* knowledge and thus presupposes the achievement of the level of universal knowledge about the world of Earth's life. The other necessary predisposition for the achievement of universal knowledge is the introducing of the novel trend of Cosmist Dualism, which is differentiated from Cartesian dualism. On this basis, the metanaturalistic notions of "Process" and of the triune essence of human nature are advanced. In outcome, I deduce two principal corollaries that a) exclusively subjective (personalist) level of consideration is appropriate for universal comprehension of living things on Earth, and b) exclusively *cosmist functional* systemic approach might reach the universal comprehension of the life phenomena on Earth - biological, personal, societal. In completion of the work, I conduct a short historical analysis of analogous (to Cosmist philosophy) attempts in world science and draw a conclusion that the universal systemic organising of sciences has an urgent significance for the future wellbeing of man and world. Significantly, we already possess the scientific means for this universal systemic approach and, at present, just need to create the proper methodological foundations for this great advance.

Key words: universalism, epistemology, naturalism, metaphysics, dualism, cosmology, wholism, tectology, general systemology

"Philosophy is a science and therefore, like every other science, it seeks to establish truths that have been strictly proved and are therefore binding for every thinking being and not only for a particular people or nation."

Nicolei O. Lossky (Lossky 1951, p. 402)

INTRODUCTION

This judgement, which forms the epigraph, opens the chapter "Characteristic Features of Russian Philosophy" in N.Lossky's well-known book "History of Russian Philosophy". Contemporary views, however, separate definitely philosophy (metaphysics) from science. Modern metaphysics is the science of mental phenomena which is concerned (*a priori*) with being, including theories of the nature and kinds of being, while science (physics) relies basically (*a posteriori*) on the empirical evidence aiming at the disclosing of universal principles and laws of Nature. At the same time, it is obvious that the true universal knowledge will emerge exclusively when the synthesis of *a priori* knowledge with *a posteriori* knowledge will take place. To my view, in his judgement Lossky precisely implied this kind of synthesis - of *a priori* and *a posteriori* knowledge. Hence, with respect to the modern standpoints, he apparently implied some other (distinct from philosophy and physics) fundamental origin of scientific knowledge. As I can guess, Lossky had endowed with particular powers the philosophical branch 'cosmology'. To prove this it might be sufficient to demonstrate his understanding of the task of philosophy:

...having studied the basic elements and aspects of the world, philosophy must detect the interconnection between them which forms the world-whole. Moreover, the world-whole, studied by the branch of metaphysics called cosmology, contains concrete individual elements of such significance as for instance, the biological evolution, the history of humanity – and philosophy must answer the question as to their meaning and their place in the world-whole. (Lossky 1951, p. 402)

However, modern philosophy does not contain such a branch as cosmology. It is enough to have a look at the website of the 21st World Congress of philosophy where the sections for contributed papers are exposed (<http://www.wcp2003.org/>). At the same time, the main point is that Earth's living world is evidently universal. Primarily, I would like to draw attention to the so-called 'Epistemological Evolutionary Paradox' in relation to a person: Man is an uterine element of the one common whole cosmic evolutionary process of the life on Earth (Process, in abbreviation); however we deny the search for universal evolutionary knowledge and rely on the plural (different and often incompatible) sources of knowledge in defining man's nature: biological, sociological, psychological, etc. First of all, I claim that both evolutionism (Darwinism) and Creationism are equally incapable to scientifically explain the universal nature of man. Hence, the situation calls for the creation of original methodological fundamentals, which might provide the integrated comprehension of man's universal nature.

Even if Lossky brilliantly had pointed out on cosmology as an area of philosophy that deals with the world-whole and produces universal knowledge, he did not develop in-depth this idea. At the same time, he had expressed another very valuable idea, having drawn the distinction between Kantian epistemological idealism and Russian intuitivism:

In contradistinction to Kantian epistemological idealism Russian intuitivism is a form of epistemological realism... The ideal of *integral* knowledge – i.e., of knowledge as an organic all-embracing unity, proclaimed by Kireyevsky and Khomiakov – appealed to many other Russian thinkers; but it can only be attained if the subrational aspect of the world (sense qualities), its rational (or ideal) aspect, and the superrational principles are all given together in experience which combines sensuous, intellectual and mystical intuition. The whole truth is revealed to the whole man, said Kireyevsky and Khomiakov... It is precisely such integral experience that underlies the creative work of many Russian thinkers – Vl.Solovyov, Prince S. Trubetskoy, Prince E. Trubetskoy, Florensky, Bulgakov, Berdyaev, N. Lossky, S. Frank, Karsavin, Losev, I.A.Ilyin, and others; in connection with it they attempt to work out a philosophy which would be an all-embracing synthesis (Lossky 1951, p. 404).

