

## Editing the English version of the *Biocosmology Initiative*, year 2022

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Редактирование английской версии *Биокоσμологической инициативы*, год 2022

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The first edition (its English version) of the *Biocosmology Initiative* (BCI), among English-speaking scholars, met with both approval and difficulty in grasping some of the key elements of the Initiative’s text. In this matter, from the position of secretary of the Biocosmological Association and in active interaction with the BCA-associates : I have made efforts to improve as much stylistic and grammatical, as the lexical properties of the English-language text of the BCI. Quite unexpectedly, it turned out that we first needed to change (correct) the lexical content of the leading terms – so that they would correspond to the Biocosmological (neo-Aristotelian) content of the Initiative put forward. Above all, the section “The Bipolar nature of scientific knowledge” demanded lexical development. Whereas other edited sections have undergone mainly stylistic and grammatical improvement; that is, leaving the lexical content the same – this applies to the sections of the document: “PREAMBLE”, “Basic Principles of the Biocosmological Approach”, “On the national (civilizational) nature of science”, and “FINAL SUMMARY OF THE DOCUMENT”.

### Addressing the scientific community – the *Biocosmology Initiative* (edit in 2022)

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#### *PREAMBLE*

A century ago, Vladimir Ivanovich Vernadsky (1863–1945) raised the issue of introducing new cosmological foundations into science. He argued as follows: “It took many years before I realized (in the mid-30’s) the backwardness of philosophy (in its global scope) at the historical moment we are experiencing in the life of mankind... It stands in essence on grounds of the 17<sup>th</sup> century, unaware

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of the impossibility to grasp new phenomena with ‘old bellows’ ...” (taken from the scientist’s book *Philosophical Thoughts of a Naturalist* (Filosofskie mysli naturalista) [M., 1988. P. 237]). There is no doubt, in view of the current global crisis – the time has actually come for the scientific community to reconsider the supremacy of the 17<sup>th</sup> century’s cosmological (defined by explorer’s stance in the universe) foundations of science; but instead to take as a basis for new fundamental principles of scientific and cultural activities, consistent with the evolving needs of the anthropocene, the individual and society in the 21<sup>st</sup> century.

The emergence of the *Biocosmology Initiative* was preceded by a long way of scientific pursuits and consistent contributions by many scholars of the Biocosmological Association (BCA). Eventually, the *Initiative* was accepted and launched at the 22<sup>nd</sup> International Symposium on Biocosmology (22ISBC), held as part of the 7<sup>th</sup> International Conference on Global Studies (organized at MSU, June 2021). Now, the needed Biocosmological scientific principles and the sought-for path (its bases and purposes) for scientific evolvement are ready to be presented to the scientific community. The main challenge for the *Biocosmology Initiative* is to make a *decisive U-turn shift* (for 180 degrees) in relation to the contemporary (21<sup>st</sup> century) scientific knowledge; and which, in our times, needs to be based on the recognition and actualization (in scientific theory and practice) of the universal Triadic nature of rational knowledge, i.e. the substantially Triune and Triadological essence of scientific and philosophical activity and of the achievable results (successes).

### MAIN CONCEPT

***Basic Principles of the Biocosmological Approach.*** The Biocosmological approach first of all states that the real world is a Single (one whole) natural Dynamic Living Cosmos – *Biocosmos*. Our other essential starting point, in connection with the universality of the *Biocosmological* approach : the widespread term “*self-*”, which primarily refers to the individual person (the individual self – “my own very self”) as a subject of her/his own experience of phenomena (through personal perceptions, emotions, thoughts, etc.). Therefore, the term ‘self-’ does not fit the Biocosmological worldview at all. In fact, the meaning of the English *self-* (German: *Selbst*) fundamentally means (and provides, in human consciousness) the separation of the individual (and her/his selfishness) from the world around him; whereas the Aristotelian (*Organon*<sup>i</sup>Kosmological)<sup>ii</sup> approach requires precisely the reverse merging of a subject (man, first of all) with the world that naturally surrounds him.

The crux is that the cornerstone notion of a '*subject of life*' (*subject*, for short), that is introduced in a Biocosmological inquiry – the latter has the universal significance. In other words, '*subject*' means, in a universal way, a physical – natural, cosmic, natural-scientific, autonomic integral entity. Substantially, this concept embraces both as the whole living world-Cosmos (living Nature) – *Biocosmos*; as each subject of this Biocosmos – from a free quantum microparticle to a substantive person and society-civilization, and all of humanity.

Therefore, we replace 'self' with '*Auto*'<sup>iii</sup> – in order to give universality to the naturalist Dynamic essence of a Biocosmological subject, thus stressing the priority of *internal* inherent potency-powers and of vigorous autonomy in the vital activity of each subject of life. Ultimately, as Biocosmology states : the primary quality-virtue of a natural *subject* is its/her/his inherent results-oriented (telic – *Entelechist*) lifelong *Auto*-evolution (from within, throughout the subject's ontogenesis) – with the eventual achievement and exercising the unique Functionalist (effector) abilities; and that everything is carried out on the basis of constant *Auto*-maintenance and *Auto*-controlling, in a homeostatic 'corridor of normality', of all its vital functions.

