

New Integralist Time : New (True – Organicist) interpreting, understanding and applying of Aristotle's *OrganonKosmology* – to bringing successes to the contemporary world science

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Новое Интегралистское Время :
Новое (Истинное – Органицистское) осмысливание, понимание, перевод и
применение *ОрганонКосмологии* Аристотеля –
для привнесения успехов в современную мировую науку
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Abstract. The authors substantiate in the paper the depressing conclusion that Aristotle, Father of Science and author of the phenomenal Organicist cosmology (a comprehensive rational knowledge) : his *OrganonKosmology* is contemporarily “lost in translation” and beyond the intellectual grasp of the modern scientific community. Such a situation is completely unacceptable, in our current time of change and global transformation. As a way out, the authors propose an immediate (true – Organicist) rehabilitation of Aristotle’s scientific heritage : in this, beginning with reviving the true meaning of the Stagirite’s basic concepts and notions; and then realizing the first-priority rehabilitation of the Organicist aetiology and, further, all other foundational constituents of Aristotle’s *OrganonKosmology*.

Keywords: *organon, entelecheia*, Entelechist cause, Aristotle’s *OrganonKosmology*, naturalist Hylemorphism, Organicist aetiology.

Резюме. Авторы обосновывают в статье удручающий вывод о том, что Аристотель, отец науки и автор феноменальной Органицистской космологии (всеобъемлющего рационального знания): его *ОрганонКосмология* в наше время «потеряна в переводе» и находится вне интеллектуального восприятия современного научного сообщества. Такая ситуация совершенно неприемлема в наше современное время перемен и глобальных трансформаций. В качестве выхода авторы предлагают немедленную (истинную – Органицистскую) реабилитацию научного наследия Аристотеля : в этом, начиная с возрождения истинного значения основных концепций и понятий Стагирита; а затем осуществляя приоритетную реабилитацию Органицистской этиологии и, в дальнейшем, всех других основополагающих составляющих *ОрганонКосмологии* Аристотеля.

Ключевые слова: *органон, энтелехия*, энтелехистская причина, *ОрганонКосмология* Аристотеля, натуралистический гилеморфизм, Органицистская этиология.

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Introduction

The Aristotelian *Organon*Kosmology is now “lost in translation” and is beyond the comprehension of the world scientific community: this is the disappointing conclusion the authors come to in a special study. There is no doubt that such a result in world cultural development is totally unacceptable, especially in the current ‘time of change’ (of ‘tectonic shifts’ in world evolvement) : all this requires a decisive correction of the present state of affairs. In their approach the authors argue for a primary clarification of the cosmological foundations in the existing (polar) opposition between the two great (super)systems of rational knowledge – of Plato’s *transcendentalist* Static (*Top-Down*) Dualism and Aristotle’s *naturalist* Dynamic (*Bottom-Up*) Organicism.

On this basis, the authors see and pursue a fundamental opportunity to project a strategy for correcting the current grave situation : the latter lies in realizing the primary task of restoring the true (in scientific meaning) names for the main Aristotelian conceptual notions; with further disclosing the true significance of *entelecheia* – a cornerstone concept in Aristotle’s *Organon*Kosmology, and eventual introducing the notion of *Entelechist cause*. The final task (level) on this way is the realization of the scientific returning – but for the emerging jump “Back to the Future of the Aristotelian Aetiology and Organicist Science, as a whole”. We cannot but agree with Demetra Sfondoni-Mentzou’s conclusions that the era of rejection Aristotle’s physics is ending, when a preference to “Newtonian Mechanics, for at least three centuries” drastically dominated : with its general aim that pursued the main task of realizing “the description of experienced phenomena, rather than explanation referring to a deeper level of reality,” in this entirely relying on the modern “language of Mathematics”; however, nowadays, we are faced with the challenge of urgent reviving the significance of “the Aristotelian world of real qualities, qualitative transformations and the becoming of nature.” [Sfondoni-Mentzou, 2018, p. 27]³

1. The Big Three of Greek philosophy and science: Socrates, Plato, and Aristotle

Socrates, Plato, Aristotle are the pivotal figures in the history of Ancient Greek, Western and world culture, firstly relating to rational knowledge evolvement. Socrates (469–399 B.C.E.) is credited both as one of the founders of Western philosophy; and as a great cultural figure in the world history. Karl Jaspers defined him as a

³ See: Sfondoni-Mentzou, Demetra (2018). “Aristotle’s Dynamic Vision of Nature. A Neo-Aristotelian Perspective on Contemporary Science.” In: *Aristotle – Contemporary Perspectives on his Thought: On the 2400th Anniversary of Aristotle’s Birth*. Walter de Gruyter GmbH & Co KG. Pp. 27–56. DOI: <https://doi.org/10.1515/9783110566420-003>

“paradigmatic individual”, together with Buddha, Confucius and Jesus [Jaspers, 1957, p. 95]⁴. Socrates’ way of life, character, and thought generally exerted a historical influence of incomparable scope and depth onto the cultural and intellectual development of the whole world. His deeds have changed the type of philosophical thinking itself (starting with moral philosophy and ethical tradition of thought), with further transforming rational thought (into) and becoming of the modern Western type of philosophizing. However, Socrates did not leave behind any conceptual constructions of his mode of thinking. Moreover, as it is known, the definition of each concept was always a difficult task for him.

As a matter of fact, the act of determining essence of things and beings, thereby significantly differentiating each one from all other things and beings – this is, every time, a really difficult task. However, Aristotle succeeded in this way. In the *Topics*, he arrives at the conclusion: “A definition is an account (*logos*) that signifies the essence.” (*Top.* 101 b 38). At the same time, substantially, Aristotle’s (who is a student of Plato, at the Academia in Athens) : his concept of *definition* is fully opposite (polar) to his teacher’s cosmological attitude to this issue. In Plato’s approach, the organic order is unified, the universal for everyone; and ultimately is reducible to the Transcendent (divine) Realm of Forms (or Ideas). The latter are precisely the highest and the only real (eternal, immortal, unchangeable Forms-Eidos-Ideas’) entities that are the real bases and tools for a Demiurge to creating an actual, sustainable and flourishing (but founded in the Realm of Forms’ ultimate Righteousness and Goodness) world. Fundamentally, these transcendent “*eternal patterns*” and “*immortal forms*” that are located in the Realm of Eidos – they omnitemporally pervade the entire space. In a substantial way, in turn, the creative activity of a Demiurge constantly is based on the knowledge (of) and direct access to this Realm of Forms (the shortest approximation to which is mathematical knowledge).

Demiurge (creator) essentially is using this knowledge for its implanting into the things and construction of (and harmonizing) the entire created cosmos and the living world of a human being. Fundamentally, all this creation process is realized in the Top-Down mode – in the position of an external actor – *from without*, to the studied and created objects : of the whole space – by a Demiurge; but in the earthly life and particular space and time – by Human Being’s (who is the likeness of God) and human Societies’ activities; i.e. by creative processing and constructing-transforming (through mathematical manipulation) the entire elemental (chaotic, quantitative, mechanistic, aimless) material space into the harmonious living order. Lloyd P. Gerson, responding to the question “What is Platonism?” – arrives at the same main conclusion that we

⁴ See: Jaspers, Karl. (1957). *Socrates, Buddha, Confucius, and Jesus: The Four Paradigmatic Individuals*, tr. by Ralph Manheim. New York, A Harvest Book.

should understood Platonism historically as consisting in fidelity to the principles of «top-downism»” [Gerson, 2005, p. 269]⁵.

In his in-depth analysis of Plato’s “theory of Ideas”, Karl Jaspers firstly points out to his notion of “good (*agathon*)” that has “the highest authority” for Plato; the scholar stresses:

From the very outset Plato searched for the supreme authority, knowledge of which first lends meaning to all thought and action. He calls it the highest science (*megiston mathema*). To attain it, no effort is too great. It is the only important thing. Its object is the good (*agathon*). [Jaspers, 1962, p. 28]

Further, Karl Jaspers, developing his substantive analysis of ancient genius’ theorizing : he reveals the significance of Plato’s “theory of Ideas”; and “its eternal being from the good, from that which is above being” [ibid., p. 29]. In the conclusion, Plato’s conception expresses the existence of the “Two worlds”, wherein Plato discerns and learns “the world of Ideas and that of the senses, the world of being and that of becoming, the noetic (intelligible) world and the world of appearance.” [Ibid., p. 30] In an obvious way, here, “the world of ideas” serves as the main basis of acquiring a way of knowing the world by a cognizing subject (human being; and this is her mathematical competence); while “the world of becoming” is always an object for the objective study, in this relying on the factual, sufficient database of the object under research – for its further mathematical processing and analyzing. As for grasping “*the relation between the two worlds*”: Jaspers explains that “the fundamental form of this Platonic thinking is the cleavage (*tmema*) between the changing world of temporal things and the eternal world of enduring things (and again between the world of Ideas and the realm beyond it, where the formidable knowledge that dwells in the world of Ideas soars to ineffable contact with the One and the good).” [Ibid., p. 30]

As for understanding “*what is an Idea?*”: Jaspers notes that “Plato gives us a rather confusing picture. Some of them are: form (*eidos*), shape (*morphe*), type (*genos*), essence (*ousia*), unity (*monas, henas*) «what,» «what it is,» «self» (beauty itself; the horse itself), «as such»; «what is,» «what beingly is» (*ontos on*).” [Ibid., p. 30] In a generalizing view, however, throughout Plato’s dialogues – his core philosophical conception of “forms beneath appearances” is obvious. Not surprisingly, as it is well known, Plato was deeply influenced by Pythagoras – a thinker who introduced the concept of form as distinct from matter; and that the physical world is an imitation of an eternal mathematical world. Among the many opinions that exist, Francesco

⁵ See: Gerson, Lloyd P. (2005). “What is Platonism?” *Journal of the History of Philosophy* 43: 253-276.

Ademollo's⁶ conclusion seems significant that Plato's "sensible particulars as we ordinarily conceive of them – i.e. as continuants endowed with a temporal career which has a beginning, a duration, and an end – strictly speaking do not exist." [Ademollo, 2018] Thereby, author stresses the foundational "contrast between forms and sensible particulars in terms of a contrast between being and coming" (otherwise, between "immortal forms" and "sensible particulars"); and, in conclusion, that all this is "against which Aristotle intends to react when he promotes sensible particulars to the rank of (primary) ousia, which Plato had conferred on the forms, and declares it a distinctive mark of ousia that it remains numerically identical through time and change." [Ibidem]

Plato's theory of Forms and Dualist conception of "the two worlds" existence, as it is stressed throughout the BCnA-articles – all these are the fundamental elements of Plato's, substantially Transcendentalist (Dualist – *idealist/materialist*) cosmology. The latter reveals to us the existence of the Platonic cosmos (space), we are living in : this space unites both the world of all the sensible particulars (that come into being, undergo changes, and disappear), including living beings (firstly, human beings; and who are carriers of immortal souls); with the world of eternal beings – the immortal and unchangeable Forms (from the Transcendent Realm of Ideas) that are atemporal (transcendent to time), aspatial (transcendent to space), and transcendent to a human being and her mind (but who is a carrier of immortal soul). Another BCA-fundamental position, as we see it in the *BCnA*-papers: Plato is highlighted as a philosopher of science; and that "Plato has exerted a greater influence over human thought than any other individual with the possible exception of Aristotle" [Demos, 1927], as we learn from the article by K.S. Khroutski [2015]⁷. The following quotation from the author (Raphael Demos) is noteworthy:

A philosopher in our day is considered a specialist in a field of knowledge distinct from that of science. Plato was a philosopher in a totally different sense. For him, philosophy was insight into the whole of truth, the study of reality in all its aspects; he was unaware of any barriers between this or that field of inquiry such as we erect today. Common sense ran into physics, physics into mathematics, mathematics into metaphysics; metaphysics, in its turn, led into ethics, politics, and religion. In reading the dialogues of Plato, we find abstruse discussions of ultimate principles joined to detailed descriptions of the parts of the human body, and investigations into the

⁶ Who studied Plato's conception of change; see: Ademollo, Francesco. (2018). On Plato's Conception of Change, *Oxford Studies in Ancient Philosophy* 55: 35–83.