The names of prominent Russian scientists likewise validate the existence of this whole-organising potential in exploring the objects in natural and human sciences. Sufficiently to mention the names of D.I.Mendeleev, V.M.Behterev, I.P.Pavlov, A.A.Bogdanov, A.A.Ukhtomsky, V.I.Vernadsky, P.K.Anokhin, A.M.Ugolev, L.N.Gumilev, P.V.Simonov, and others. The more it is significant that we (Russian philosophers and scientists) have found ourselves at present, in modern post-soviet Russia, in unique cultural conditions. The point is that we have lost simultaneously and entirely (in the late 1980s) all our philosophical fundamentals when the Marxist doctrine (the only one possessing legality in communistic Russia) was found to be incompetent and was disqualified. Thus we had become, at once, free and got the opportunity for conducting the independent epistemological exploration. In these phenomenologically favourable conditions I am taking the responsibility to give a name of *metanaturalism* to Lossky's notions of "epistemological realism" and "all-embracing synthesis", and to attempt to substantially characterise this direction of human cognitive activity. The next section of the paper is entirely devoted to the introduction of the conception of *metanaturalism*. Moreover, at the end of this article I will try to draw a parallel between an original Cosmist philosophy (created on the basis of *metanaturalism*) with Tectology and General Systemology, which likewise possesses the ability to integrate *a priori* and *posteriori* knowledge with respect to scientific understanding of a given phenomenon of reality (complex dynamical system).

In completion, I would like to stress, once again, that Earth's living world is universal in substance. The latter is an indisputable scientific truth at least since the 1953 when Watson and Crick discovered the structure of DNA. As a corollary, we objectively need a science that would deal universally with every life phenomenon on Earth. From the logical point of view, universalism is a most natural quality for a science exploring life phenomena on Earth: biological, personal (psychological), sociological, ecological, etc.

Instead, in the present reality, we are witnessing that reflections on the meaning of the complex dynamical nature of living systems show an overwhelming multiplicity in approaches, descriptions, definitions and methodologies (Van de Vijer, 2003). To overcome this sharp epistemic pluralism we really need to create a new basis of fundamental knowledge for achieving the main goal of "epistemological realism" - "organic all-embracing synthesis".

1. A CONCEPTION OF METANATURALISM

What is Metanaturalism? Metanaturalism is *meta*-naturalism: This epistemological area likewise denies that an event or object has a supernatural meaning but, in contradistinction, metanaturalism seeks for *a priori* uncovering of a substance (substratum), that which is empirically invisible, but which underlies all outward naturalistic manifestations of the phenomenon under exploration, or which constitutes all subjects of the class or process being considered. What are then the examples of *metanaturalist* notions? To my mind, they are Newton's Gravity, Faraday's and Maxwell's Electro-magnetic field, notion of Affinity in chemistry, notion of Biosphere (by Vernadsky) or notion of Gaia (by Lovelock and Margulis), Freud's Id, Maslow's Basic Needs, etc.

Notion of *metanaturalism* is clearly discriminated from the notions of naturalism and metaphysics. Naturalism explores the physically positive (sensible) world and is aimed at the rational disclosing of the natural empirical (experiential) laws regarding regularities existing in objects and events, both observed and posited. Newton's three laws of motion can exemplify this position or Hans Selye's "the General Adaptation Syndrome". The definition of the term health in Oxford dictionary likewise bears the essence of the naturalistic approach: Health is "the state of being well and free from illness, - restored to health". In the latter case, naturalism manifests itself in giving the names to *a posteriori* evident phenomena.

Metaphysics, in turn, although dealing with the same naturally (physically) given reality, is unable to frame theories for empirical testing and, instead, considers the *a priori* aspects of the universe, which are free from movement and on which everything in the world of nature is thought to be causally dependent. In other words, metaphysics is the philosophical study whose objects "being as such" are "beyond the senses". Essentially, metaphysical thinking is chiefly based upon contemplative speculation.

As opposed, *metanaturalism* is dedicated precisely to organise the search for the positively given, genuine, empirically verified *meta*fundamentals. The discovery of *meta*fundamentals necessarily calls for true intuitive (*a priori*, unreflective) approach, insofar these *meta*fundamentals do not manifest themselves in natural phenomena of a reality that are directly observable.¹

I can now draw a conclusion: Naturalism is chiefly *a posteriori* thinking; Metaphysics, on the contrary, - *a priori* thinking; and *metanaturalism* integrates both types of thinking - *a posteriori* with *a priori* - empirical (descriptive, objective) with

intuitive (likewise positive, but of phenomenological essence), although this integration is a greatest philosophical sin.