In this Biocosmos every physical (from *physis* – Greek Φύσις; and the title of Aristotle's work *Physica*) : every physical *subject*, from physical fields, forces and energies of nature, to a free particle, atom, molecule, bacterium, subject of plant, animal and sociocultural (mankind-humanity) worlds; and in Vernadsky's approach: the stratum of *Geo*-, *Bio*-, *Socio*-, *Techno*- and *Noo*-spheres. Being in the Biocosmos, every physical subject naturally subordinates to and follows the *Biocosmological* – the universal, timeless and omnipresent laws (the foundational principles), they are:

**-the Dynamic** (*Hylemorphist* and *Entelechist*) **coherent oneness** of a subject : its Organicist *active-evolutionary Auto*-existence and *Auto*-changeability – in the ontogenetic process of the subject's *Auto*-ascending evolution (in the complexity of organization – within the surrounding Biocosmos); which is realized through the inherent (to any natural-cosmist subject) *inner entelechist* powers-potentials;

**-Bipolarity** : unchanging existence of two opposing centers (poles) of the integral life organization in a subject;

**-Triadicity – in the Triune** : the poles are united by means of the median base-axis-Center; the integral organization of a subject's life and ontogenetic *Auto*-evolution is carried out through the coherent

and consistent vital functioning of the median *homeostatic* Centre, which is the only one capable of synchronizing and harmonizing the activities of both poles;

**-Circular Cyclicism** : natural dynamic, rotational and alternating dominance (of the poles and the medium Centre) in organizing the subject's integral and coherent life;

**-Quaternity (Four-sidedness)** : the essential inherent concurrent vitality of both poles; and, consistently, under the influence of their dominant activities – the two polar cycles in the subject's circadian life activity (as are, by physiological analogy – the two circadian cycles, “Sleep” and “Wakefulness”);

**-Pentavalency** : the essential meaning of the median Axis-Center – as an integral basis in the existence of a subject's poles and the circular realization of all its life cycles; thus, of all the five essential and autonomous in their organization elements;<sup>iv</sup>

**-Ontogenetic finitude** (of a subject's life course);

**-Functionalist (Entelechist) inherent Heterogeneity** of Biocosmos subjects;

**-Dynamic hylemorphist Hierarchicality** – in the realization of the general order of natural, coherent with other subjects and wholesome life activity and Auto-evolvement of the Biocosmos subjects;

**-Entelechist dynamic Auto-ascendance** (in successively increasing levels of complexity, throughout ontogenesis) of the subject's life organization – for the ultimate Functionalist fulfillment (into the Common Good) of its/her/his autonomous *entelechist* coherent wholesome contribution.

**On the national (civilizational) nature of science.** 150 years ago, Russian scholar Nikolay Ya. Danilevsky has produced and advanced the foundations of the civilizational theory of world evolvement. In the book “Russia and Europe” published in 1871, the scholar proved the essential independence of the Russian civilization (as the subject of world sociocultural evolution). He also proclaimed the phenomenal evolvement of the Russian cultural-historical type, including its scientific domain; and the essential significance of this civilizational movement for the fate of the world. The great scientist's prediction proved completely correct. The *Organicist* civilizational essence of the Russian social organization manifested itself in the history of the 20<sup>th</sup> century both in terms of (Soviet) social and economic development, and in terms of the formation of the inherent scientific (naturalistic – *Organicist*) tradition; with its “Russian” schools of *cosmism*, *Organicism*, *cyclism*, *pulsationism*,

*functionalism*. Especially as substantiated in the BCA, a conceptual awareness of the ‘*Russian school of civilizational studies*’ is required (see BCnA<sup>v</sup>-publication, [2020 – DOI: 10.24411/2225-1820-2020-00006]); where the importance of the *Big Five* outstanding scholars (N.Y. Danilevsky, K.N. Leontiev, V.I. Vernadsky, P.A. Sorokin, L.N. Gumilev)<sup>vi</sup> is acknowledged.

First of all, as N.Ya. Danilevsky discovered a century and a half ago: the sociocultural (hence also scientific) world cannot be similar (monolithic), uniform and homogeneous (unified for all). On the contrary, humanity naturally consists of different “*cultural-historical types*,” heterogeneous in their historical “*beginnings*,” accordingly – each has a national *cultural-historical essence*; hence the inseparable destiny to make an inherent contribution to the natural common for the whole world – a peaceful evolutionary movement ahead. This is vividly illustrated by how the Anglo-Saxon civilization, now dominant both in the West and in the global world – how this “cultural-historical type” has been able to succeed (since the 17th century); for example, in imposing on the entire global world a commitment to an exclusively Transcendentalist (Dualist) cosmology (just inherent in its Type), thereby forcing scientists worldwide to follow it unquestioningly.