⁷ See: Khroutski KS. (2015). "In defense of Aristotle's Biocosmology as the comprehensive supersystem of knowledge: Eight critical comments on the article of M.Benetatou." *Biocosmology – neo-Aristotelism*, Vol.5, No.1 (Winter 2015), c. 28–50.

properties of geometrical figures along with inquiries as to the nature of the good life. [Demos, 1927]⁸

2. Plato's Static (*Top-Down*) Dualism and Aristotle's Dynamic (*Bottom-Up*) Organicism

With deep correspondence to the Aristotelian *Organon* Kosmology, BCA-associates strive to introduce, as a cornerstone : a Dynamic *naturalist* (Bipolar and Cyclic – Triadic) – thus Triadological (and Triune) view on (approach to) studying the substances, events, and processes of reality. Even in terms of natural logic, inasmuch as the real Kosmos is factually Bipolar – Plato's Dualist cosmology ought to (and naturally has) its polar equivalent; and this opposite cosmology is evidently the Aristotelian *Organon* Kosmology. Both cosmologies are comprehensive; both are essential; both approaches are equal in their importance for a deeper and more complete study of the actual world. However, so far, since the 17th century (in Modern era), especially in recent centuries – the Platonist Dualism (and its mathematical physicalism) is sharply predominant, factually dictates all the conditions of scientific activity.

As BCA-members are convinced, and in Anna Makolkin's expression, after "the centuries of the cult of Plato, genuine fear of Aristotle's wisdom and misrepresentation of his works," [Makolkin, 2013]⁹ – Biocosmologists now meet the challenge to vigorously redressing the imbalance; and making a start to harmonious applying (in the current scientific activities) of both cosmologies and their types of science (that are outlined in this work); and despite the fact that they are foundationally opposite to each other): of Plato's (*Top-Down*) Dualism and Aristotle's (*Bottom-Up*) Organicism.

The key point in Aristotle's position is that scientist's (Father of science) "organic" basically corresponds to the word *organon* (ὄργανον) that means in Greek "instrument" ("tool", "function"); and Biocosmologists fully agree with the essential note of Mariska Leunissen that:

The term ἐντελέχεια was coined by Aristotle, and designates a completed state resulting from an internal movement towards this state [see Ritter (1932; 1934) and Johnson (2005), 88–90]. The traditional reading of ὀργανικόν as "having organs" or "being composed of organs" [see, e.g., Ross (1961), 51, 313; Hamlyn (2001), 85] must certainly be wrong: elsewhere in the

⁸ See: Demos, Raphael (1927). Introduction. In: *Plato Selections*, ed. Raphael Demos, New York: Charles Scribner's Sons (Available online – <http://www.ditext.com/demos/plato.html> – retrieved: 14.01.2021)

⁹ See: Makolkin, Anna (2013). "America discovering Aristotle." *Biocosmology – neo-Aristotelism*, Vol.3, No.4 (Autumn 2013), c. 685–687.

Aristotelian corpus, the term *organikon* (coined by Aristotle; see Byl (1971), 132) always means “instrumental,” and there is no reason to assume it means something different here. [Leunissen, 2010, p. 53]¹⁰

The conclusions of the scholar Abraham Bos are no less important to us: concerning the meaning of the term. The scholar emphasizes that the Stageirite uses the concept *organikon* in his definition of the soul (412a28 and b6) – “Arguing step by step, he (Aristotle. – **Authors**) arrives at the following definition of ‘soul’: ‘(the soul is) the first entelechy of a natural body (*sôma physikon*) which potentially possesses life and which is *organikon*’.” [Bos, 1998]¹¹

The scholar makes a number of significant conclusions and statements, beginning with the assertion that “the psychology of Aristotle has never been understood in a historically correct way”; and that “*De anima* has been interpreted in a way that runs completely counter to Aristotle's intentions”; in this, primarily, “the incorrectness of the standard interpretation is also shown by the fact that the psychological theory it has produced is incompatible with Aristotle’s position in the other works of the extant Aristotelian *Corpus*, (...).”¹² The main conclusion of Abraham P. Bos is the following:

This brings me to what I regard as the crowbar for tackling the traditional interpretation of *De anima* II, 1. It is the term *organikon* which Aristotle uses in his definition of ‘the soul’. This term is also original to Aristotle and is used very frequently by him. And in his work it never means ‘equipped with organs’ but always: ‘serving as an instrument’! Only in the two passages of *De anima* II, 1 where Aristotle uses the term *organikon* in the context of his definition of the soul have interpreters since antiquity taken the word to mean ‘equipped with organs’. But from a philological point of view this is totally unacceptable. One cannot, precisely at the place where Aristotle formulates the heart of his psychology, translate a crucial term in a way which has no parallel in Aristotle’s entire oeuvre, while the term itself is used on countless occasions by Aristotle in a different sense. Aristotle’s definition of the soul must therefore in any case be corrected to: ‘the first entelechy of a natural body which potentially possesses life and which is instrumental’. [Abraham Bos, 1998]

¹⁰ See: Leunissen, Mariska (2010). *Explanation and Teleology in Aristotle's Science of Nature*. Cambridge: Cambridge University Press.

¹¹ See: Bos, Abraham P. (1998). Aristotle’s Psychology: The Traditional (hylomorphic) Interpretation Refuted. URL.: <https://www.bu.edu/wcp/Papers/Anci/AnciBos.htm> (last retrieval – 15.02.2021)

¹² All references are to Abraham Bos's 1998 paper on Aristotle's psychology; and which follows the scholar’s report to the Twentieth World Congress of Philosophy.

In his other work, Abraham Bos confirms his main conclusion that in the whole of Aristotle's oeuvre '*organikon*' never means 'equipped with organs' but always '*serving as an instrument*', 'instrumental' [Bos, 2002, p. 278]¹³ In this general approach, and concerning the issue of *the soul* : the scholar states that Aristotle essentially disagreed with his teacher Plato; Abraham Bos concludes that "Aristotle specified the condition of the soul as being inextricably bound up with a *soma physikon organikon*." [Ibid., p. 277]

The central issue is, therefore : What would be the essence of a thing? After all, essence is something that belongs to a thing as the inherent property, and which always persists, remaining unchanged, although it is an undeniable fact that everything is a subject to constant changes without end, which can be very different; thus fitting a maxim of Heraclitus "Everything flows, everything changes". Not surprisingly, philosophers have expressed themselves on this topic in very various ways. Appreciably, in the Biocosmological approach : two great figures (of Ancient Greek philosophy and science) are distinguished, and who are the central figures of Axial age, denoted by Karl Jaspers – they are Plato and Aristotle. Their conceived and developed (super)systems of rational all-round knowledge on the world (cosmos) : significantly, these great comprehensive cosmologies are rationalized (conceptually grounded). In other words, both cosmologies have their own substantive conceptual and categorical frameworks, key concepts and notions, with the definitions of basic terms. It is essential, however, that these (of Plato and Aristotle) cosmologies are opposite to (incompatible with) each other. At the same time, we follow the theory of Pitirim Sorokin¹⁴ that confirms the coming of the Integralist epoch in the world (dynamic, bipolar and cyclic – Triadic) cultural evolvment, in the current time (21st century).

In this attitude, scholars and cultural figures in the world : now they have no right to miss the convenient historical chance and its natural (evolutionary) grounds – for the efficient using the potentials of both great (although opposite) cosmologies in achieving the goals of the world Integralist evolvment (of course, in terms of the eternal principles contemporary interpretation). In fact, in the case of a naturally Integralist epoch that is actually self-evolving, and if truly basing on the leading foundations of Integralism (as follows from Pitirim Sorokin's Dynamic theory of cyclical sociocultural development) : in this way, drawing from the *naturalist*

¹³ See: Bos, Abraham P. (2002). "«Aristotelian» and «Platonic» dualism in Hellenistic and early Christian philosophy and in Gnosticism," *Vigiliae Christianae*. Vol. 56, No. 3 (Aug., 2002): pp. 273–291.

¹⁴ See (for instance): Sorokin, Pitirim (1970 [1957]). *Social & Cultural Dynamics. A Study of Change in Major Systems of Art, Truth, Ethics, Law and Social Relationships* (Revised and abridged in one volume by the author). Boston, Parter Sargent Publisher. The legacy of the outstanding Russian-American scholar P.A. Sorokin is also widely studied in the BCA and reflected in the BCnA-publications of its members.

scientific-theoretical substantiation – the prospects of successful practical building a common, safe and prosperous peaceful future on Earth look quite real, and which are urgently demanded. At least, under the conditions of sufficient (sound) scientific-theoretical justification of this (world Integralist sociocultural) process – cultural humanity obviously gets an excellent perspective to overcome the current world crisis.

2.1. Naturalism vs. Transcendentalism : *as the most basic polarization and critical framework*

The Greek genius of Aristotle made an irreplaceable (Organicist) scientific-theoretical and general philosophical contribution to world culture – a subject of never ending interest to the cultural community of Earth, throughout the last 2400 years. At the same time, the content of perceiving the Aristotelian scientific approach – as an integral all-encompassing (cosmological) system of knowledge; and which initially had an essentially Organicist meaning : the subsequent (in world history) perceiving the Aristotelian *Organon* Cosmology was consistently subject to the spirit of successive historical epochs. As Charles W. Tolman makes clear [1994]¹⁵:

Critical sorting (italics is ours. – **Authors**) began already with Aristotle's pupil and literary executor Theophrastus. The Stoics made Aristotle's naturalism into a deterministic materialism. The Sceptics accepted and developed his logic while abandoning his realism. In the centuries that followed, Plotinus, Boethius and Avicenna would attempt to reconcile Aristotle with Plato, creating what we know as neo-Platonism. During the Middle Ages Maimonides successfully appropriated Aristotle for Judaism, Averroës for Islam and Thomas Aquinas for Christianity. [Tolman, 1994, p. 434]

The scholar also notes that the recent centuries are characterized by “the enormous prestige attained by science”; in turn, if we refer to the authoritative judgment of Alfred North Whitehead, 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]¹⁶ Furthermore, Whitehead provides an essential definition of the notion of ‘matter’ that exists in the contemporary Western cultural (scientific) milieu:

There persists, however, throughout the whole period of the fixed scientific cosmology which presupposes the ultimate fact of an irreducible brute matter, or material, spread throughout space in a flux of configurations. In

¹⁵ Tolman, Charles W. (1994). “What is Living and What is Dead in Aristotle's Psychology,” *Theory & Psychology* Vol. 4(3), Aug 1994; pp. 433–446.

¹⁶ Whitehead, Alfred N. (1978 [1929]). *Process and Reality*. New York : The Free Press. P. 39.

itself such a *material is senseless, valueless, purposeless* (italics is ours. – **Authors**). It does what it does, following by a routine imposed by external relations which do not spring from the nature of its being. [Whitehead, 1948, p. 18]¹⁷

In addition to the judgement of Tolman, regarding the issue of “critical sorting” over the Stagirite’s comprehensive Organicist rational knowledge (cosmology) : herein it is also appropriate to give the finding of the Aristotelian scholar Helen Lang; who states, in relation to the naturalistic foundations of Aristotle’s *Physics* – that Aristotle’s “position stands in sharp contrast not only to Plato but also to later philosophy, including the Stoics and Philoponus.” [Lang, 1998, p. 64]¹⁸ Tolman himself reveals the main gist of the issue : all this world cultural-historical movement (a natural; but seemingly the process that is irreducible to common grounds) – therein, Tolman essentially discovers the existence of the two poles of rational knowledge, i.e. the principle of natural Bipolarity (Bivalence, Twoness, Universality) in the ongoing knowledge management; and formulates that “in the course of time the poles of debate became more clearly defined as *naturalism* vs. *transcendentalism* (italics is ours. – **Authors**).” [Tolman, 1994, p. 434] Continuing his reasoning, the scholar states that “the naturalists and the transcendentalists did not alternately replace each other; they have existed side by side, only varying in relative historical status and influence.” [p. 434] Tolman’s general conclusion – “this polarization thus provides the most basic critical framework in which new works on Aristotle can be judged.” [Ibidem]

We should recognize the value and importance of Tolman’s conclusions. In fact, the dichotomy (and the unity) of the poles *Naturalism* vs. *Transcendentalism* : this disposition allows us to use a deeper (hence broader) basis and possibility for knowing the ongoing world processes of life and cultural evolvement. For example, during the Soviet period of Russian cultural history, the so-called “main question of philosophy” was put forward, on the metaphilosophical level : the one that asserted the main problem of philosophy (throughout its history) – the question of the relation of consciousness to matter, thinking to being, spirit to nature; thus – of Materialism to Idealism. In fact, as follows from the afore stated Bipolarity of the real world, i.e. of the Bipolar existence of *Naturalism* vs. *Transcendentalism* : firstly, our world (Biocosmos – Kosmos) is naturally Self-realized in the Dynamic, Bipolar and Cyclic – Triadic (and Triadological) way; wherein all the Three Types (of reality; and its rational understanding) are autonomic (to the needed extent) in their organization, mode of existence and evolvement. Secondly – the binary opposition of Materialism

¹⁷ See: Whitehead, Alfred N. (1948). *Science and the Modern World*. New York: Pelican Mentor.