However, we really need *metanaturalistic* type of thinking to cope with a very significant task - to define a substance of the one common whole universal evolutionary process of the life on Earth. This substance, to my mind, is evolutionary process itself (we can abbreviate it as Process or Evolution). The division of Process (Evolution) into biological, social, personal evolutions, etc. is artificial and unreasonable in epistemological relation. We have factually that the evolving life on Earth is substantially universal, but still we have not effective epistemological foundations for the rational universal comprehension of the existing living world on Earth.

Primarily, from my standpoint, insofar modern epistemology still is unable to disclose the way to the scientific comprehension of this universality, Cartesian dualism² eventually ought to yield the way for another kind of Dualism - Dualism of Civilised Times. I prefer to call it Cosmist³ Dualism. The latter states the factual existence of the one universal evolutionary process (Process) and calls for its scientific exploration but, at the same time, declares that cognition of the causes and mechanisms of Process's origin and evolution are beyond the scope of current scientific exploration.

This approach is similar to the exploration, for example, of Gravity or Electromagnetic field: It is noble to seek for the origins and causes of Gravity or Electromagnetism but that is not the matter of contemporary science, which is busy with factual exploration of these phenomena.

2. COSMIST DUALISM - DUALISM OF CIVILIZED TIMES

Cosmist Dualism have some similarity to Cartesian bifurcation of reality into *mental* - immaterial and insensible - ideal, given to conjecture and theorising; and *physical* - derived from observation or experiment. At the same time, in contradistinction, Cosmist Dualism deals on another - *meta*⁴ - level of natural reality consideration, dividing this *metareality* either into 1) *speculative* - based upon contemplative speculation, abstract reasoning and hypothetical statements, not verified by phenomenal and physical demonstration and objective evidence⁵ or; 2) *positive* - depending upon the exploration of genuine phenomena and founded upon experiment or evident observation,⁶ and based on any form of verification of concepts and claims: Phenomenological *a priory* intuitive foundation; Rationalist reasoning, Empiricist synthetic *a posteriori* statements, etc.

With respect to the evolutionary process of the life on Earth (Process) Cosmist Dualism states that we reasonably ought to accept two incommensurable categories: a) the life on Earth evidently has the cosmic and transcendent origin and causative mechanisms, but the latter is essentially not researchable on the current level of the world scientific development; b) simultaneously, we have the real challenge and the real possibilities to comprehend rationally the natural universal laws of the one common whole actually existing evolutionary process (Process) of the life on Earth. In

other words, I claim that Process is an autonomous subject: independently of our interpretation of its origin and causative mechanisms of development (God, Nature, Cosmos, Darwinian evolution, etc.), the final outcome of Earth's evolutionary process, its current state, reveals the one wholeness (proved by natural sciences) of the entire living world of Earth. Thus, in contradistinction to Cartesian dualism, the novel dualistic approach includes equally both *subject-object* and *subject-subject*⁷ pattern of the exploration of the phenomena of life on Earth.

Furthermore, my Cosmist approach resolutely denies treating evolution⁸ as 'change over time', and that evolution is ruled by chance and natural selection and, thus, 'evolution is a matter of history'. On the contrary, Process is an autonomous subject, which has its emergent past, present and future. In other words, Process's development is absolutely independent of our metaphysical considering of its origin and causative developmental mechanisms: be it the terms of survival value ('natural selection', 'survival of the fittest', 'struggle for existence'); or supernatural effect; or Panspermia; or Big Bang effect; etc. But we can and ought to comprehend the universal laws of the one common whole evolutionary process of Earth's life. In this, we need not currently seek for the explanation of Evolution's origins and the developmental causes by virtue of speculative contemplation and our 'common sense', but we are to focus on the factual exploration of Process - how it is in reality.

At this point, the Kansas State Board of Education Decision "to remove references to evolution and cosmology from its state education standards and assessments" (AAAS 1999, p.1297) is certainly the example relevant to be discussed here. This decision caused a hot debate, where one judgement occurred, which is seemed especially significant for my discourse:

Mainstream creationists also accept that genetic and phenotypic changes could result in speciation. They consider evolution as a plausible model to account for the natural history of living things, but they see a great distinction between the empirically proven elements of evolution (micro-evolution) and the explanation of speciation and origins of life (macro-evolution)... The crucial difference between what the creationists believe and what the proponents believe and what the proponents of evolutionary theory accept concerns the issue of whether the origins of life were driven by randomness or by an intelligent creator. (Todd 1999, p.423)

I stress here, however, that from the *metanaturalistic* point of view we have not at this point any substantial difference between the arguments of both creationists and evolutionists in relation to macro-evolution, i.e. - to evolutionary process on the whole, for, they equally have the metaphysical nature.