In other words, the results of one-nation’s (civilization’s) dominance have manifested a radical adherence to a single unified *Transcendentalist* cosmology, which provides the *ideal-abstract* (mathematical) conditions and opportunities for the successful confrontation of human consciousness with the *external* material world-cosmos, and which is fundamentally recognized as Chaotic. Such a world, following Plato, is taken in the modern academic community in the meaning of an essentially aimless “*physicalist*” world; and which is a matter both for its anthropocentric “*idealistic*” understanding and explanation, and (ultimately) for the constructive “re-creation” of nature by man – in the ultimate goal of the complete subordination of natural forces and potencies to human consciousness. All this turns out to be possible, in a fundamental way, exclusively on conditions of unquestioning submission of scientific thought to the monistic, properly *Transcendentalist*, cosmological scientific foundational principles – of the objective positive *mathematical-physicalist* knowledge about the real world; while these fundamental scientific principles (and the “*scientific method*” in general) were put forward and accepted as the basis as early as the seventeenth (17<sup>th</sup> – !) century.

***The Bipolar nature of scientific knowledge.*** In turn, as Ecclesiastes argued, there is “*a time to scatter stones, and a time to gather stones: everything has its time.*” Undoubtedly, the era of analytical (mathematical-physicalist) knowledge was (and still is) absolutely essential. But, because of the natural cyclicity in the evolvement of the world : in the present, the Integral sociocultural epoch

naturally and inevitably enters its rights, in the current 21<sup>st</sup> century; and as it was substantiated by Pitirim Sorokin, already 80 years ago, with the completion of the release of his four-volume *Social and Cultural Dynamics*, in 1941<sup>vii</sup>.-Exactly this work presented to the world the Triadological Dynamic civilizational theory of the great Russian-American scholar, including his foundational principle of *Integralism*. The latter, in an essential way, equally requires an understanding and knowledge of both poles of scientific knowledge; because an Integral basis equally brings to bear (merges) the polar powers and means – for producing a true Integralist cultural knowledge. In this light, the biocosmological ideas expressed by Alfred N. Whitehead, in his book *Process and Reality* (and who was a colleague of Sorokin at Harvard University, but worked at the philosophy department), are also important.

The core is that scientific knowledge is naturally Bipolar: i.e. scientific knowledge always contains the Two Types of polar (and incompatible with each other directly) – the Two opposite Types of scientific approaches; but which are equally indispensable for the One, coherent whole Triune, all-round true rational (scientific and philosophical) knowledge. It is essential that each of the Three Types of Scientific Knowledge (Transcendentalist, Organicist, and Integralist) is capable of knowing the real world only in the realm of its potentiality. For instance, the modern dominant Western (Dualist) science is essentially based on the method of categorically objective, mathematical-physicalist positive cognition; all of this is rooted in the Transcendentalist-Type approach to comprehensive studying the physical reality, and which principally realizes the opposition of human consciousness (with) and proves its superiority over the physical world. In a logical way, therefore – Western (Dualist) science is capable of establishing exclusively grounds and conditions that cannot help but remove from scientific inquiry and ban for scholars the natural-scientific relevance of endogenous *telos*-propelling<sup>viii</sup> (Bio)cosmic forces-causes acting *from within* the subject.

A well-known judgement by Cicero says: “the Greeks term by the *Telos*, the highest, ultimate or final Good.” In respect to Aristotle’s science, another statement is essential, of John Herman Randall, Jr. [1962]<sup>ix</sup>, where a renowned scholar concludes that the Aristotelian “rupture with Plato is complete: natural teleology has nothing to do with mind, and «purpose,» which in English suggests «conscious intent,» is an erroneous translation of *hou heneka* and *telos*.” J.H. Randall reveals the crucial issue that “*Physis* for Aristotle is not a Platonic «soul»: it is something «completely new»”. At the first priority, therefore, Randall stresses that what is needed is the ability “to detect *unconscious Platonizing* (italics is ours. – Eds.)” [1962]. Likewise, F.E. Peters, another recognized authority in Classics Studies completes on the issue, stating that “The doctrine of teleology is basic in Aristotle: (...) It is explained in various places that the *telos* is the Good (Phys. II, 195a; Meta. 1013b), and in

Meta. 1072b the ultimate Good, and hence the final cause of the entire kosmos is the First Mover, the noesis noeseos of 1074b (see kinoun, nous).” [Peters, 1967, p. 192].