¹⁸ See: Lang Helen S. (1998). *The Order of Nature in Aristotle’s Physics: Place and the Elements*. New York, Cambridge University Press.

vs. Idealism is artificial (ideological). The gist is that both the Marxist Materialist world and the Platonic Realm of Ideas (or Realm of Forms) : both they belong to the Transcendentalist (but not to the Naturalist) essences; hence both belong to the sphere of a Transcendentalist pole (thus, to only one of the two equal poles). Therefore, the foundations of the Soviet scientific-philosophical approach can in no way claim to correspond to the category of “the main question of philosophy”.

Moreover, the failure of Soviet scientists and philosophers to grasp the true (Bi)polar essence of the real world : all this has caused considerable harm by depriving society of the true foundations for scholarly endeavors; but has instead trapped the cultural process in the actual (albeit indirect) service to the interests of its ideological opponents. The reason for this is obvious : Russian and Soviet scientists have not sufficiently studied and mastered the knowledge of Aristotelian *Organon* Cosmology (as a result, they were thrown back to the foundations of Marxism and its materialism). All the more essential today is the goal of an immediate study of the true Stagirite’s Organicist cosmology : so that it can successfully act as a conceptual framework (basis) for references – for all scholars who are ready to embark on the path of the Organicist and Integralist study of the real world; thus following the true Aristotelian principles of Entelechism and Hylemorphism, etc. It is clear that Aristotle’s *Organon* Kosmology (over the past 2400 years, since its inception) has completed the full cycle (turnaround) of its existence and activity in the history of world culture : to re-enter, in the current Integralist era – into the perception by the world scholarly community of its original (genuine, true) meaning.

In this way, basing on true Organicist foundations : each scientist (scholar – explorer; already without division of spheres of knowledge into science and philosophy) finds a basis for his own conceptual perception and comprehension of natural processes as processes of life – in the existence and evolvment of the real world (including anthropological and social processes). In such an approach, each scholar is given an opportunity, for example, in relation to mental processes – to relate his findings and conclusions to the whole Aristotelian cosmological edifice (reducible to underlying principles), thus conceptually revealing and justifying his own approach (and making it comprehensible to others). For instance, Svend Brinkmann calls colleagues to treat “Aristotle’s idea of the soul (or mind) as a life principle.” [Brinkmann, 2020, p. 3]¹⁹ : the scholar herein emphasizes that, in one way, psychology “has been a science of life since Aristotle,” [p. 15] but not in a way that has defined the discipline, at least in modern times; and, ultimately, Brinkmann speaks of the

¹⁹ See: Brinkmann, Svend (2020). “Psychology as a science of life,” *Theory & Psychology* Vol. 30(1); pp. 3–17.

perspective that psychology “can finally change now in the age of the Anthropocene?” [Ibid., p. 15].

3. Plato's *transcendentalist* essence versus Aristotle's *naturalist* essence

Essentially, Plato's space (of the constructed cosmos) is filled by things created by a Demiurge – through his access and knowing the unchangeable Realm of Forms, and applying this *formal* (Idealist) knowledge to the myriads of primordially chaotic aimless (material, changeable) things (so-called sensible particulars; or particulars of appearance). In other words, a Demiurge, in the *Top-Down* world : herein Demiurge gains a result through combatting aimless chaotic material world (where chance rules) with the help of intelligence and soul – for imposing (bringing) order onto the world, out of a primal chaos. Therein, “bodily things, or what Plato calls the particulars of appearance, participate in the intelligible Forms which constitute reality.” [Clegg, 1976, p. 57]²⁰ Also, for animate chaos (produced by living particulars), as J. Clegg notes, “Plato's vision of chaos would seem to be a vision of the world guided by the appetites only and directed to an endless pursuit of pleasure the reason leaves unchecked” [Ibid., p. 59] (thus, as it is interpreted in the *Timaeus*, Chaos is given a teleological origin).

On the contrary, Aristotle's cosmos is existing quite in the opposite way. A student of Plato: but Aristotle has conceived and presented the opposite (to his teacher's) – *Bottom-Up* Organicist cosmology; wherein the essences of the real world are given by Nature, but are “hidden” within the things, in their inherent substances – ingenerate *dunamis*-potencies. Precisely the natural dynamic substance-potency of a living thing (subject of life) generates the subject's *morphe*-functionalist (*morphe*-organicist) activities (*energeia*); and, ultimately, leads to (reaches) the thing's ontogenetic (life entelechial) Self-actualization. Significantly, Aristotle's theory of *substance* and the Dynamic (Bipolar and Cyclic) *potentiality/actuality* theory, coupled with the *Organon* Kosmological foundational principles, as Entelechism and Hylemorphism, etc. : all this essentially is a core of the Stagirite's scientific approach to studying the actual (tangible) things and the real subjects' processes in the actual world. That way, in a naturalist mode, realizing the understanding and explanation of the actual state and natural change (present, historical and the future) – *naturalist* changeability and Self-evolution of all active subjects in the cosmos is becoming a common subject-matter and methodology in science.

Significantly, in the Aristotelian world-viewing, the notion of “essence” : Aristotle's essences relate to the inherent unchanging-permanent (and objectively

²⁰ See: Clegg, Jerry S. (1976). “Plato's Vision of Chaos,” *The Classical Quarterly*, New Series, Vol. 26, No. 1 (1976), pp. 52–61.

invisible) thing's *substance*, throughout its entire ontogenesis. The substances (essences), as the ultimate indemonstrable principles, in turn, are given to things by Nature; and which constitute the things' "properties in itself". The latter, coupled with the environmental factors – precisely determine all the successive features and manifestations of a thing, during its entire life span (ontogenesis). Aristotle, similar to Plato, uses several terms to designating the essential (unchangeable) properties of substances and describing their *naturalist* features, these are : *hypokeimenon* – υποκειμενον; *to ti en einai* – το τι ην ειναι; *arche* – αρχη; *genos* – γενος; *eidos* – ειδος; *katholon* – καθολον; and, of special significance – *entelecheia* (ἐντελέχεια); we argue its cornerstone significance below.

In "by nature" we apply the meaning "from birth"; given "through inherent nature". Herein, "nature" means the entire universe (Kosmos, with all its phenomena and the natural Organicist universal laws, including human subject and human-social activities first of all); but not, as it is explained in modern dictionaries – not the natural (material) world as it exists without human beings or civilization; especially as surrounding humankind and existing independently of human activities; and which are regarded as a kind of object for human cognition and consciousness. In general, these definitions are completely and demonstrably executed within exclusively the Dualist framework of Platonic cosmology. On the contrary, from the Biocosmological (Organicist) standpoint : a human subject (naked ape) is primarily the *naturalist* entity, the result (product) of the Self-ascending Kosmic (living) Evolutionary Process (EvoProcess); and wherein the level of humanity (human subject) and its societal organisation is the indispensable point and era of the Kosmic EvoProcess.

It should be stressed, once again, that the Aristotelian *Organon* Kosmology is fully opposite and essentially incompatible (in its aetiological, gnoseological, methodological, anthropological, etc. Organicist basic principles) to the Platonic Dualist cosmology. However, as is evidently the case : modern interpreters and translators of the texts of both geniuses, Plato and Aristotle – they apply one the same terms for realizing their translations; and the latter is clearly the unacceptable approach. For instance, the philosophical notion (and term) "being" directly relates to the Platonic theory of Forms : for it essentially (ultimately) signifies a thing's relation to Plato's permanent and eternal Realm of Forms; with its absolute timeless (of eternal "being") unchangeable Ideas; and which are recursive-circulating between the highest perfect Idealist World and the earthly mortal, changeable material world. In this, we here immediately see the fundamental difference (with the opposite foundational essences) between the Platonic *material*-(non-living)-*physis*²¹ (i.e. materialist nature – the

²¹ The word *nature* is borrowed from the Old French *nature* and is derived from the Latin word *natura*; the latter, in turn – is the Latin translation of the ancient Greek *physis* (φύσις), which

physical world or universe-space, that is a mechanical world without purpose or human consciousness); and the Aristotelian *natural-(living)-physis* – that relates to the living Nature of the Self-evolving Kosmos; wherein each subject, including a man is the *naturalist* element of the one-whole Kosmic EvoProcess. Substantially, the former is explored nowadays in the forms of currently dominating (Western conventional – Platonist) *mathematical-physicalist* (*Transcendentalist*, thus Dualist – *idealist/materialist*) science; while the latter is the basis for the (undeservedly absent from modern scientific life – Organicist, Hylemorphist) *natural-Entelechist* science.

4. In the present, Aristotelian *Organon* Kosmology is “lost in translation” and beyond the comprehension by the world scientific community

While Platonic cosmology (in studying a thing and its events and processes) answers to the question : *What is it* (in respect to its Idea); and how to artificially improve it (by bringing it closer to its perfection) – the Aristotelian Organicist cosmology, on the contrary, strives to find the answer to the question *What for is this thing-subject* : what this thing is intended for “*by nature*”; therefore what is its inherent place in the Kosmos; and what is its natural (*by nature*) Organicist (Functionalist) mission in the Self-evolving Cosmic EvoProcess. In this light, it becomes clear that already by applying the term “being” (and not ‘telic life activity’, for example) to translating the Aristotelian texts – we involuntarily attach the Static (made *from without*)-significance to the things (subjects) and their activities, that are studied and discussed; and, thereby, unwittingly denying the Dynamic (Self-evolving, *from within*) essence of the Aristotelian theorizing and scientific Organicist foundations, as a whole.

Appreciably, we remember and agree with the conclusions of renowned Aristotelian scholars such as John Herman Randall Jr. and David Charles – with their expressing doubts as to whether “Aristotle can survive translation into the Latin substantives of the scholastic tradition” [Randall, 1960, p. iv]²²; and Charles’ arguing that the true Aristotle is not “the type of Aristotelian essentialist they (modern scholars. – **Authors**) attack.” [Charles, 2000, p. 3]²³ J.H. Randall likewise stresses that modern scholars “have come at Aristotle from the standpoint of the later medieval developments and problems”; and that the early modern scientists (including Bacon, Descartes, and Kant) had “discarded Aristotle in rebellion against his religious interpreters.” Randall also seriously doubts, “whether it is possible to state his (Aristotle’s. – **Authors**) *fundamental functionalism* (italics is ours. – **Authors**) in the

originally related to the intrinsic characteristics that plants, animals, and other features of the physical world develop of their own accord.

²² See: Randall, John H. Jr. (1960). *Aristotle*. New York, Columbia University Press.

²³ See: Charles, David (2000). *Aristotle on Meaning and Essence*. Clarendon Press, Oxford.

Latin tongue.” (Ibid.) Significantly, we likewise ought to pay attention to the conclusion of John Monfasani²⁴:

In translating history, one should wish to replicate the *res* of the original, not the *verba*. But in translating scientific texts, especially Aristotle, one must follow the Greek as closely as possible within the limits of literate Latin, neither adding or subtracting anything lest the translator substitute his understanding of the material in place of Aristotle’s or of readers more insightful than the translator. [Monfasani, 2006, p. 291]

At the same time, of course, we know that some terms in Plato and Aristotle overlap (at some extent) in their meaning; and this is natural, since both masters study and explain the same real world (but which is substantially Triadological-Triune), although doing this from the opposite cosmological positions. Moreover, both titans of world science produced their masterpieces during the Integralist era (as Pitirim Sorokin substantiates this historic period²⁵). In turn, the situation changes radically when scholars apply the Latin terms (like) “form” and “matter” (that have the substantive significance in the Platonic Dualism) to interpreting the Aristotelian texts (and which, “form” and “matter”, are used ubiquitously (!) in modern scholarly translations of Aristotle) – such an approach inevitably leads to a deadlock (when the paradox becomes a trap). In other words, a scholar who studies Aristotle (from his, in this way, translated texts) – in this case he finds himself utterly incapable of correctly perceiving the true (Organicist) meaning of Aristotle’s *Organon* Kosmology.

Metaphor of *the acorn and the oak tree* attracts attention; for its origin is attributed to the Stagirite. It is noteworthy that throughout the major cultures of Europe people have held the oak tree in high esteem. Moreover, throughout mythology, the acorn and oak tree analogy was linked to gods of power. Not surprisingly therefore, this analogy is widely used in philosophy too; and, here, its origin is attributed precisely to Aristotle, but not associated with the name of Plato. Paradoxically, however : on the one hand, although this example is widely used in textbooks and scholarly articles – we are unable to find this metaphor applied anywhere in Aristotle’s texts (in line with the Bekker numbering); but, on the other hand – this analogy usually is interpreted in a Platonic (Dualistic) way. For instance, in the book of S.E. Frost, Jr., entitled as “*Basic Teachings of the Great Philosophers : A Survey of Their Basic Idea*”, the author argues that in all

²⁴ See: Monfasani, John (2006). “George of Trebizond’s Critique of Theodore Gaza’s Translation of the Aristotelian ‘Problemata’.” In: De Leemans P. and Goyens M. (eds.), *Aristotle’s Problemata in Different Times and Tongues*, Leuven University Press, pp. 275–294.