3. METANATURALISTIC BASIS OF THE UNIVERSAL SCIENTIFIC APPROACH: THE COSMOLOGY OF "PROCESS"

The detailed characteristic of the entire system of philosophical cosmology and ontology was given in my previous publications (E-Logos 2001, 2002). Here, I want to

develop in-depth some core principles, categories and notions, which might be crucial for understanding of the whole concept.

First of all, that is the cornerstone notion of CEPLÉ: cosmic evolutionary process of the life on Earth (my abbreviation is Process). Process is an objective phenomenon of reality verified by numerous scientific disciplines, including comparative anatomy, biochemistry, etc., related to evolutionary history and, chiefly, to molecular biology. Significantly, the notion of Process falls precisely into the metanaturalistic area, insofar it incorporates in itself as much *a posteriori* (objective, empirical, and descriptive) meaning as, simultaneously, *a priori* essence, for, it solely can be revealed through rational (intuitive) cognition. Hence, notion of Process integrates *a posteriori* and *a priori* thinking, disclosing the approach for universal comprehension of the phenomenon of the life on Earth. Essentially, Process, in his universal ascending complication, has the Past, Present, and Future existence and emergent development, integrating the entire living matter and - functionally - every living subject on Earth. In other words, Process embraces all processes (ontogeneses) of all the subjects (living active organisms: biological, personal, and societal) of the life on Earth, determining, through the functional belongingness (usefulness) to CEPLÉ, the healthy ontogenesis of any living subject on Earth. In this, to my view, the scientific value of Process may be comparable with such fundamentals as Newton's "Universal Gravitation" or Maxwell's "Electromagnetic Field".

The other basic notion, which stresses the universality of the life on Earth, is 'subject'. In Cosmist philosophy 'subject' means the *integrated functional subject*, which ever integrates autonomously and hierarchically other subjects (to be the functional whole) and, simultaneously, always being functionally integrated by the higher organised subject (organism). In other words, from the Cosmist point of view *subject* means every living organism on the Earth: molecule, cell, biological organism, biosphere, human being, family, community, social body, society, mankind, and, ultimately, Process itself (CEPLÉ) - the one common whole cosmic evolutionary process of the life on Earth.

Another cornerstone notion is 'emergent future', which means the successive appearing of the integrated macro-level of a subject's (man's) wellbeing⁹ ontogenesis: the university for a schoolboy, the vocational body for a graduate, etc.). In this, the term 'emergence' substantially has the accepted meaning (in evolutionary thinking) of the rise of a system that cannot be predicted or explained from antecedent conditions.

Further, I would like to stress on the cosmist meaning of the term 'society'. This one has not prevailing political meaning, but precisely relates to any community, structure, organisation, or any other socially functioning body of people having common purposes of their organisation.

It is also important to discern the meaning of my terms 'cosmist' and 'cosmic': the former lays the stress on two points: (a) on the intrinsic *subjective* origination of the primary perceptions of man's creative activity; (b) the *deliberate* character of a person's creative activity, aimed at the achievement of the most desirable possible state of adaptation on the current level of her/his existence and, simultaneously, of the gratifying

ascent on the successively higher level of the person's entire wellbeing ontogenesis. In other words, a person performs cosmist creative activity basically on his/her own. In turn, the term 'cosmic' particularly emphasises that a subject is ultimately the function of Process. Finally, typing the word 'Cosmist' from the capital letter or using Italics I accentuate its reference to my original philosophical system.

Next, the term 'creativity' has no correlation with supernatural factors, but designates precisely a person's inherent natural ability and energy to create: to originate, to design, to invent, to bring into existence, etc. new products, or results, or effects, etc. of one's creative activity.

Finally, I stress the definition of contemporary civilised man (Man) as the equal (in comparison with Nature-Biosphere and Society), autonomous, and determining evolutionary element, who is solely capable to preserve the life on Earth and to continue whole Process (CEPLE) to its emergent future wellbeing. The most significant quality of man (any subject) is his or her Basic Cosmist Functionality (this notion is defined below in the text).