William Emerson Ritter, a distinguished naturalist and philosophical biologist, and who is considered to be the first biologist to propose a theory of systems, and recognized as the originator of the term *organicism* for biological scientific activities – the renowned scholar, in his famous work “*Why Aristotle Invented the Word Entelecheia*” [1932]<sup>x</sup>, here the scholar makes a number of crucial generalizations, understandings, and conclusions. His big takeaway is that “the teleology for which Aristotle is roundly condemned by many present-day biologists he was not at all or very slightly guilty of,”; and further Ritter continues, in his concluding statement, “On the other hand those who condemn the teleology which he (Aristotle. – **Eds.**) did hold, that of completed wholeness as essential to the adequate interpretation of any phenomena of nature whatever, are in so far not only failing, themselves, in reaching such interpretation, but are tacitly denying the possibility of it.” [Ritter, 1932, p. 382] The gist is that Aristotle’s *Organicist* teleology (*telos*-logy) and *OrganonKosmology* as a whole is fully opposite and polar to Plato’s Transcendentalism (Dualism). However, as this is brought out by Alfred North Whitehead, in his *Process and Reality* (1929), modern Western rational thought is fundamentally Platonic: “The safest general characterization of the European philosophical tradition is that it consists of a series of footnotes to Plato.” [Whitehead, 1978, p. 39]

Substantively, the guiding principles of Aristotle’s *Physics* are likewise of decisive importance to us. Here, in *Physics* I.2, the founder of the overarching *Organicist* science (*OrganonKosmology*) introduces the *telic cause* – *for the sake of which* (το ου ενεκα – *hou heneka*). In the modern perception of the Aristotelian scientific heritage – this is the *final cause* (Lat. *causa finalis*); however, in the light of aforesaid – this is genuinely the *telos*-cause. But, what is essential : the Stagirite do this as Christopher Miras argues (2004), in terms of three criteria: “something is an end (in the original text τέλος; in transliteration – *telos*. – **Eds.**) if (a) it is last (έσχατον) – that is, is an outcome of some motion; (b) the motion in question is continuous; and (c) the outcome is, as he puts it, the best: (...) For not everything that is last claims to be an end (*telos*. – **Eds.**), but the best (*Phys*.II.2, 194a29-33)”. In any case, moreover, the neologism of Aristotle – his foundational concept of *entelecheia*, as the richly meaningful, compound three-word comprehension (with *telos* as its central component) – to all intents and purposes, in no way can it be translated by the simple one-word “actuality” (but this is done everywhere in the academic world nowadays!).

In this entangled (in quantum physics terms) situation – of the incompatible contraposition between the Transcendentalist (rooted in Platonism) Type of science and the Aristotelian *OrganonKosmology* of the *Organicist* Type of the scientific understanding of the natural world; but which coexist in the

coherent integral Triunity of scientific knowledge – the more we should bring back to life the original (true) meaning of the seminal pillars in Aristotle’s *Organon* Kosmology. Among the primary ones here is the rehabilitation of the original meaning, hence the true understanding of the Aristotelian key concept of *telos*. We have no right to forget the basic concept in Aristotle’s theory, as it is given in the “Loeb Classical Library 288” [1957]<sup>xi</sup>: “The soul may therefore be defined as the first actuality (in the original text – *entelecheia*. – Eds.) of a natural body that has life potentially.” (*De Anima*, 412a28-412b1). Essentially, *entelecheia* is a crucial concept introduced into science by Aristotle himself (the universally recognized Father of science). The latter has a cornerstone significance, in the entire coherent framework of the Aristotelian knowledge (his comprehensive *Organon* Kosmology) – *entelecheia* lies “at the heart of everything in Aristotle’s thinking, including the definition of motion.” [Sachs, 1998, p. 245].

Through careful study, Aristotelian scholar Abraham Bos (1998) has come to the strong, deeply researched conclusion that the generally accepted translation of Aristotle’s most important statement (on the definition of the soul) – the given translation is incomplete, hence incorrect. First of all, the scholar emphasizes that the Stagirite uses the concept *organikon*<sup>xiii</sup> in his definition of the soul (412a28 and b6) – “Arguing step by step, he (Aristotle. – Eds.) arrives at the following definition of ‘soul’ (we also cite the Aristotelian original Greek terms, from the *De Anima*. – Eds.): ‘(the soul-ψυχη is) the first entelechy (εντελεχεια) of a natural body (σωματος φυσικου) which potentially (δυναμει) possesses life and which is instrumental (οργανικον – organikon)’.” [Bos, 1998]. Again, referring to *Physics*, here Aristotle, taking into account the knowledge revealed in the first four chapters : further, the Father of (Organicist) science, in chapters 7 to 9 – he comes to the fundamental conclusion that nature acts for *telos* (whereas the usual English translation “end” is erroneous); but Aristotle’s *telos* means exactly the achievement (in a continuous inherent process) of a completed, wholesome and of superior quality result – the *Organon*-result that is needed for the universal Good.