²⁵ For more details, please see the section “3. Integral type of the “Classical Greece” cultural period”; in the paper, “In defense of Aristotle’s Biocosmology as the comprehensive supersystem of knowledge: Eight critical comments on the article of M. Benetatou.” *Biocosmology – neo-Aristotelism*, Vol.5, No.1 (Winter 2015), c. 28–50.

cases “we have matter and form” : “the acorn which we hold in our hands is matter”; and “the oak tree is matter,” as well as “the oak boards” (from this tree) are the material for furniture production. “In every case, the acorn, the oak tree, the piece of furniture, we have matter and form,” as he concludes [Ibidem]²⁶.

Cosmologically (etiologically) Frost makes the following (Platonist) explanation:

Thus, forms never change, but are eternally the same. The form “acorn” is always the same and never becomes the form “oak tree.” But matter takes on different forms as it changes. First it took on the form of an acorn, then the form of an oak tree, and then the form of a piece of furniture. And the process goes on indefinitely as change takes place. Matter is always taking on, striving to realize, forms. [Frost, 1962]

But it does “becomes” (it is an evidence based fact that an acorn naturally self-evolves into the oak tree, and categorically not to other “forms”) : an acorn-*morphe* (with its inherent potencies-*dunamis*) naturally (ontogenetically) self-evolves into the mature fruiting oak tree-*telos*. Therefore, we can in no way be satisfied with the Platonist approach to interpreting this metaphor. On the contrary, and in an obvious way : we do need (meeting the evident challenge) of emergent rehabilitation of Aristotle’s naturalism – his *naturalist OrganonKosmology*. Herein, the starting point evidently is the restoring of Aristotle’s true aetiology true significance (within his *OrganonKosmology*, for a scientific-*naturalist* understanding of the driving forces in the Kosmos). On this path, correcting (returning original) names to Aristotle’s basic concepts and notions is the primary task.

5. The primary task of restoring the true (in scientific meaning) names for the main conceptual notions of Aristotle’s science

In the joint paper on “Challenging Integralism” [2018], BCA-scholars discuss (referring to Aristotle’s *Physics*) the important point : of the Stagirite’s emphasizing the decisive role of analogy in realizing scientific pursuits – that “there will only be the ‘ultimately underlying’ factor in Nature [υποκείμενο φυσικς]... And of this ‘underlying’ factor we can form a conception by analogy; (191a7-11).” As we also know well, Aristotle placed sufficient emphasis on the differentiation of the notions “natural” and “artificial”; and “he never proposed an explanatory theory of organisms that would make artificial products of them, as is really the case with the modern mechanistic theory of life.” [Ritter, 1932, p. 388]²⁷.

²⁶ See: Frost, S.E. (1962). *Basic Teachings of the Great Philosophers: a Survey of their Basic Ideas*. New and Enlarged ed. Garden City, N.Y.: Doubleday.

²⁷ See: Ritter, William E. (1932). “Why Aristotle Invented the Word Entelecheia,” *Quarterly Review of Biology* 7, no. 4 (1932): 377–404.

In turn, we can find (in Aristotle's texts) not only naturalist analogies, but the examples of “bronze,” “silver,” and “marble,” etc., i.e. which represent themselves the artificial objects – in the course of explaining his naturalist concepts by means of analogy. In regard to this paradox, we must first recall that Stagirite lived in the era with little or no objective biological knowledge, and he knew nothing about the advances of modern biology (especially, of biochemistry, molecular biology, and integrative physiology – to use effectively his basic “method of analogy”²⁸). Therefore, it is possible to assert that Aristotle (having the modern information available) – would certainly prefer (for demonstrating a true *hyle*) the examples of nitrogenous bases (nucleotides), or amino acids, or chemical elements; or the “functional blocks” (referring to A.M. Ugolev’s conception of “universal functional blocks”)²⁹ – as the genuine analogies of *hyle*.

There is no doubt, had Aristotle the knowledge of modern science’s results (achievements) : he would surely have taken the analogy, as an example to his cosmological constructs – for instance, the analogy of protein synthesis (or a similar *naturalist* example, from the great set that modern integrative physiology contains). In this attitude, *hyletic* things-subjects, who are *morphe*-organs themselves) : their natural *dunamis*-potencies are essentially *telic* (goal-oriented – organised at the actual needed Functionalist result-effect) – in the *Entelechist* (ontogenetic) self-contribution to the successive *morphe*-organisation at the higher (organising) level of living Kosmos. Thereby, naturally, in (and to) this *bottom-up* Kosmic Self-ascending Evolutionary (ontogenetic – for each subject of life) Process (EvoProcess) participating and, as the engaged entities, ultimately, contributing to the emergence of a new (higher level) *morphe*-structure (physical *organon* – Functional organ) : herein, *hyle* and *morphe* are inextricably linked (the foundational principle of *Hylemorphism*) – over the subject’s entire *Entelechist* ontogenesis (the principle of *Entelechism*).

Strikingly, the example with protein synthesis vividly demonstrates that *hyletic* units (like nucleic bases, or amino acids), but in no way Platonist uniform (homologous and aimless) material particles : *hyletic* entities have equal importance (as subjects of the universal evolutionary process); and, by realizing their natural *dunamis*-potentials – exercise the vital activity and fulfil the indispensable functions in the upward evolvment of the EvoProcess. “*Hyle*, – as Francis Peters concludes in his *Historical Lexicon* (of the Greek philosophical terms, 1967)³⁰, – *Hyle*, a purely Aristotelian term

²⁸ Equally to Aristotle’s “analogy” (in studying the intrinsic naturalist principles) – the method of “essential metaphor” has been introduced; for instance, see: Khroutski, 2015.

²⁹ See: Ugolev, Alexander M. (1987). *Estestvennye tekhnologii biologicheskikh system* [Natural technologies of biological systems]. Leningrad, Nauka. 317 pp. (In Russian).

³⁰ See: Peters, Francis E. (1967). *Greek Philosophical Terms: A Historical Lexicon*. New York: New York University Press.

(italics is ours. – **Authors**), does not have its origins in a directly perceived reality...” [p. 88]. “*Hyle*, then, – he continues – is the primary substratum of change (*hypokeimenon*, q.v.; Phys. 1, 192a) (...) *Hyle* is like a substance (...)” [p. 89] Substantially, as F. Peters deduces : Aristotle’s *hyle*-concept is opposed to the meaning of a similar (in scientific focusing) concept – to Plato’s term *hypodochē* for the primal stuff or receptacle which is equi-primordial with the perfect Forms; and which (the Forms, according to the *Timeaus*) are being embedded on this stuff (*hypodochē*) by the Demiurge (the artisan or creator); thereby, causing the sensible world of appearance (*Kosmos Aesthetes*) coming [Peters, 1967].

The Aristotelian conceptions (and their terms), first introduced into science, are essential; and cannot be replaced by other concepts (and their terms) used in the (adequate) explaining of alternative cosmologies and theories. These Aristotelian (essential) neologisms, should certainly include those concepts that have to do with the Stagirite’s aetiological (Organicist) thought and his main theoretical foundations; such as the notions of *physis*, *hypokeimenon*, *organikon*, *hyle*, *morphe*, *dunamis*, *energeia*, and, of course – *entelecheia*.

Above, we already considered the meaning of the two concepts – *hyle* and *morphe*; and, having analysed their meaning : we derived the conclusion above (and emphasized) that it is completely impossible to replace them by the terms “matter” and “form” – for translating the texts of the Stagirite, without completely losing their true meaning. The reason for this is obvious : both (among others) terms (*hyle* and *morphe*) are essential for the conceptual construction of Aristotle’s entire (super)system of rational (scholarly) knowledge – the all-encompassing *Organon*Kosmology; therefore, as they have the foundational significance – they cannot be replaced by other terms, in principle (it was precisely for this reason that Aristotle produced them) – to achieving the stability and consistency of his entire cosmological edifice. Otherwise, if replacing these key concepts (*hyle* and *morphe*) with the terms of *matter* and *form*, which belong to Plato’s *Transcendentalist* cosmological system and its Dualist *idealist/materialist* opposition; which is a clear anti-Naturalism) – we, then, will get a new version of Platonism, and nothing more.

Therefore, the Biocosmological approach primarily aims at rehabilitating the true Organicist aetiology, within Aristotle’s entire *Organon*Kosmology (of the essentially *Organicist* essence; wherein *organon*³¹ is a thing’s effective functioning). In the

³¹ Curiously, Aristotle never used the word “*organon*” : but this name was given to the collection of Aristotle’s six works on logic (made by Andronicus of Rhodes around 40 BC). It should be noted that Aristotle also never used the word “logic”, but, referring to these works – he called the study of correct reasoning and valid inferences as “analytics”. Nevertheless, as we referred above to the conclusion of Mariska Leunissen: “elsewhere in the Aristotelian corpus the term *organikon*

collective work (“*Challenging Integralism*” [2017])³², BCA-scholars meet the challenge (due to scientific methodological necessity; and after continuous discussions) – to giving new names to Aristotle’s four (well-known) aetiological causes (held by him in *Physics* II.3 and *Metaphysics* V.2). In this endeavour, the BCA-proposal was realised to change the existing (Latinized) terms of the Stagirite’s four “κατα φύσιν”-causes – into, scientifically, the more consistent ones with the Aristotelian theory:

- to **Hyletic** (instead of *material*) cause, thereby stressing the process of a living thing-body’s filling (with the necessary constituent elements-entities) and building of the body, both by virtue of their inherent goal-oriented activities and due to integral interaction with the *morphe*-basis;
- to **Generative** (instead of *efficient*) cause : the resulting genesis (ontogenetic emergence) and the natural appearance of a viable subject of life – “the Functionalist organ” as *organon*, the living thing itself;
- to **Morphogenetic** (instead of *formal*) cause : relating directly to a tangible subject and its body existence, with the given shape (*morphe*) under genesis – its concrete optimal configuration and structure, and that is carrying the due (mature) *dunamis*-potencies to actualizing the inherent Functionalist (effective) activity;
- to **Telic** (instead of *final*) cause : that realizes the inherent goal-oriented effective activity itself; with, eventually – the effective enjoyment (fulfilment, carrying out, exercising) of a needed effect (product) – the efficacious result of action.

In the main, as held in BCA : the aetiological forces in Aristotle’s *Organon*Kosmology are essentially *telic* (goal-oriented, intrinsically and ontogenetically – teleological, in a *naturalist* sense), including the four aetiological forces-causes, discussed above. In this light, we meet with full understanding of the Aristotelian scholar, Helen Lang’s findings; in particular, with her conclusions that, firstly, “although the term «teleology» is regularly applied to Aristotle, it is a modern one, and is quite definitely fixed in meaning by contemporary use.” [Lang, 1998, p. 36]³³ Due to this misinterpretation, “Aristotle’s teleology is often identified with his account of «final causes» as if, apart from them, the rest of his physics (or philosophy more generally) were not teleological.” [Ibid., p. 274] Helen Lang reveals, in Aristotle,

(coined by Aristotle; see Byl 1971, 132) always means «instrumental» and there is no reason to assume it means something different here.” [Leunissen, 2010, p. 53.]

³² See: Bremer, Josef; Khroutski, Konstantin S.; Klimek, Rudolf and Tadeusiewicz Ryszard (2017). “Challenging integralism, Aristotelian entelechy, hyle and morphe (form), and contemporary concepts of information, touching upon the etiological issues of carcinogenesis (with reflecting feedbacks of Paul Beaulieu, Ana Bazac, Anna Makolkin, Leonardo Chiatti, Milan Tasic and Dariusz Szkutnik),” *Biocosmology– Neo-Aristotelism* Vol. 7, No. 1 (Winter 2017), pp. 8–111.

³³ See: Lang Helen S. (1998). *The Order of Nature in Aristotle's Physics: Place and the Elements*. New York, Cambridge University Press.

“the active orientation of potency toward actuality”, and that it is crucial to the account of “things that are by nature.” [Ibid., p. 47] Therefore, in Aristotle’s theory, “what is potential is not thereby passive: in natural things what is potential is caused by its proper actuality because it is actively oriented toward it.” [Ibid., p. 64] The scholar concludes that “this active orientation of the potential for the actuality that completes it lies at the heart of the order and teleology of nature.” [Ibidem]

In a significant way, the Aristotelian aetiology conceptually is much deeper and broader (than the above four causes, conventionally distinguished) : all this, therefore, needs its fuller presentation and development. For instance, an essential moment is, referring to F. Peters : *hyle* has the direct relation to *steresis* (privation). The scholar’s characterization is the following: “*Steresis*, which Aristotle defines (*Meta.* 1011b) as the «negation of something within a defined class,» is one of the three essential elements in Aristotle’s analysis of genesis in *Phys.* I: the permanent substratum (*hypokeimenon*) and the passage of one form to its opposite (*enantion*) demands the existence of a lack of that second form in the substratum (*Phys.* I, 191a191b).” [Peters, 1967, p. 180] Thus, the scholar continues, “*steresis* both permits *genesis* and solves the Parmenidean problem of nonbeing.” [Ibidem] In fact, the Stagirite substantiates the essential (Naturalist) reality in the transition (shift) of the subject’s life activity from one order of organization to another (opposite) one. In the *BCnA*-paper entitled “Discussing the hypothesis of «spatial homeostasis» by Oleg I. Epstein : On the Biocosmological parallels and terminological corrections, and general foundations of the Organicist – *Organon*Kosmological – science in Russia”³⁴ – the concept “Aether-Noetic (*steresis*-gravitational) physical cause” – of the attractive, evolutionary-ontogenetic acting, among other major aetiological forces in Aristotle, is substantiated and advanced.