Original cosmological principles lay a foundation for the advancement of the framework of ontological assumptions - the so-called system of Absolute (relative to all-embracing evolutionary Process) Cosmist (universal, functionally intentional realisation of the transcending satisfactory ontogenesis of any subject - living organism: biological, personal or societal, including man primarily) Wholism (with reference to universal functional integration of any subject into one whole - self-unfolding and evolutionary ascending Process).¹⁰

Process is the primary, basic, and ultimate (ever-evolving) organism on Earth. Process (*cosmist*) philosophy is an organismic philosophy. Noteworthy, in this meaning, Process is clearly discerned from the well-known Gaia hypothesis (referring to J.Lovelock and L.Margulis, biosphere-"Gaia" is likewise viewed as a single, self-regulating organism): CEPLE has the future emergent stages of evolution, while Gaia is a phenomenon of the present state. Likewise notably, the notion of Process introduces into scientific activity equally both the *subject-object* and the *subject-subject* pattern of scientific cognition, establishing the truly wholistic¹¹ comprehension of our living world.

It is likewise significant that Process is a notion, which refers to *cosmist dualistic* type of thinking. The latter denies definitely the search for origins and developmental causes of evolutionary process of Earth's life but takes Process how it IS, concentrating on the factual exploration of Process's existence. What does the factual exploration of Process precisely mean? To my mind that is the positive disclosing of objectively verified properties (inherent characteristics) of Process for the purpose of rational revealing the laws (substantive and universal qualities) of Process's existence. Factually, at least the following substantial attributes of Process can be specified:

1) *Cosmic* origin. This fact does not depend upon any of the existing idealistic assumptions (not validated by experiment: Evolutionism, Creationism, Pan-Spermia, Big Bang, etc.) of the origination of the life on Earth; in any case, the life on Earth has developed from cosmic matter and energy.

2) *Universality*.

3) *Evolutionary* (self-unfolding) and *ascending* (in complication) essence.

4) Essence of the *emergent* evolution.

5) *Cephalization*. That is an evident law of Evolution, which has been proved as through the study of fossil records as, nowadays, on the molecular level. (How not to remember here Plato's 'dictatorship of philosophers' as a resolution of ideal social organisation?)

6) Process's *autonomy – evolutionary independence* (from our scientific explanation of its origin and self-unfolding: Process is, because it IS).

7) The fundamental law of Process is the *special evolutionary status of man*. Man is the forefront of Process (CEPEL) and s/he is an equal element with Nature (Biosphere) and Society. That is the chief conclusion from my philosophical cosmology. Therefore, Man is capable both to free her/himself from harmful influences of the physical and societal (ecological) environments, and to transcend (going beyond, or rising above) societies that does not suit his or her personal growth.

Herein, a historical figure of Aleksandr Solzhenitsyn, a novelist (Noble Priser, 1970), is relevant to be mentioned. Solzhenitsyn fearlessly transcended the all societal constraints ('societies'): eight-year imprisonment, government pressure and censorship, forcible deportation to the West (1974), and has carried out ultimately his cosmist assignment - informed the world about the techniques of terror and resulting moral debasement in the USSR, and exposed the nature of the Soviet system. Eventually, he has returned (in the 1994) to his native land as a very respected citizen. His life's ontogenesis can be fairly considered as wellbeing (healthy) one. At any rate, up to the present, in his 85th year, Aleksandr Isayevich is in good spirits, active, and full of creative plans.

This example definitely shows that man ultimately is a function of Process, but not merely of biosphere or the society.

4. COSMIST EPISTEMOLOGY: THE TRIUNE NATURE OF HUMAN KNOWLEDGE

The evolution of the life on Earth is a universal process (Process), which is scientific evidence. If this is a matter of fact, then I claim that the all subjects of life, including man primarily, are reasonably the functions of Biosphere (regional ecosystem), Society (the societal structure) and ultimately the one whole evolutionary process (Process). In consequence, the recognition of Process as the absolute substance of the evolution of Earth's life logically permits the 'functional reduction' of any subject of life (of man, primarily) to its/his/her Basic (also called by me as Cosmist) Functionality.

The proposition of Basic Cosmist Functionality leads logically to claiming two significant corollaries: a) exclusively subjective (personalist) level of consideration is appropriate for universal comprehension of life phenomena on Earth, and b) exclusively

cosmist functional systemic approach might reach the universal comprehension of the life phenomena on Earth - biological, personal, societal.