Nevertheless, as the translation of the *entelecheia* in Aristotle, throughout the modern global academic world, is done through the generally accepted word *actuality* (and while the word «actuality,» refers to anything, however trivial, incidental, transient, or static, that happens to be the case) for that matter, the Aristotelian scholar Joe Sach arrives at the conclusion that in the modern academic world, as far as the legacy of Aristotle is concerned: “***everything is lost in translation, just at the spot where understanding could begin*** (bolding and italics is ours. – Eds.) [Sachs, 1998, p. 245]” In fact, Aristotle’s *entelecheia* is a compound word that is consisted of the three components; in the expression of Will Durant (from his “*The Story of Philosophy*” [1926]): “Entelecheia (εντελεχεια) – having (εχω – echo) its purpose (τελος – telos) within (εντος – entos).” [Durant, 1962,

p. 69]<sup>xiii</sup>. Other Aristotle's leading notions, in addition to the aforementioned *telos*, *organon* (*organikon*), and *entelecheia*; and which are (by Will Durant's definition) "the magnificent Aristotelian terms which gather up into themselves a whole philosophy" – these key concepts also are *hypokeimenon* ("underlying thing", Latin: *subjectum*), *dunamis*, *energeia*, *steresis*, *hyle*, *morphe*, *aether*, et al.; and which state the actual existence of the Aristotelian *Organicist* foundational principles – of Organicism, Dynamicity, Entelechism and Hylemorphism, Bipolarity and Cyclicity – Triadicity of a Subject's Functionalist Ontogenetic Auto-(Self-)evolvment, etc.

*Summing up this section*, we affirm the natural existence of the Two pole Types of scientific knowledge:

- a) the *Transcendentalist* Type, which is implemented in the New Age by modern Western (and global) science, and that is based on the Dualist (Platonic) cosmology; and which is ultimately Anthropocentric;
- b) the opposite *Organicist* Type, based on the principles of the Aristotelian *OrganonKosmology*; and which is ultimately AnthropoKosmist.

The former (Transcendentalist Type of science) deals, in all cases, with the external mechanistic *objective* data (in studying real things and forces; phenomena and processes, causes and effects) : which all is perceived in the realm of homogeneous uniform human consciousness – for the data successive *artificial* mathematical (of Man against Nature) processing and analysis, and consistent conceptual technical constructing; of all of this – aimed at the ultimate Anthropocentric positivist application of the obtained technical results and their progressive incorporation into the world around for the betterment of societal conditions. The polarity of a Transcendentalist science establishes the foundational elemental and structural Uniformity (Homogeneity) – both of the physical world that is perceived and explored, and of the mathematical apparatus that realizes the artificial *idealistic* conceptual constructing of all the successive progress, regarding the person and her environment (geo-, bio-, socio-, and techno-spheres).

The second pole, of the Organicist Type of science, in contrast – here the *internal*, intrinsic natural forces are predominant for a subject (living thing or entity). These inherent *telos*-moving forces-causes are recognized (in Organicism) as leading and contributing (through subjects' ontogenetic wholesome effects) to the world movement and evolvment. The subject's naturalistic *telos*-propelling Organicist forces-causes, both the inherent *dunamei*-potentials and *energeia*-activities – they all carry out the subject's ontogenetic *entelecheia*-route and the eventual successful (its/her/his) wholesome contribution into the Kosmist universal Auto-ascending evolvment – the EvoProcess.

In this foundational (Bipolar and Triadologic) way, the Two Kosmist (and of scholarly endeavor) poles are inextricably united (through the Third, the median foundation) to one another, thus constituting the integral Triunity. Aristotle's inductive method of scientific knowledge confirms this proposition. Here, the Father of science (exactly – the Father of Organicist science; but Aristotle is also recognized as the Founding Father of empiricism) : in his Induction, Aristotle's first-initiative and essential phase of a scientific process (but where the ultimate task is apprehending the subject's *internal* and inherent *telos*-substance<sup>xiv</sup>) – the primary stage of Aristotle's Induction is exercised through direct observation, exactly the thorough external empirical (objective) inquiry of the subject under study. Basically, therefore, this inductive empiricist phase in the research process – it essentially orients a scientist at the task of conducting the direct (naturalist) careful observation-study of the subject's morphological properties and the features of his *dynamic* behavior (motion) in the inherent environment (*topos*). At the same time, an artificial experiment (which provides a mathematical study of the object) is not allowed here, in principle; for, experiment establishes artificial (*Static* – unnatural) conditions for studying the object, hence making impossible the Organicist observation of the subject's *Dynamic* behavior-motion in his natural milieu.

However, especially in the contemporary era, when scientists around the world are conducting their research in all fields and at all levels of scientific inquiry – from the quantum level to the astrophysical study of distant cosmic objects; today, in modern conditions, it is possible to apply the Organicist Type of scientific pursuit only if scholar is using (in his Organicist approach, seeking for the naturalist observation) the objective data already available (in their entirety, as applied to a given subject-matter), and which are obtained by the opposite, of the Transcendentalist Type of science activities. Otherwise, there is really no other way to conduct an effective organicist study of the world-Kosmos (Biocosmos), starting with the observation of the subject's natural dynamic changeability, his behavior and the ontogenetic evolvment-growth of physiological and psychological (and all other, anthropological) inherent capabilities-strengths of a subject under study.