In another joint paper (devoted to the contribution to WIU-evolvment), the WIU³⁵-fundamentals for aetiology are conceived to have a deep correlation (as to the essential reference basis) with the Aristotelian *κατὰ φύσιν* (by Nature) – intrinsic telic causes (*hyletic*, *generative*, *morphogenetic*, *telic*); as well as, substantially – with the *steresis* (*steresis*-gravitational) physical cause : in all this, deeply correlating with the Stagirite’s teleological physics, based on his authentic Dynamic *naturalistic* Organicism – *Organon*Kosmology, as a whole. Likewise, the priorities are designated for the Aristotelian “*κατὰ συμβεβηκός αἰτίον*” – the *resonance* cause (or the

³⁴ Khroutski K.S. (2019). “Discussing the hypothesis of «spatial homeostasis» by Oleg I. Epstein : On the Biocosmological parallels and terminological corrections, and general foundations of the Organicist – *Organon*Kosmological – science in Russia,” *Biocosmology – neo-Aristotelism* Vol. 9, Nos. 1&2, (Winter/Spring 2019); c. 21–136. (In Russian)

³⁵ The WIU – World Information University – is launched in Krakow, in the 2016; its founder and the first President is Prof. Rudolf Klimek.

circumstantial, or *convenient case* cause), which is essential as for the reintegration of a subject into the surroundings, as for the Three-valued logic and Ternary informatics³⁶; concurrently and equally (on an equal footing) with the currently dominating Two-valued logic and Binary informatics – for the benefit of their Integralist unity. Basically, as a Russian scholar Nikolai Brusentsov concludes (cited in the paper):

By a misunderstanding, Aristotle was proclaimed the father of two-digit logic, whose authority unwittingly served to strengthen the principle of the excluded third and the formal system of inferences based on it. But the numerous attempts to reflect Aristotle's syllogism in this «fundamental» system are futile, and it cannot be otherwise, because syllogism represents a three-valued dialectical logic, incompatible with the principle of excepting the third. After all, as the third is excluded a distinct (one more), the middle-intermediate basis between «yes» and «no», that renders to logic a living, adequate to reality quality. [Brusentsov, 2002]³⁷

Naturally, in respect to the WIU-activities – the main priority is given to Information and the Information cause. The definition of the *Information cause* given here (based on the Aristotelian matrix and Biocosmological perspective, as well as Professor Klimek's basic formula – $E = i mc^2$) is as follows:

Information cause is essentially the Naturalist cause, which, by nature (the “κατα φύσιν”-causality), by testing and receiving (resonating with) all the needed essential contacts and messages – thus naturally is realizing (disclosing, discovering) the inherent (substantive) solution for uniting the congeneric polarities (opposite substances) – for the given subject of life effective Homeostatic existence and the entire Functionalist (Entelechist, Ontogenetic) Self-evolvment. [Khroutski & Klimek, 2018, p. 221]³⁸

³⁶ For more details, see: Kudrin V.B. & Khroutski K.S. (2017). “Three-valued logic and ternary informatics of N.P. Brusentsov: their Aristotelian foundations,” *Biocosmology – neo-Aristotelism* Vol. 7, Nos. 3&4, (Summer/Autumn 2017); pp. 337–388. (In Russian)

³⁷ See: Brusentsov N.P. *Ot Aristotelya do komp'yutero* (*From Aristotle to Computers*) // *Kibernetika – ozhidaniya i rezul'taty*. Politekhicheskie chteniya (Cybernetics – expectations and results. Polytechnical readings). Vol. 2. Moscow: Znanie, 2002. P. 104–105.

³⁸ See: Khroutski, Konstantin S. & Klimek, Rudolf (2018). “Biocosmological definition of Information and its Naturalist causative significance, approaching to evolve the World Information University (WIU),” *Biocosmology – neo-Aristotelism* Vol. 8, No. 2, (Spring 2018); pp. 203–261.

6. The true significance of *entelecheia* – a cornerstone concept in Aristotle's *Organon* Kosmology : the notion of *Entelechist cause*

Finally, the *Entelechist*³⁹ *cause* (in the Organicist scholarly approach) occupies a crucial (the ultimate vital) place for a thing-subject of the real world (Biocosmos). We fully agree with Will Durant who, showing *The Story of Philosophy*, essentially concludes that “ἐντελέχεια – having (ἔχω) its purpose (τέλος)⁴⁰ within (ἐντός); one of those magnificent Aristotelian terms which gather up into themselves a whole philosophy.” [Durant, 1962, p. 69]⁴¹ In a similar manner, Wilhelm Windelband, in his *A History of Philosophy*, 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, and the respect in which it is opposed to the earlier explanation of Nature consists therefore in carrying through in conceptions of the teleology which Plato had only set up as postulate, and developed in mythical, figurative form. [Windelband, 1914, p. 140]⁴²

In a striking way, however, the key concept (of the “*entelecheia*”) in Aristotle's genuine *Organon* Kosmology is hardly used in modern scientific life. Moreover, modern scholars (in interpreting the notion *entelecheia*) – they use the term “actuality” to translating the Stagirite's concept of crucial significance; and this approach can in no way correspond to the (true) Dynamic Telic (inherent and goal-oriented) *ontogenetic* meaning of the subject's *entelecheia* (directly given to it by the Greek genius) – within the entire Aristotelian Dynamic naturalist approach to a scientific understanding of the world. In fact, “actuality” comes from Latin *actualitas*, and its normal meaning in Latin is “anything which is currently happening” (thus, the “actuality” essentially rejects any relationship to the inherent *dunamis*-potencies of a

³⁹ The application of the term *Entelechist* (and not *entelestial*) immediately addresses to the gist of the issue : the Aristotelian concept of *entelecheia* relates to both as to the internal driving forces of a subject, that are predisposed to actualizing its inherent (ontogenetic Functionalist) life destination (mission), and what is the subject's substantive Self-realization and Self-actualization (efficient carrying out) its naturalist *dunamis*-potency; as well as in relation to the surrounding (external) factors, which the subject's ontogenic Functionalist process undergoes, receiving its concretization under to the environmental factors and circumstances impact.

⁴⁰ But we cannot agree with the translation of τέλος as “purpose;” for τέλος, in Aristotle's meaning, is rather “the needed result of life activity.”

⁴¹ See: Will Durant (1962 [1926]). *The Story of Philosophy: The Lives and Opinions of the Greater*, New York: Time Inc.

⁴² See: Wilhelm Windelband (1914)). *A History of Philosophy: With Especial Reference to Formation and Development of its Problems and Conceptions*, trans. J. H. Tufts, 2nd edition; London: Macmillan & Co. Ltd.

subject). Therefore, in principle, “actuality” cannot serve as a true translation option for the Aristotelian *entelecheia*, with its Dynamic Telic and Ontogenetic essence.

In the author’s paper to the “*Proceedings of the World Congress: Aristotle, 2400 Years*”⁴³ : its second section is devoted to the evidence that “Aristotle’s ἔντελέχεια Cannot Be Translated by the English «Actuality»”. The paper concludes that ἔντελέχεια can never be identified with “actuality.” Significantly, the concept *entelecheia* is conceived by the Stageirite to define the natural force (cause) that is existing by Nature (thus being *naturalist* – inherent), and which works ontogenetically – throughout the life of a subject. In the real world, therefore, we naturally have the hierarchy of a subject’s life *entelecheia* – for realizing the successive and ascending, through the intermediate tasks and levels (cycles and circles) of the life Self-evolvement – up to achieving and Self-realizing the main (Functionalist) goal-mission of the entire life’s journey. In fact, ἔντελέχεια (*entelecheias*) of a thing (in all the variety of actualized and realized goals and tasks) exist synchronously in the *dunamis*-potencies and *energeia*-activities of a living subject. In this order, *the former*, i.e. the Self-realization of a subject’s inherent (endogenous) potencies for individual growth and the establishment of mature functionality – naturally is serving for the inherent Self-actualisation of *the latter*, i.e. the Telic (goal-oriented) actual approaching (to) and achieving the needed result of activity, thus satisfying the essential need. All the more, due to Aristotle’s basic conception that “*soul is the entelecheia of the body*” (see references below), and as Soul cannot be present only in activity (*energeia*), and (at the same time) be absent in potency (*dunamis*) – the subject’s ἔντελέχεια naturally falls as much onto telic *energeia*-activity, as to the initial *dunamis*-potency.

As well as the statement that “substance is actuality” is a direct logical contradiction in reasoning : i.e., this is an assertion that ‘the invisible is visible’ (and this is an oxymoron). Or that “there are two kinds of actuality” (‘two incompatible entities’ given the same term “actuality” – an obvious unacceptable violation of elementary logic : all this makes modern translations of Aristotle completely unacceptable to current scientific (and philosophical) theory and practice. However, for instance, in J. Barnes’ edition of *The Complete Works of Aristotle*, we see:

But, substance is actuality (ἐντελέχεια), and thus soul is the actuality (ἐντελέχεια) of a body as above characterized. Now there are two kinds of actuality (ἐντελέχεια) corresponding to knowledge and to reflection. (*De an.* 412a21-23)⁴⁴

⁴³ See: Khroutski K.S. (2019). “Aristotle’s *Organon* Kosmology – Teleological Organicism Naturalism – As the Type of Rationality and Its Actual Position.” In Demetra Sfendoni-Mentzou (ed.), *Proceedings of the World Congress: Aristotle, 2400 Years*: pp. 680–685

⁴⁴ See: Aristotle (1984). “De Anima,” in: *The Complete Works of Aristotle*; The Revised Oxford Translation, trans. J. A. Smith, vol. 1. Princeton: Princeton University Press.

On the contrary, the position of the BCA-scholars is the exact opposite : that Aristotle's *entelecheia* cannot be interpreted by the word "actuality" by no means; but the need is to preserve the original name for the most important concept in Aristotle's scientific edifice.

In general, the *naturalist* essence (substance, *essentia*) of things and beings is a basic concept in his physics, to which he assigns the first (most important) place in the list of ten categories within the science. It becomes clear, therefore : unless we return the original name and meaning to *entelecheia* (and other key Aristotelian concepts) – it will remain extremely difficult (rather, impossible) to comprehend the foundational principles of the Aristotelian essential *Organon*Kosmology's framework. For instance, as it is given in the sample: "The soul must be a substance in the sense of the form of a natural body having life potentially within it." [Aristotle (1), 412 a 20]⁴⁵ : in such a statement, wherein, again, an internal quality (substance) is equated with an external (form) property – in such a case, it seems impossible to understand such a statement from the standpoint of the world's existing statement (sentential) logic. All this fully applies to other main conceptual constructs of Aristotle's comprehensive Organicist scientific approach to studying the real world.

Aristotle opens the Book III, of his *Physics*, with the crucial statement: "Nature has been defined as a "principle of motion and change" (ἀρχὴ κινήσεως), and it is the subject of our inquiry" (*Phys.* 200b10-11).⁴⁶ He concludes further that: "The fulfilment (ἐντελέχεια) of what exists potentially (δυνάμει), in so far as it exists potentially, is motion (κίνησις) –" (*Phys.* 201a10-12). In Robert Drew Hicks' edition of Aristotle's *De anima*,⁴⁷ the word "actuality" likewise replaces "ἐντελέχεια"; however, therein, the translation is more conform to Aristotle's original *Organicist* (archetype of) rationality that has been developed and introduced into the world culture by the Stagirite:

Such substance is actuality (ἐντελέχεια). The soul, therefore, is the actuality (ἐντελέχεια) of the body above described. However, the term 'actuality' (ἐντελέχεια) is used in two senses; in the one, it answers to knowledge, in the other to the exercise of knowledge. Clearly, in this case, it is analogous to knowledge (ἐπιστήμη): for *sleep, as well as waking, implies the presence of soul* (highlighting is ours. – **Authors**); and, whilst waking is analogous to *the exercise of knowledge*, sleep is analogous to the possession of knowledge

⁴⁵ The excerpt is taken from: Aristotle. *On the Soul*. The Internet Classics Archive. URL: <http://classics.mit.edu/Aristotle/soul.html> (last retrieval – 2021.02.03)

⁴⁶ 10. The translation is taken from: Aristotle (1930). "Physics," in *The Complete Works of Aristotle*, trans. R. P. Hardie and R. K. Gaye, vol. 2. Oxford: Clarendon Press.