It is necessary to emphasise: Universal knowledge is always rational knowledge, and the latter, in turn, is always reducible knowledge. Significantly, Cosmist approach does not seek for common structural-functional (morphological-functional) reduction: to organism, organ, cell, gene, etc. In contradistinction, Cosmist concept, relying on the own original cosmological and ontological principles, is aimed at the opposite form of primarily *functional* (*functional-systemic*, *cosmist-functional*) consideration of the life on Earth. In other words, I propose here a novel universal bio-reductionism ('bio' has the sense of *bios* - of life), which has true functional essence. It means that *universal functional bio-reductionism* categorically does not depend on the common morpho-functional approach: of reducing living phenomena from biosphere to a population, organism, cell, organelle, gene, etc.; or from mankind to a society, social body, family, and man ultimately - a member of the society. On the contrary, Cosmist 'functional' bio-reductionism signifies that every living subject (organism) on Earth (man, primarily) is reduced primarily to the *health-design*: its/his/her basic (cosmist) inherent and distinct functionality (BCF).

From this basis I claim the existence of three functional macro-orders of man's being (functioning):

Homo Sapiens *animalis* (HSA) - the direct function of Biosphere.

Homo Sapiens *sapiens* (HSS) - the direct function of Society.

Homo Sapiens *cosmicus* (HSC) - the direct function of Process.

Homo Sapiens *animalis* and Homo Sapiens *sapiens* (HSA and HSS) are the object (and subject) of numerous natural, human, and social sectoral sciences, including philosophic anthropology, which originally treats individuals as both creatures of their environment and creators of their own values. Furthermore, it argues that human nature is complex and dynamic, thus being constantly able to rediscover and create itself within the confines of its biology and culture. In contradiction, from the Cosmist point of view, human behaviour and wellbeing are determined not exclusively by biological, social, and environmental factors, but, equally and ultimately, by the person's functional belongingness to Process.

At any rate, both HSA and HSS ever are Bio-Social creatures, and never Bio-Social-COSMIST person, as Homo Sapiens *cosmicus* (HSC) is. In other words, HSS is always a bio-organism, social actor, and unique person truly in his adaptation to the society. As opposed, HSC is likewise a bio-organism and social actor, but s/he is also a COSMIST agent of carrying out his or her inherent functional (personal, specific) contribution to the wellbeing of one common Process. As a corollary, Cosmist philosophy challenges to replace "being" (a basic concept that serves as a clear starting-point for any serious metaphysicist) by "functioning" as a more basic Cosmist concept, which points out on the necessity i) of active evolution for every living subject and ii) man's *personal responsibility* - for the realisation of his/her *basic cosmist functionality*.

Given the above substantiation, I now draw a Cosmist epistemological conclusion: All knowledge about man has its origin in two sources: a) in objective (*subject-object*) exploration of man as the biological organism and psychosocial agent; b) in *subject-subject* comprehension the human being's subjective realisation of the personal experience - equally both of present and past experience and of the cosmist experience of his or her safe and satisfactory *emergent future*, which emerges from human ability to create the transcendental knowledge and values¹² of the person's inherent functional integration into the emergent future levels of his or her wellbeing ontogenesis.

Another crucial perception of Cosmist epistemology establishes the triune nature of human knowledge: 1) of man's (being HSA) biological and biosocial innate patterns of behaviour; 2) of man's (being HSS) social learning of objective realities or predefined norms and, as well, of the lived experience: the person's meanings, relations, values, patterns, etc.; 3) of man's (being HSC) - cosmist perception of the world for the as much *actual* (responsive, problem-based, coping, adaptational - *micro-evolutionary*) as *transcendental* (inherent, transcending, cosmist, creative - *macro-evolutionary*) realisation of the person's unique safe and satisfactory route of the ascent on the future emergent levels of his/her entire wholesome ontogenesis. In relation to a person's macro-evolutionary process, man equally uses both *subject-object* and *subject-subject* patterns of the world's cognition.

In sum, in Cosmist approach all knowledge about a person is derived as much from objective study of the man (biological or psychosocial) or consideration of her or his subjective present and past experience (both of empiricist and rationalist origin), as from the future emergent experience coming from the transcendental grasping by a person of the (cosmist) mental *virtual constructs* of his or her functional integrated wellbeing in the emergent future. In this comes the task to explore thoroughly the 'process of processes' of individual's wellbeing - of the unity of evolutionary levels: of the constant macro-evolutionary ascent of man on the successively higher - of the emergent future - levels of his/her wellbeing, but, simultaneously and primarily, of the micro-evolutionary adaptational development on the given macro-level - up to the highest gradation of equilibrium and stableness with the environment. Hence, cosmist epistemology brings the possibility to comprehend the man's both 'micro-evolutionary' stableness on the given macro-level of the ontogenesis (through her/his adaptational creative activity) and 'macro-evolutionary' transcendence - going above this stableness (through cosmist creativity and agency).