Therefore, finding ourselves in today's 'entangled' situation (in the third decade of the 21st century) : we have the right, in light of the above, to find the two really existing pairs of incompatible (with one another), but inextricably linked (in a universal coherent unity) interactions:

*Firstly*, the '*mutual negation*' pairing : here, the Transcendentalist Type of scientific knowledge disavows the presence of internal *telos*-propelling forces and causes of motion and change-evolvment in the studied objects. In turn, the Organicist type of science denies the experimental, mathematical-physicalist method – rather, the artificial and Static study of the physical objective world. The reason is obvious, since the Transcendentalist method excludes Dynamic observation of

the natural living subjects of the real world under study. Consequently, as much the subject's residing in its natural (inherent) surroundings, as its Dynamic realization of the ontogenetic, *entelecheia*-propelled Auto-ascending process of evolvment – both stay without the *dynamical* observation and Organicist exploration of the subject's eventual carrying out his inherent (Functionalist) *telos*-contribution to the world evolutionary movement, the Auto-ascending (in complexity) EvoProcess.

*Secondly*, it is a pair of '*interdependent coherence*' : here, regarding the objects under study, the Transcendentalist Type of scientific knowledge takes *for granted* (with no proof) the specific purposeful behavior of a subject under study; thus making the detectable specific dynamic processes just the object to an external mathematical description. On the contrary, Organicist science takes *for granted* the objective all-encompassing data that is delivered to the academic world by Transcendentalist knowledge. However, in contrast : the Organicist approach uses them to directly observing the naturalist *dynamic* living subjects and their autonomic life *dunamei*-potentials and *energeia*-activities, and which are aimed at the inherent, but efficiently wholesome *telos*-contributions to the world-Kosmos Auto-(Self-)evolvment (EvoProcess); and which are realized at all levels of their existence (from quantum particles – to atoms, molecules, organs and organ systems, biological and social organisms, civilizations, Biosphere and Noosphere, etc.).

*The Last, but Not the Least* : we complete this section with a few more important statements:

- In fact, it is impossible to carry out the study of a given matter by means of a scientific method that produces the proof (and is based on evidence), in respect to both pole Types of knowledge : as much for the *external* data (of objective, mathematical-physicalist origin), as for the *internal* – subject data, that are essentially Entelechist and Hylemorphist (of the *Organon*-Functionalist essence). Similarly, in metaphor, it is factually impossible for a man to be both Sleeping and being Awake. A scholar, therefore, who is seeking for comprehensive knowledge : s/he actually needs to be ready for accepting the results-data from the polar Type of scientific knowledge for granted (without the proof, that is not produced by the pole Type of knowledge, which s/he follows). These are (which are taken *for granted*) : the subject's natural Dynamic *internal* (inherent) *telos*-propelling existence and behavior – for a Transcendentalist scholar; and, vice versa – the entirety of objective (Static and experiential) data, in relation to a given subject-matter, that are obtained through positive mathematical-physicalist processing and the analytical approach to studying the external objective reality – for an Organicist scientist.

- For Aristotle, the motion of a natural living thing (of the conscious human subject as well) is determined principally *from within* (by the *telos*-propelling forces-causes), which are essential for a living (Auto-changeable – movable-evolvable) thing-subject. On the contrary, modern science that is

based on Platonism and which activities are realized within the realm of mathematical-physicalist (Transcendentalist) objective positivist inquiry – here the motion of objects is determined categorically *from without*. Hence, as a direct, inevitable consequence : modern Dualist science categorically excludes in a subject any intrinsic strength-causes for moving-evolving activities, that are aimed at the eventual efficient wholesome *telos*-results. It is natural that by no means these *telos*-causes can be included in the research agenda of modern Dualist (Western) science. But it is the other way around, within the Transcendentalist Type of science (with its rational base model in Platonism), that only external objective data are recognized and accounted for here, inasmuch as exclusively objective data turn out to be fit for *idealistic* analytical (mathematical) processing, with the following conceptual constructing – of all, in the finality, into practical, constructive and technical applications in the life of man and society. On the contrary, in the Biocosmological Organicism (rationally correlating with Aristotelism) : the naturalistic Organicist-pole scientific approach recognizes as foundational and studies the Dynamic *internal – telic*, results-oriented propelling forces-causes of the subject, which are essentially *naturalist* – generated by Nature.

- Not surprisingly, in the New Age, the Organicist natural *dynamic* forces-causes of a living subject have been categorically excluded from modern (Western) scientific knowledge; and they are not permitted, at present, to be studied and applied within the contemporary Transcendentalist (Western) science. The latter is essentially global and positive, but Dualist – of a man withstanding Nature, and (in its extreme activities) – withstanding the natural-Kosmist Auto-ascending EvoProcess; thus (inasmuch as interrupting the natural Dynamic EvoProcess), inevitably pursuing anti-humanistic goals with respect to man – a product of the natural Auto-(Self-)evolving Kosmos.

- As a matter of fact, the time has come today to categorically change the way things are, and, for scientists around the world – to recognize the essentially Triadological essence and Bipolarity of scientific knowledge.