⁴⁷ See: Aristotle (1907). *De Anima*, ed. R. D. Hicks. Cambridge: Cambridge University Press.

without its exercise; and in the same individual the possession of knowledge comes in order of time before its exercise. (*De an.* 412a21-28)⁴⁸

Thus, in respect to the Aristotelian *potentiality/actuality* foundational principle : we are dealing with the Bipolar existence of the two opposing worlds of life activity; which are fully incompatible, but essentially equal in their importance for the consistent organization of healthy effective vital functioning of an organism (living thing-subject) and all its organs (that are the *Entelechist*-functional elements). At the same time, the Aristotelian notion of the soul as the “*first entelechy of the body*” reveals the existence of the Third life order : thus, the Triunity and Triadic (Triadological) essence of a subject’s life organization (within the conceptual framework of his *Organon*Kosmology) – a Type of Integrating foundation. The latter is organized on the basis of (around) the ontogenetic axis of homeostatic stability, which we call the *Information cause* : the vital basis that ensures the stable existence of ontogenesis as a life process, thus – the subject’s eventual Self-realization of its inherent life goals. Summarizing the study of this physical issue, Aristotle states: “it was said first that only the contraries were starting points, but later that something must also underlie them and that they must be three;” (191a17-18)⁴⁹; and, in general terms, Entelechial kinesis (movement and activity) is the actualization of the (Entelechial) potency (201a).

6.1. To defend the original meanings of the Aristotelian concepts of *Entelecheia* and *Energeia* – from the use of the term “actuality”

Strikingly, but the term “actuality” is also often used to translate another original (invented by Aristotle) concept – *energeia*. This is all the more surprising because both terms are easily distinguishable and essentially different from each other: *energeia* does not correspond in any way to the qualities of the soul of a subject of life – both in the process of sleep and in the cycle of wakefulness. Essentially *energeia* expresses the very process of actual realization of a subject’s life forces in the surrounding real world. That is to say, the Aristotelian concept means the realization of vital activity by a subject : i.e. movement and development, as well as impact (on) and interaction with other surrounding objects and subjects; but *energeia* exists solely with the sufficiency of (Dynamic) resources-potentials for action in a living subject. Therefore, when these potentials are exhausted : the continuation of carrying out the *entelechist* activity becomes impossible; then a need is for the organ(on)-subject’s sufficient *dunamis*-potentials re-production, in this way of restoring possibilities to action – for the continuation of successive goal-(result-)organized efforts.

⁴⁸ The Italics and extra bold are given by authors.

⁴⁹ Cited from: Aristotle. (1957). *Physics*, ed. by P. H. Wicksteed and F. M. Cornford, Loeb classical library, Harvard University Press.

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The Aristotelian scholar Thomas Olszewsky [1997]⁵⁰ speaks about the total obviousness in existing controversy about the understandings of Aristotle’s terms ‘*energeia*’ and ‘*entelecheia*’. He cites the opinion of Stephen Menn that Aristotle needs this concept for “using ‘*entelecheia*’ as a notion of the product of work,” as well as Olszewsky quotes the Stagirite’s definition given for *kinesis*, as “the *entelecheia* of what exists in *dunamis*, insofar as it exists in *dunamis*” (201a10). Another reference to Aristotle’s grounding [Olszewsky, 1997] is how *dunamis* and *energeia* are one: “For the *ergon* is the *telos*, but the *energeia* is the *ergon*, on which account the name *energeia* is drawn from *ergon*, and exerts all of its powers toward *entelecheia*.” (1050a22) Essentially, *energeia* is a concept completely opposite (but equal in significance, and inextricably linked) – to *dunamis*, which denotes the natural potentialities and vitality of a given subject, likewise taken in a general sense (as a whole). Substantially, as stated above, due to the foundational principle of Bipolarity : a thing-subject’s *entelecheia* integrates and unites the meanings and forces of both *dunamis* and *energeia* – in organizing the vital activity of a whole subject towards achieving its specific (as the results of activity) goals. The ultimate life goal, as a result of entire endeavors : is the subject’s highest Functionalist Self-actualization and wholesome contribution to EvoProcess’ ascending Self-movement.

The opinion of William E. Ritter, a prominent American biologist, is likewise important to us. Ritter contributed a lot to Organicist approaches in biology and science. The scientist left his mark on science by attempting “to work out some

⁵⁰ Olszewsky, Thomas (1997). “Energeia and Entelecheia: Their Conception, Development and Relation,” *The Society for Ancient Greek Philosophy Newsletter*. 277.
<https://orb.binghamton.edu/sagp/277>

naturalistic *Weltanschauung* in keeping with the methods of the zoologist, the biologist, the naturalist” [Lunau, 1955, p. 192]⁵¹; in this approach he evolved the concept “about man as an element in the natural order” [Ibid.]. It is essential that Ritter refutes to follow (already accepted) either “vitalism” or “mechanicism”; but evolves the conceptual building of *organicism*. In this way, he realized his preferences for a multitude of natural causes⁵² : “Ritter closes his book with a chapter on Multiple Causes in Organic Evolution.” [Hall, 1920, p. 95] Another valuable statement, already given in the “OBITUARY – to William Emerson Ritter: Naturalist and Philosopher” : is highlighting the essential Ritter's affirmation that “every living individual organism has the value, chemically speaking, of an elementary chemical substance” [Sumner, 1944, p. 337]⁵³ – which is a direct correspondence to Aristotle’s foundational principles of Entelechism and Hylemorphism!

Immediately, we relate this approach to the scientific achievements of a BCA member (and leading scholar) Georges Chapouthier, author of the *Mosaic theory* [2018]⁵⁴; wherein he realizes precisely the combination of the (opposing and competing) principles of *Elementalism* (in Chapouthier’s approach we meet with the analogous principle of Juxtaposition) and *Organismalism* (the Mosaic principle) into a general order of life existence and evolvement. Among the results achieved by the American biologist and philosopher, Chapouthier singles out an important point, exactly that “contrary to arguments put forth by Hans Driesch, Ritter saw the correct concept of entelechy as being based on the actualization of potential (potential to act) and not on action alone (*energeia*)” [Chapouthier, 2018, p. 423]⁵⁵; thus revealing the Dynamic essence of the *entelecheia* as a natural evolutionary (ontogenetic) force (cause). Another significant aetiological point is (as Chapouthier reveals) that “in Aristotelian entelechy, the telos (or purpose) involves the idea of fulfilment, of a being achieving full development as a final, functional whole.” [Ibid., pp. 423-424] In his book on “*The Mosaic Theory of Natural Complexity*” (2018), the scientist (in the

⁵¹ Quoting the review of H. Heinz Lunau, in the *Theoria*, 1955, Vol. 21; Iss. 2-3, pp. 191–195 : on William Emerson Ritter’s book “*Charles Darwin and the Golden Rule*”; compiled and edited by Edna Watson Bailey; Science Service, Washington and Storm Publishers, New York, 1954. XXI, 400 pp.

⁵² What is noted by reviewer Edwin H. Hall, in the *Harvard Theological Review* / Volume 13 / Issue 01 / January 1920, pp 93–96; on William Emerson Ritter's “*The Probable Infinity of Nature and Life*,” The Gorham Press. 1918. Pp. 164.

⁵³ See: Sumner, Francis B. (1944) “William Emerson Ritter; Naturalist and Philosopher,” in *Science*, 99: 335–338;

⁵⁴ See: Chapouthier, Georges (2018). *The Mosaic Theory of Natural Complexity: A scientific and philosophical approach*. New edition [online]. La Plaine-Saint-Denis: Éditions des maisons des sciences de l’homme associées.

⁵⁵ See: Chapouthier, Georges. (2018). “Aristotelian entelechy and modern biology,” *Biocosmology – neo-Aristotelism*, Vol.8, Nos.3&4 (Summer/Autumn 2018), pp. 421–430.

Conclusion to the Chapter 3) speaks about “extending the Aristotelian belief in the universality of biological processes to these (nature and culture. – **Authors**) ontic levels, with complexity of culture being built according to the same processes as apply to complexity in living organisms.” [Chapouthier, 2018, p. 38]

Ritter’s close attention to the relationship between Aristotle’s key concepts (entelechia and energia) deserves special attention. He emphasizes that the concept of *Energeia* is likewise a notion that has been invented by the Stagirite, and further introduced by him into scientific practice as a basic principle. In his seminal work, “*Why Aristotle Invented the Word Entelecheia*,” (which appeared 13 years after the publication of the book on “*The Unity of the Organism, or the Organismal Conception of Life*”, thus reflecting the more mature stage of his theoretical activity) : Wm. Ritter makes an important point – he brings into focus the fact that Aristotle already had the term ἐνέργεια (i.e. that this key concept already existed) – before the *entelecheia* emergence. The scholar’s explanation is, therefore : the Stagirite felt “the need of a new term”– ἐντελέχεια [1932, p. 380]⁵⁶, especially in discussing “the actual as contrasted with the potential”. Eventually, Ritter revealed (in his work of the 1932) the essential point that ἐντελέχεια is the term of the entire process of ontogeny and the issue of ontology [Ibid., p. 386]; and that, paradoxically (but essentially), ἐντελέχεια is used more frequently in the *Physics* (as well as *Metaphysics* and *De anima*) than in his zoological treatises [p. 383]. The scholar speaks about “the deplorable perversion of Greek, especially of Aristotelian,” and emphasizes Aristotle’s “intrinsic ‘principle of motion’ (growth and differentiation)”[p. 390] – “a whole series of stages till the fullfledged, functionally mature organ is present, i.e., has come-to-be.”[Ibidem] In conclusion, Ritter speaks of ἐντελέχεια (and Aristotle’s aim of its invention) as “«the entirety» the «complete reality» – germ, material, motion, form and whatever, if anything more, there may be that is «not separable from the things themselves.»” [Ibid., p. 390]

To sum up (from the Biocosmological disposition) : the term “actuality” is completely unacceptable in interpreting the original texts of the Stagirite; wherein the references to *entelecheia* and *energeia* are used (despite significant differences in the meaning of the Aristotelian concepts of *entelecheia* and *energeia*). The same refers to all other scholarly texts (that address these concepts); while *entelecheia* and *energeia* are to be used themselves, in their original meaning. The Aristotelian scholar Joe Sach clearly argues this point, that “the word «actuality» already belongs to the English language, and has a life of its own which seems to be at variance with the simple sense

⁵⁶ See: Ritter, William E. (1932). “Why Aristotle Invented the Word Entelecheia,” *Quarterly Review of Biology* 7, no. 4 (1932): 377–404.

of being active.” In fact, he continues, “by the actuality of a thing, we mean not its being-in-action but its being what it is.”⁵⁷ In fact, as the scholar explains:

Some commentators explain it (*entelecheia*. – **Authors**) as meaning being-at-an-end, which misses the point entirely, and it is usually translated as «actuality,» a word that refers to anything, however trivial, incidental, transient, or static, that happens to be the case, so that *everything is lost in translation, just at the spot where understanding could begin* (bolding and italics is ours. – **Authors**). [Sachs, 1998, p. 245]⁵⁸

This is all the more important because the Aristotelian concept (and notion) of *energeia*-activity is inextricably linked to the corresponding inherent *dunamis*-potency in the subject; and both concepts are combined (in ontogenetic *bottom-up* growth) in the notion of *entelecheia*. The latter (*entelecheia*), as the scholar explains in his book on “*Aristotle’s Physics: A Guided Study*” : Aristotle’s *entelecheia* has a cornerstone significance – it lies “at the heart of everything in Aristotle’s thinking, including the definition of motion.” [Sachs, 1998, p. 245] Thus, the translation of *entelecheia* has a special (foundational) meaning. Herein, being at stake : the correctness of understanding the whole edifice (essence of the entire cosmology) – of all the sciences generated by Aristotle; and wherein any substantive misinterpretation, including the use of the term “actuality,” is wholly unacceptable.

Similarly, another Aristotelian scholar – Abraham P. Bos, relating to his exploration of the *De anima* : he concludes that “the psychology of Aristotle has never been understood in a historically correct way”; and that “the qualification «*organikon*» should not be understood as «equipped with organs» (as it always has) but in the sense of «serving as an instrument to the soul».” [Bos, 1998]⁵⁹ All thus, the scholar concludes: “Aristotle’s definition of the soul must therefore in any case be corrected to: «the first entelechy of a natural body which potentially possesses life and which is instrumental».” [Ibidem]

⁵⁷ See: Joe Sach, *Aristotle: Motion and its Place in Nature*. URL.: <https://iep.utm.edu/aris-mot/> (last retrieval – 15.02.2021)

⁵⁸ See: Aristotle, Sachs Joe (trans., ed.) *Aristotle’s Physics: A Guided Study*; Publisher: Rutgers University Press, 1998.