Next, in my discourse, the fundamental principle of CosmoBiotypology emerges. CosmoBiotypology is a positive Cosmist law, which states: Every living subject on Earth is a natural (more accurately, in my context, - *Cosmic*) function of the superior congenerous subject (superior organismic level of its/his/her integrated organisation), ultimately - of Process itself, and, thereby, every subject (man) naturally bears the biotypological traits of this intrinsic basic functionality and likewise naturally relates to the appropriate (biological, ecological, social) environment.

Principle of CosmoBiotypology - a crucial element in the entire undertaken Cosmist theoretical building. This principle serves as a real premiss (and 'warrant') that the end of *rational* (and, moreover, - *universal*) explanation of the man's personal wellbeing will be reached. Really, this basic principle establishes the functional identity (and thus the universal meaning) of the three macro-orders of the man's (subject's) entire wellbeing: Of his/her gratifying subjective feelings and perceptions; of his/her adequate position in the social (ecological) environment; and of his/her appropriate physiological constitution (biotype). The latter naturally serves to the fulfilment by the man of his/her *basic (cosmist) functional* assignment. Thus, CosmoBiotypological principle reasonably aspires to universalise biomedical, social, and human knowledge. In other words, CosmoBiotypological approach aspires to unite rationally the man's subjective knowledge with the objective knowledge about the man - to unite ever-incompatible scientific and humanitarian paradigms.

5. COSMIST PHILOSOPHY, TECTOLOGY, AND GENERAL SYSTEMOLOGY: ESSENTIAL PARALLELISM

Kachanova T.L. and Fomin B.F. (1999) divide the entire fundamental knowledge into four sources: philosophy, physics, mathematics, and general systemology. On their account, philosophy explores the 'first principles' - basic fundamentals and the universal laws of being. Basing on universal ontology, the philosophical science is categorical and aprioristic in its fundamentals. In essence, philosophy is irreplaceable in actualising the process of the becoming of paradigmatic knowledge (of its the very initial basic forms). In turn, physics investigates the common principles and laws of the world's structure in the process of real empirical study of Nature. The chief purpose of the physical investigations is the penetration into depths of a structure of substance and nature of interaction, cognition of essence of the phenomena and processes through disclosing fundamental laws of the objective world. Next, mathematics originates utmost abstract world of universal symbolical designs, creating ideal images without any communication with empirical experience.

Alongside with philosophy, physics and mathematics, *general systemology* should become one more source of forming fundamental scientific knowledge. It carries in itself the universal meanings that are essential to all sciences. General systemology creates the special world of systems, in which every system represents in its form the quality of being utmost general (universal), as well as represents its constructively comprehended image, which has the basis in empirical experience, transmitting the senses of objects and phenomena of the real world, but embodied in abstract interpretative forms (Kachanova, 1999).

Kachanova and Fomin are followers of the general line of a Russian systemology development. As considered, systemology was founded by A.A.Bogdanov (Malinovsky), outstanding Russian physician and philosopher,¹³ by virtue of the emergence of his famous "Universal organising science" ("Tectology").¹⁴ Tectology

was created by Bogdanov to address issues such as holistic, emergent phenomena and systemic development. This new constructive science builds the elements into a functional entity by using the general laws, which determine the organization. According to his "empirio-monistic" principle (1899) he does not recognise differences between observation and perception (i.e. - between *a posteriori* and *priory* knowledge) and thus creates the beginning of a general empirical, supradisciplinary (yet not supernatural) science. Starting point in A. Bogdanov's "Universal Science of Organization - Tectology" (1913-1922): nature has a general, organised character, with one set of laws of organisation for all objects. As likewise recognised, Bogdanov's Tectology is the "missing link" of the natural sciences, the discipline of 'self-organisation', the synthesis of higher complexities. Noteworthy, Bogdanov gave the definition of a system: "System is a multitude of interconnected elements that possesses a common (systemic) property which is not reduced to the properties of these elements" (Bogdanov 1989, p. 48).

Here is an apparent analogy between the "General systemology" advanced by Kachanova and Fomin and "New Tectology", which is characterised by John A. Mikes (1997). New Tectology is likewise utmost general (universal) covering the domains of material sciences, computer science, physical and life sciences, cognitive sciences, economy and social sciences, and developing a natural science philosophy to pave the way for further development of the practical disciplines. At the same time,

The notions in A. Bogdanov's "Tectology" outlined the concepts and concerns of Complexity Theory by a full 50 years in advance of the chaos and fractal mathematics. All that we can intone is that we are still at the beginning of its understanding. (Mikes, 1997)

The further development of general systemic approach in Russia brought to life the other unique phenomenon of the functional trend in the systemic investigations. Founded by prominent physiologist A.A.Ukhtomsky, the functional approach was realised and brought off in striking forms of the general theory of functional systems by Piotr K. Anokhin, functionalism concepts by Alexandr M. Ugolev, need-informational theory of higher nervous activity by Pavel V. Simonov. The latter considers human personality as an individual unique composition and internal hierarchy of his vital, social and individual needs.