#### *FINAL SUMMARY OF THE DOCUMENT*

The address to the academic (scientific and philosophical) community comes at a time of the current global crisis (WW3) and comprises the launching of the Biocosmology Initiative. The essence of the latter is a call to consider, recognize, and return to the natural order of the world's cyclical evolutionary (and historical) Auto-ascending circuiting; hence – to basically accepting the foundationally Triadologic world, as the Auto-(Self-) ordered and Auto-(Self-)evolving Living Cosmos – Biocosmos, Kosmos; and which is the universal concurrent existence of the Three dynamic autonomic omnipresent Types of the Kosmic Organization, which always exist and act together, in

the Triunity. These Triune Types universally substantiate as the entire world-order, as the life (ontogenesis) of its each subject, from a quantum particle to molecule, bio-organism, human being, society and civilizations, Biosphere and Noosphere, etc. Substantially, in their Dynamic Cyclical circuiting – the Triune Types by turns determine the dominant (one of the Three) Type in the world-Kosmist organization, respectively also in relation to authentic scientific knowledge.

In the realization of this enormous task, the recognition of the naturalistic Bipolarity and the dynamic Triadology of scientific knowledge is of prime importance. In this perspective, the main focus in our times is on the Organicist pole of subjects' *telos*-(for wholesome result)-propelling potencies and activities; naturally, that in the Triune wholeness with the world-Kosmos and, accordingly, in the Triunity of all Three academic Types of scientific knowledge (Organicist, Integralist and Transcendentalist), which all are essential for the effectual integrity (of all the realms and subjects involved). Likewise, the Dualist Anglo-Saxon analytical knowledge (and whose foundations were laid as early as the 17<sup>th</sup> century) has the equal importance for the world History (social-cultural evolution).

Nevertheless, in the face of the unavoidable problems and threats of the 21st century (and within the current period of the so-called “tectonic shifts” in the world development) : we see the direct natural challenge for a decisive **U-turn**, but already on the basis of the contemporary, 21<sup>st</sup> century Integralism. The essence of the latter – to make the *U-turn* from the Transcendentalist or Dualist Pole (of the *Southern* and *Western* – Anthropocentric potencies and activities) – to the *North-Eastern* (AnthropoKosmist and Noospheric) Pole and Vector of the (dominating) Organicist and Integralist Types of rational, scientific and philosophical knowledge. The vector of the outlined world evolutionary advancement has a path that is essentially *Biocosmological* and *Integralist* – chiefly of the *North-Eastern* contribution to peace sociocultural evolvement.

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<sup>i</sup> Here, “*Organon*” – from the Greek ὄργανον – directly has the original meaning of ‘instrument’ (‘tool’ and ‘means’ to achieve ‘an end’, i.e. the needed result of activity); and what is, ultimately, the natural *telic*-(for the needed result)-*function* of a subject (thing, organ).

<sup>ii</sup> Spelling “Cosmos” with the capital “K” (as *Kosmos*; and studying Kosmos as *Kosmology* and *Kosmism*) comprises a direct reference to (in full accordance with the Biocosmological Triadological approach taken) the meaning of the ancient Greek “κόσμος”, the main significance of which is “good order”; Pythagoras first used the term κόσμος (Lat. *kósmos*) to denote the highest world order, thus the world and the universe as a whole. In Aristotle, the most primary substance of cosmos (and which is not analyzable into matter and form) – the First Unmoved Mover, who is conceived “as an active, intelligible, eternal,

and imperishable substance (*ousia*) or Nous.” [Christos C. Evangeliou, 2016] The matter *Nous* deals with – for Aristotle, his matter (*hyle* – υλη) is not the passive and formless ingredient of cosmos; but matter for Aristotle is that which is full of potentiality for the completely developed essence, “also completely – developed substance and essence in a lower level is the matter (that is potentiality) for the next higher ontological level of the cosmic hierarchy.” [Georgios Pavlos, 1997] The author also concludes (in the name of Aristotle) that “the quantitative and the other characteristics of cosmos are the derivatives of the cosmic dynamics and becoming.” [Ibidum]

At the same time, the term *Kosmism* (*Kosmist*), already in the Biocosmological perspective – directly points to the Organic unity of the Cosmos with all its living subjects as the main basis for the existence of the real world-Kosmos.