⁵⁹ See the *Paideia Project On-Line* that gives access to the nearly 1000 papers presented at the Twentieth World Congress of Philosophy, including: Bos, Abraham P. *Aristotle’s Psychology: The Traditional (hylomorphic) Interpretation Refuted*. URL.: <https://www.bu.edu/wcp/Papers/Anci/AnciBos.htm> (last retrieval – 15.02.2021)

6.2. William Emerson Ritter's Organismalism : his aetiological quest for the Ultimate Cause

In Wm. Ritter's *magnum opus*, the two-volume "*The Unity of the Organism, or the Organismal Conception of Life*" [Ritter, 2019]⁶⁰, as a reviewer stresses from the beginning: "These volumes urge a conception of living things that is denominated *Organismalism*, as opposed to one characterized as *Elementalism*" [Jennings, 1921, p. 616]⁶¹. In this profound (on "*The Unity of the Organism*") observation, and herein referring to the previous essay "The Higher Usefulness of Science" (1918) : William Emerson Ritter raises and tries to answer the query, "What is nature because man is a part of it?" [Ritter, 1919, II, p. 337]⁶² He also raises the question in a different, less ambiguous way: "What must nature be in order that it may produce such an animal as man?" [Ibidem].

An essential feature of Ritter's *organicism* is its *anthropocosmist* approximation and similarity to the Russian natural science tradition⁶³. Thus, the American scientist concludes in his study that:

The "self" which I am suggesting does indeed imply "another" no less unequivocally than does the "self" of advanced social psychology. But the "self" and the "other" implied by my hypothesis differ from those of current philosophical theory in that the roots of both are not only in the social relationships of the human species, but extend right on through these into sub-human relationships, *even down into the very constitution of inorganic nature*. The "self" and the "other" of my conception are more personally objective, and more *cosmic* (italics are ours. – **Authors**) in their affinities, than are the "self" and the "other" of social psychology. [Ritter, 1919, II, pp. 306-307]⁶⁴

With obviousness, Ritter's approach is also compatible with the conceptual achievements of Russian scientists within the theoretical sphere of functional systems' studies (Anokhin, 1980; Simonov, 1984; Ugolev, 1985; Poletaev, 2008; et al.)⁶⁵; which

⁶⁰ See: Ritter, Wm.E. (1919). *The Unity of the Organism, or the Organismal Conception of Life*. 2 vols. Boston: Gorham Press.

⁶¹ See: Jennings, H.S. (1921). "Review of *The Unity of the Organism, or the Organismal Conception of Life*; by W.E. Ritter," in *The Philosophical Review*, Vol. 30, No. 6 (Nov., 1921), pp. 616–624.

⁶² See: Ritter, Wm.E. (1919). *The Unity of the Organism, or the Organismal Conception of Life*. 2 vols. Boston: Gorham Press.

⁶³ For instance, the interested reader can find a characterization of Russian *organicism* (cosmism) in the *BCnA*-publications : Bremer et al., 2017; Khroutski and Klimek, 2018; et al.

⁶⁴ See: Ritter, Wm.E. (1919). *The Unity of the Organism, or the Organismal Conception of Life*.

⁶⁵ For instance, see the works: Anokhin, Pyotr K. (1975). *Ocherki po fiziologii funktsional'nykh system* (Essays on the Physiology of Functional Systems). – M.: Medicina, 1975. (In Russian); Simonov Pavel V. (1984). "The need-informational theory of emotions," *International Journal*

are goal-oriented (*telic* – teleological); and, wherein, Self-realizing the goal, thus the final efficient needed result (*telos*) of a subject's living – this goal-driven potency and energy is the leading substance and cause of a subject's life activity; herein naturally relying on the Aristotelian principles of Entelechism and Hylemorphism (noteworthy, these Organicist principles that continue to remain in a status of non-recognition in a current scholarly milieu : they still are applied in the default mode, as if taken for granted). At the same time, by nature, since any form of life is teleologically (hence, functionally and holistically) organized; and this is a natural scientific (irrefutable) truth : consequently, scientific (Organicist) efforts to revealing and accepting into academic practice the natural Organicist (*telos*-oriented) laws and aetiological basic principles – should become of high priority for scientists and scientific institutions (however, such a task still is off the agenda for the scientific community).

At any rate, we are to take into consideration Ritter's conclusion (made through studying the relationship between the nucleus and the cytoplasm of a cell) that “«Back» of this, in the chromosomes, which, be it specially noticed, cannot be seen to take any active part in the operations, we must conceive is the «organization» which is «definite, determinate and primary» in other words which is The Ultimate Cause, so far as heredity is concerned.” [Ritter, 1919, II, p. 28] Nor can we avoid the judgments of H. Jennings (the reviewer of Ritter's *The Unity of the Organism*,) who emphasized (with Ritter) “the fact that the two organisms as unified entities are diverse; each is «ultimate in causal power»; and also that “there is a «causal power of the whole organism over its parts»” (I, p. 49); and that the individual is “«ultimate both as to structure and as to causal power» (II, p. 149); etc. etc.” [Jennings, 1921, p. 620]

We are confident that the scientist followed the right (*Organismal*, in Ritter's term) path in studying the biological questions he posed: including the search for answers to the issue of the Ultimate Cause that determines the natural self-evolvement of the bio-organism (and man, as well). First of all, let us note that central to Ritter's etiological attitude (as in his naturalist gnoseological, methodological, anthropological disposition too) – is the correspondence and correlation of his academic studies with the conceptual (Organicistic – *Entelechist*) foundations of the Aristotelian type of scientific pursuits.

of Psychophysiology Volume 1, Issue 3, March 1984, Pages 277–289; Ugolev, Alexander M. (1985). *Evolutsiya pishchevareniya i printsipy evolyutsii funktsiy: elementy sovremennogo funktsionalizma* [*Evolution of digestion and principals of evolution of functions: elements of modern functionalism*]. Leningrad, Nauka. 544 pp. (In Russian); Poletaev, A. B., Stepanyuk, V. L., & Eric Gershwin, M. (2008). Integrating immunity: The immunculus and self-reactivity. *Journal of Autoimmunity*, 30(1-2), 68–73. doi:10.1016/j.jaut.2007.11.012.

It becomes obvious to us that the American scientist [Ritter, 1919–1932] has reached in his works a high level of essential penetration into the Biological issues under his studying. As a result, the scientist's efforts led him to achieving a deep grasping and rational representation of the fundamental (Organicist) meaning of Aristotle's concept of *entelecheia* (and this is a very rare case in the practice of Western science). Essentially, Ritter clearly outlines the significance of the *entelecheia*-concept as the ontogenetic (cosmic evolutionary) life force and power – the cosmic natural cause that is inherent in all cosmic subjects and their life ontogenetic Self-evolving processes realizing.

Represented in Ritter's exploration, the *entelecheia* naturally integrates (as discussed above) the meanings of both *dunamis* (*telic* inherent potencies) and *energeia* (*ergic* – the task-oriented activities, driven by inner strivings-powers). All of this is incorporated in a *bottom-up* (full-fledged) process of organizing the vital activity of a living thing (subject of life) towards (upward to) achieving its specific goals (as the needed results of activity) – ultimately essential for the subject's Self-actualization (within the entire ontogenesis), in its contributing to the surrounding current and future levels (places-*topos*) – of holistically organized environment and the subject's wholesome coexistence (with all other cosmic subjects of life). In so doing, substantively, a subject is achieving its whole (wholesome) sustainable integration into the world around him through the full and efficient Self-realizing of its inherent natural potentials : in the autonomic ontogenetic way of Self-evolvment – of growth, Functionalist maturation, and the ultimate goal-*(telos)* efficient realization (Self-completion).

7. Rehabilitating the original true Organicist (but already well-forgotten) Aristotelian aetiology : as an essential basis for the contemporary Biological (scientific, in general) knowledge

BCA-scientists fully acknowledge and support (as strong) the Aristotelian scholars' essential conclusions stated above and below (Ritter, 1932; J.H. Randall Jr., 1960; J. Sachs, 1998; A.P. Bos, 1998; D. Charles, 2000; A. Makolkin, 2018; et al.) : first of all, that it is hardly “possible to state Aristotle's fundamental functionalism in the Latin tongue”; and that the question full of doubt is “whether Aristotle can survive translation into the Latin substantives of the scholastic tradition”; as a result – “misinterpretation of Aristotle's terms simply due to mistranslation.” Other noteworthy substantive conclusions are that, since Antiquity, on the part of his commentators and translators : “Aristotle has never been understood in an historically correct way”; thus, “Aristotle's psychology has remained unknown up to now”.

John Herman Randall, Jr., in his reviewing the book on Aristotle⁶⁶ : the scholar here firstly emphasizes the book's valuable "suggestive and illuminating" materials. On the other hand, however, Randall stresses that what is needed is the ability to "to detect unconscious Platonizing," as well for this book, among others : and that the given book is just as much an example of "a rather Platonized version of Aristotle" [Randall, 1962, p. 523]; as also imposing a view of "Aristotle's «departmentalized» thinking" [p. 520]; and "with only incidental references to his (Aristotle's. – **Authors**) system of *animate nature* (italics is ours. – **Authors**), so obviously the center of his vision." [Ibid.] In general, the scholar concludes, in respect to Aristotle's science : the evidence is that "the 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*." [p. 522] J.H. Randall concludes his judgments with the thesis that "*Physis* for Aristotle is not a Platonic «soul»: it is something «completely new»" [Ibidem].

In our main conclusion, as it clearly follows : the current standard interpretation of Aristotle is erroneous due to the accepted wrong conceptual (cosmological Platonized) bases; and, as a result, with accepting the foundation that "is demonstrably incorrect because it is based on a mistaken interpretation of the words". The latter refers to the meanings of Aristotelian key concepts, as *organikon* (*organon*), *entelecheia*, *hypokeimenon*, *dunamis*, *energeia*, *telos*, *steresis*, *hyle*, *morphe*, *aether*, et al.; and as are the basic Aristotelian (of foundational significance) principles – of *Organicism*, *Dynamicity*, *Entelechism* and *Hylemorphism*, *Bipolarity* and *Cyclicity* – *Triadicity of a Subject's Functionalist Ontogenetic Self-evolvment*, etc.

A constant point accompanying the incorrectness of the standard interpretation (as Aristotelian scholars conclude), and applied to an individual text or question in Aristotle (but never to Aristotle's *OrganonKosmology*, in general) – is that the reasoning produced by commentators "is incompatible with Aristotle's position in the other works of the extant Aristotelian *Corpus*,...". Especially striking (with respect to the destruction of Aristotle's *Organicism*) is the use of the term "actuality" ("which misses the point entirely," immediately in relation to two key concepts of Aristotle: *entelecheia* and *energeia*) : and after which, "everything is lost in translation, just at the spot where understanding could begin."

The output, therefore, as it imminently follows : Aristotle (Father of Science) and the enormous (vital) conceptual potential of his *OrganonKosmology* – all this inevitably falls into a state of profound incomprehension on the part of the vast majority

⁶⁶ See: Randall, John Herman Jr., (1962). "Aristotle's System of the Physical World: A Comparison with his Predecessors by Friedrich Solmsen," *The Philosophical Review*, Vol. 71, No. 4 (Oct., 1962), pp. 520–523.

of modern scholars. The latter, however, is absolutely essential at present as a reference base for all scientists around the world, in their way of interaction and mutual understanding – to ultimately pursuing the goals of modern grandiose Organicist and Integralist (reasonable, purposeful, and uniting all the involved heterogeneous subjects-organs) transformations in modern peace-building – all this, however, turns out to be unattainable for modern scientists (due to their misunderstanding the Aristotelian Organicism; in turn, wherein the misunderstanding occurs because of the, so-called in BCA ‘*cosmological insufficiency*,’ in the current world culture). Thereby, because of the profound and persistent incomprehension among scientists in the world concerning the bases and essence of the contemporary (in the 21st century) Organicist and Integralist approaches (and their *OrganonKosmological* foundations) : all this can have the most disastrous (catastrophic) consequences for the world evolvement.