Next, at this point, it is relevant to bring two evaluations from Russian renowned scientists, which relate to the scientific legacy of P.K.Anokhin and A.M.Ugolev.

...A.M.Ugolev is an author of the conception of "Universal Functional Blocks", which underlies his consideration of the basic principles of evolution on the whole. He had also created an integrated interdisciplinary science - *trophology*, which considers the whole totality of the processes of assimilation, starting from the cellular and ending on the planetary level. (Iezuitova 1996, p.2)

"A distinguished contribution of P.K.Anokhin is the elaboration of the "systems approach" to the study and understanding of functions of the organism on the basis of his "Functional Systems" theory. Universality, constructivity, and practical usefulness of the principal scheme of the functional system allow its application to phenomena of different classes (machines, organisms, society). According to this

theory, a functional system is an elementary integrative unit of any activity ending with a *useful result*. It makes the functional system an isomorphic principle for systems of different classes which end with a useful result." (Sudakov 1998, p.171)

CONCLUSION

I designed the previous part of the paper intending mainly at two goals: 1) To display that the proposed Cosmist philosophy is similar to other attempts, having been undertaken and being undertaken, which have the core property of aiming at the integration of *a posteriori* and *priory* knowledge; 2) To show that we already have an almighty scientific means and apparatus to reach the level of universal knowledge.

Indeed, besides the aforementioned resources of functional-systemic approach (including the author's *cosmist-functional* variant) and the predictions of tectology and general systemology, we are to point out to the achievements of chaos theory and control theory, advances of evolutionary programming, genetic algorithms, artificial intelligence, information systems, non-linear dynamics, and other main trends in current complexity thinking.

As a corollary, the crucial point at present is not the further perfection of scientific and mathematical means, but precisely the realisation of the needed methodological bases, capable of scientific "universal organisation". The latter is accurately the sphere of *metanaturalistic* explorations. Naturally, the Universal Organisational Science lies within the systemic explorations. In other words, the 21st century may become the 'century of systems', as well as the 20th century was. Then, I do hope that my exploration might be of certain use on this great way.

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NOTES

¹ For instance, to my mind, the *meta*fundamentals are Gravity, Electromagnetic field, Affinity, etc.

² A cornerstone of modern scientific mentality.

³ 'Cosmist' is a basic term in my theorising, which reflects the subjective (personal, responsible) and universal (in relation to a subject's 'Basic Functionality') integration of a subject (a person) into the surrounding world. Simultaneously, the term 'Cosmist' refers to my original philosophising. The detailed definition of the meaning of the terms 'cosmist', 'subject', and 'Basic Functionality' follows below in the text. The term 'cosmist' functions in the text both as adjective and noun (mainly as adjective). The analogy can be drawn with the term "personalist", which likewise functions both as adjective and noun.

⁴ Exploring Process, for instance.

⁵ Thus, being questionable and contestable, and, hence, always impracticable.

⁶ Which thus is not an issue to being disputed, but which is clear and inarguable, like universality of Earth's life, or the 'cephalization' essence of the evolutionary process on Earth.

⁷ The *subject-subject* pattern means that an explorer (a subject: scientist, doctor, etc.) treats any phenomenon of the one common evolutionary process of the life on Earth (Process) not simply as an object of scientific observation but likewise as the equally (in relation to her/him) integrated - in relation to Process - subject, which (who) has its/his/her own functional assignment and, thus, its/his/her own as past and present as emergent future being and wellbeing. In turn, the characterisation of the notion 'cosmist functional assignment' will follow below.

⁸ Distinctive for evolutionists-Darwinists.

⁹ I would like to use my core term "wellbeing" as 1) a noun - as a state of being contented, healthy, etc.; and 2) as an adjective, having the sense of 'successful, satisfactory, healthy, safe, happy, etc.'.

¹⁰ Please, see the entire characteristic of the ACW system in my previous publication (E-Logos 2001).

¹¹ I prefer to use the term 'wholistic' to draw distinction of my Cosmist approach from the classic standpoints on holism.

¹² Primarily intuitive - of virtual axiological and abstract essences, which further naturally acquire the teleologically real character.

¹³ It is ironical that philosophers know name Bogdanov as "a target" of crushing critique of Lenin in "Materialism and empiriocriticism"

¹⁴ His large work on Tectology was started in the 1913 and finished in the 1922 (it contains 3 parts).