- iii The main meanings of the ancient Greek ΑΥΤΟ- (αὐτο-) = {αὐτός} prefix, denoting: =1) natural property, naturalness (αὐτόρριζος); =2) authenticity, purity (αὐτοσίδηρος); =3) inner independence, self-determination, spontaneity (αὐτόνομος). Taken from the cite: <https://dicipedia.com/dic-gr-ru-old-term-10995.htm>
- iv If we use a geographical analogy (with the sides of the world), we get the values of the five elements, starting with the poles of the Earth – South and North; and then in correlation with biorhythmic cycles – Sleep (West) and Wakefulness (East); and finally – the Middle of the Earth (Center).
- v *BCnA* : the journal “*Biocosmology – neo-Aristotelism*”, an electronic scientific periodical – the official organ of the Biocosmological Association; URL: <https://biocosmology.org/?lang=en>
- vi However, the integral (united as a whole) significance of the world scientific (in civilization theory) contribution of Russian scholars – such a significance has not yet become a subject of actualization in the scientific and philosophical community : because of the ‘dissociation’ of the achievements of these five great scholars from each other in the thorns of the historical process that had taken place (and for other reasons).
- vii However, the first Russian-language publications (initially, fragments of the outstanding scientific work) have appeared in Russia only since 1995.
- viii *Telos* – from the Greek – τέλος; in transliteration – telos; meaning “goal, end” as the “final destination” of the subject’s efforts, i.e., the final “result” of his actions. *Telos* is introduced into science and used by Aristotle to denote the ultimate actualization of the inherent physical potential in a living thing (man, individual subject) – thus realizing its/her/his goal-end of existence and wholesome activity; and that acts as the key element in a compound concept, the original and essential in Aristotle’s scientific system – *entelecheia* (as interpreted by Will Durant (1926): “... having (*echo*) its purpose (*telos*) within (*entos*); one of those magnificent Aristotelian terms which gather up into themselves a whole philosophy.” [Durant, 1962, p. 69]).

We quite agree with Aleksei Fedorovich Losev, a prominent Russian philosopher and culturologist of the 20th century : *telos*-end and *telos*-goal are quite fused by the Stagirite; as well as that the bivalence of the term *telos* in Aristotle turns out to be quite natural – that *telos* both is the end-completion; but it also realizes the supreme Good as the main goal of all activity (Losev, *Aristotle and the Late Classics*, 1975).

Synonyms for the Aristotelian *endogenous* (acting *from within* the subject) *telos*-propelling (Bio)cosmic forces-causes are: telic, results-oriented, target-driven, ergic, intentional, task-oriented, teleological, goal-seeking. Below, *see* the explanatory statement on the meaning of the notion of *telos*, originally operative in the Aristotelian *Organicist* science.

- <sup>ix</sup> In respect to *telos* and *entelecheia*, regarding a more detailed explanation : we make it clear, with referring the statements of Randall, Sach, Bos, Ritter, Durant, Peters, Windelband, Whitehead – in the BCnA-publication “*New Integralist Time : New (True – Organicist) interpreting, understanding and applying of Aristotle’s Organon Kosmology – to bringing successes to the contemporary world science*” (DOI: 10.24411/2225-1820-2021-00004)
- <sup>x</sup> In the work “*Why Aristotle Invented the Word Entelecheia*” [1932], initially, Wm.E. Ritter aims at resolving the issue “of the relation between *telos* and *holos* in Aristotle’s thinking with a view to understanding his reason for coining a word (*entelecheia*) which should contain *telos* as a basic element.” [p. 382] Among the important results of this profound exploration, we appreciate the active claim of the scholar – “to ascertain as far as possible the English equivalent of the Greek *telos*.” [p. 380] (we ourselves have no doubt that the term-equivalent should be the original *telos* itself). The reason is that the commonly given “end” as its equivalent cannot be used, for “*telos* never meant end as of a stick or a road”, a very common meaning of the English “end”; as well as, Ritter stresses, “*telos* is not the original word for which «purpose» is substituted”. Hence, “the Greek word *telos* has quite different associations from the English word «end.»” [pp. 380, 382] On the contrary, as the author reveals in his study, “by examining a wide scope of the Aristotelian writings” – there is the evident “kindred of the *telos* of *entelecheia* to wholeness we find borne out” [Ritter, p. 380].
- <sup>xi</sup> See: Aristotle. *On the Soul. Parva Naturalia. On Breath*. Translated by W.S. Hett. Loeb Classical Library 288. Cambridge, MA: Harvard University Press, 1957.
- <sup>xii</sup> The notion “Organon” (adj. – organikon) – from the Greek ὄργανον (οργανικόν) – directly has the original meaning of ‘instrument’ (‘tool’ and ‘means’ to achieve ‘the goal-end’, i.e. the needed *telos*-result of life activity). The latter, ultimately, is the natural *telic*-function of a living subject (thing, organ) – for the needed wholesome result-effect-product achievement; and which realizes the subject’s ultimate Functionalist wholesome contribution to the Common Good.
- <sup>xiii</sup> In a similar manner, Wilhelm Windelband, in his *A History of Philosophy* [1914], comes to a conclusion: “Being is that which comes to existence in the processes of Nature. This self-realization of the essence in the phenomena, Aristotle calls *entelechy*. The central point of the Aristotelian philosophy lies, therefore, in this new conception of the cosmic processes as the realization of the essence in the phenomenon, . . .” [Windelband, 1914, p. 140].
- <sup>xiv</sup> The synonyms Aristotle used for designating the subject’s naturalist inherent unchangeable substance are: *hypokeimenon* – υποκειμενον; *to ti en einai* (a formula for expressing the notion of “essence”) – το τι ην ειναι; *ousia* – οὐσία; *arche* – αρχη; *genos* – γενος; *eidos* – εἶδος; *katholon* – καθολον; and, of special foundational significance – *entelecheia* (ἐντελέχεια).