The contributors to the Biocosmology Initiative are fully committed to the task of rehabilitating Aristotle’s scientific (*OrganonKosmological*) heritage. In their works they aim at developing (weaving them into the fabric of modern scientific approaches) Aristotle’s true (Organicist) conceptual scientific bases. Along with the evolving Mosaic concept of the French biologist Georges Chapouthier (noted above), as well as in his other research projects wherein the Organicist approaches to studying the real world are taken into account : we are to mention the original efforts of other BCA-associates. Beginning with a brief listing of some notable achievements, we turn our attention to the attitude of Arthur Saniotis, an Australian scientist, who states that “in evolutionary terms entelechy may be related to ontogenetic processes” [Saniotis, 2010, p. 103]⁶⁷. Likewise, the rationale of the Japanese philosopher Makoto Ozaki draw attention; he successfully develops the connections of Eastern philosophies with “the Aristotelian concept of *entelecheia* as a dynamic unification of potentiality and actuality in the self-realizing movement” [Ozaki, 2019, p. 142]⁶⁸

The work of Canadian scholar Anna Makolkin, who is a specialist in semiotics, has a notable influence on the current process of studying the Organicist scientific foundations in Aristotle’s theory. In an article entitled “*Aristotle’s doctrine of signs and semiotic reading of his «Physics»*” : we learn that “Aristotle always keeps in perspective both semiospheres (natural and cultural), constantly emphasizing the Wholeness of Cosmos, and the complicated realm of human existence simultaneously in both universes – Nature and Culture,” and that “Aristotle creatively combines the areas outside the natural philosophy with those inside it. His neologism *entelechia*

⁶⁷ See: Saniotis Arthur (2010). “Evolutionary medicine: A Biocosmological approach for informing future biomedicine,” *Biocosmology – neo-Aristotelism*, Vol.1, No.1 (Autumn 2010), pp. 99–111.

⁶⁸ See: Ozaki, Makoto (2019). “Kyoto School Philosophy in relation to Neo-Confucianist metaphysics,” *Biocosmology – neo-Aristotelism*, Vol.9, No.1&2 (Winter/Spring 2019), pp. 137–152.

alludes to the inner semiosis in both spheres.” [Makolkin, 2020, p. 181]⁶⁹ In her another work, entitles “*The new world overcoming Platonism in the 20th century: John H. Randall’s Aristotle*”: Anna Makolkin specifically notes that “J.H. Randall perceptively dwells on the linguistic problems and misinterpretation of Aristotle’s terms simply due to mistranslation.” For instance, “alluding to the canonical term ENTELECHY he suggests to interpret it as a tripartite unit: EN = IN + TELOS = END + ELCHEIN = TO HAVE” [Makolkin, 2018, p. 15]⁷⁰

Chinese scholar Xiaoting Liu, who is President of the Biocosmological Association : he sees a special purpose in the study of Aristotle’s scientific and philosophical heritage because “a profound return to Aristotle’s philosophical tradition is a new movement back to the past, but, thereby, due to a natural Dynamic Cyclic Ascending evolvement – to the Naturalist (of wellbeing) Future.” [Liu, 2018, p. 367]⁷¹ In turn, the Greek scholar Spyridon A. Koutroufinis performs an in-depth analysis of contemporary neo-teleological approaches and compares them with the metaphysical foundations of Aristotle’s teleology. The author’s main conclusion here is that neo-teleologism and Aristotelian teleology are based on entirely different metaphysical assumptions. [Koutroufinis, 2016]⁷² In another approach, Austrian scientist Walter Kofler tackles the problems of “the increasing inhomogeneity of the power of science and an «Aristotelian» proposal to cope with” [Kofler, 2018]⁷³ In a different perspective, from Germany, another representative of biology and medicine : a physician Peter Heusser explores questions of “active information” (Aristotle’s “formative cause,”) and other “active causes” that are “a natural part of physical explanations” [Heusser, 2011]⁷⁴. Another in-depth study performed by experts in biology and medicine, and

⁶⁹ See: Makolkin, Anna (2020). “Aristotle’s doctrine of signs and semiotic reading of his «Physics»,” *Biocosmology – neo-Aristotelism*, Vol.10, No.1&2 (Winter/Spring 2020), pp. 167–183.

⁷⁰ See: Makolkin, Anna (2018). “The new world overcoming Platonism in the 20th century: John H. Randall’s Aristotle” *Biocosmology – neo-Aristotelism*, Vol.8, No.1 (Winter 2018), pp. 7–20.

⁷¹ See: Liu, Xiaoting (2018). “On deep-seated organic property of universe,” *Biocosmology – neo-Aristotelism*, Vol.8, No.3&4 (Summer/Autumn 2018), pp. 367–379.

⁷² See: Koutroufinis, Spyridon A. (2016). “Modern biological neo-teleologism vs. Aristotle’s genuine telos,” *Biocosmology – neo-Aristotelism*, Vol.6, No.3&4 (Summer/Autumn 2016), pp. 414–426.

⁷³ See: Kofler, Walter (2018). “The increasing inhomogeneity of the power of science and an “Aristotelian” proposal to cope with,” *Biocosmology – neo-Aristotelism*, Vol.8, No.3&4 (Summer/Autumn 2018), pp. 431–448.

⁷⁴ See: Heusser, Peter (2011). “«Active information» – a modern revival of Aristotle’s «formative cause», applicable in physics, biology, psychology and medical anthropology,” *Biocosmology – neo-Aristotelism*, Vol.1, No.2&3 (Spring/Summer 2011), pp. 161–166.

devoted to exploring the “information cause” has been discussed above [Khroutski & Klimek, 2018]⁷⁵.

The works of other authors also attract attention and occupy their own separate place. Italian physicist Leonardo Chiatti, in constructing his “*A new concept of archetype in the physics of self-organization*”; and realizing a study of the process “*From the ‘quantum providence’ to entelechies*” – the scientist here uses and reformulates the concepts of “archetype” and “entelechy,” in this starting from modern notions of microphysics. [Chiatti, 2014]⁷⁶ Romanian scholar Ana Bazac, in comprehending the answer to the difficult question: “What is natural and what is non-natural in cancer?” – she turns to the study of the action of “the constitution of the body’s peculiar telos, the *entelecheia*.” [Bazac, 2018, p. 399]⁷⁷ Physicist from Moscow, Sergey N. Grinchenko, in his study of the “Aristotelian goal-driven cause and biological modeling” [Grinchenko, 2012]⁷⁸ : the scientist here takes typical Aristotelian concepts of hierarchical self-regulating system, purposive approach and *causa Finalis*, as the bases for his scientific construction. To conclude (in briefly listing the most outstanding contributions), we should note the achievement of Alexander I. Orlov, one of the most cited Russian economists. He presented (for BCA, on the subject of Aristotle’s Organicist principles evolvement) his concept of the “*Functionalist-Organic Information Economy*” [Orlov, 2013]⁷⁹ – an innovative theory of Organizational-Economic development. The latter is aimed at future research, and where the author asserts the Aristotelian essence – against “*chrematistics*”; and which is embodied in the contemporary (for the 21st century) functionalist-organic information approach to creating a new economy of the coming future.

8. Back to the Future of the Aristotelian Aetiology and Organicist Science, as a whole

In line with the main goal and objectives of the exploration, and in the light of the above argumentation : it becomes possible to assert the task of constituting Aristotle’s

⁷⁵ See: Khroutski, Konstantin S. & Klimek, Rudolf (2018). “Biocosmological definition of Information and its Naturalist causative significance, approaching to evolve the World Information University (WIU),” *Biocosmology – neo-Aristotelism* Vol. 8, No. 2, (Spring 2018); pp. 203–261.

⁷⁶ See: Chiatti, Leonardo (2014). “A new concept of archetype in the physics of self-organization,” *Biocosmology – neo-Aristotelism*, Vol.4, No.3 (Summer 2014), pp. 271–283.

⁷⁷ See: Bazac, Ana (2018). “What is natural and what is non-natural in cancer?” *Biocosmology – neo-Aristotelism*, Vol.8, No.3&4 (Summer/Autumn 2018), pp. 391–420.

⁷⁸ See: Grinchenko, Sergey N. (2012). “Aristotelian goal-driven cause and biological modeling,” *Biocosmology – neo-Aristotelism*, Vol.2, No.4 (Autumn 2012), pp. 319–325.

⁷⁹ See: Orlov, Alexander I. (2013). “Functionalist-Organic Information Economy – the Organizational-Economic Theory of Innovation Development,” *Biocosmology – neo-Aristotelism*, Vol.3, No.1 (Winter 2013), pp. 52–59.

aetiology (as an organization of the basic aetiological principles and notions in general) – which would serve as a convenient primary step (stage) on the way to full rehabilitating (as a whole) the forceful *OrganonKosmology* of the Stagirite (to become applicable in the contemporary scientific life). It is noteworthy that the scholar Aristotle had not created during his lifetime a separate work entirely devoted to the issues of aetiology. Thereby, the Stagirite did not execute the possibility of uniting all his concepts in a general construction of all the existing Organicist aetiological forces (causes) : the causes that determine the real (Organicist Dynamic, Entelechist and Hylemorphist) physical existence of the subject of life, and its realizing the subject's sustainable (ontogenetic) Self-evolvement, aimed at the ultimate Functionalist (efficient and wholesome) integration into the surrounding world (equally holistic and self-evolving) – the living Self-ascending (in the complexity of organization) world of the Kosmic Evolutionary Process (EvoProcess). All the more reason is, therefore, to carry out this task in the present, as an important and urgent one – and which is fully essential to meeting the challenges of future life (human, as well) prosperous evolvement on Earth.

As it follows from our evidence above : at present, Aristotle and his *OrganonKosmology* are completely “lost in translation”; as a result, modern scientists are unable, in principle, to understand and use (apply) in their daily scientific activities the powerful potential of the Aristotelian (*Organicist*) Type of scientific knowledge. At the same time, as it is established in the life of the BCA : Aristotle's *OrganonKosmology* (as a model of an Organicist comprehensive Type of rationality and knowledge) – it serves as a necessary (indispensable) reference base for all scientists of the world. The latter is essentially a kind of an Organicist ‘*conceptual language*’ : for academic communication and mutual understanding – in the concerted efforts of scientists to realizing the contemporary Organicist and Integralist approaches to scientific pursuits, so vital for the current world (with its ongoing era of change – global transformations, so-called ‘tectonic shifts’).

At the same time, in their attitude, BCA scholars emphasize two essential cornerstones : first is the task of maintaining continuous awareness of the essential oppositeness (but equal autonomic realness) – between the Platonic reality and rationality (mentality); and the opposite Aristotelian reality and rationality (mentality). Therefore, we always have a Platonist (Static) Dualist cosmology with its Top-Down essence (of the objective mathematical-physicalist research and the consequent practical world-building); and wherein all is created by a Demiurge (and further on – by a society or man); i.e. created *artificially* – over nature as an object. On the contrary, the eternally existing opposite Organicist (*naturalist*) world is rationalized in Aristotle's *OrganonKosmology* : this is the *naturalist* Dynamic, Organicist Bottom-

Up world – that is essentially Self-evolving and Self-Ascending, through the consistent Hierarchical (in complexity) evolutionary levels of wholly organization.

On the other way around, another foundational BCA-disposition and its main task is to realize the integration (into Organismal unity) of both essential opposites (and their Types of reality and rationalities) – Plato’s and Aristotle’s. The basis for setting and implementing this task is the BCA-scholars’ understanding of the universal existence of the Third Approach – the Integralist Type of reality (hence, the Third Type of scientific knowledge, as well). This Type is essentially Integralist and Homeostatic, thus being basal and axial (for the entire subject’s ontogenesis), for it naturally unites both polarities into a stable (homeostatic) life ground for a subject’s (organism’s) entire ontogenesis. Edward Alam, in his “Soul Reflections”⁸⁰ : here the author primarily notes the significance of the two scientific revolutions of the 20th century – the revolution in physics (in the first half of the century); and the revolution in genetics (in the second half). His conclusion is that both revolutions have brought about “the new insight into the nature of matter, the crucial philosophical result of this revolution is the revival of Aristotle’s conception of matter as *potency*.” [Alam, 2008] His other valuable inference is that “the age-old question of the soul is again back on the table – with only a few brave anthropologists willing to take it up.” [Ibidem]

In this light, the Aristotelian concept of *Entelecheia* and the proposed (in the paper) notion of *Entelechist cause* (as the cornerstone of Aristotelian aetiology) : it precisely requires the ending of “*ist*” at its denoting word. In its essence, *entelecheia* is a universal (Organicist) cause that unites all the Three Types of realities : Organicist, Dualist, and Integralist; and which is active through the entire ontogenesis of a subject. In an integral way, during the life time, *Entelechist cause* operates in the sequential order of a subject’s Self-climbing the consistent (by Hierarchy) steps (stages) of its Functionalist inherent maturation; and, in the end (*telos*) – it (*entelecheia*) executes the subject’s carrying out of a need-based functional wholesome contribution to (the evolutionary, in complexity) a higher organization. In other words, this is a subject’s ontogenetic functional efficient incorporation into the integrity of a higher (in complexity) evolutionary whole (that as well is organized around the realization of its ultimate *telos*) : and wherein everything exists for the sake of functional (wholesome) integration and needful contribution to the successful (successive) self-evolvment of the EvoProcess – all-in-one and end-to-end Kosmic evolutionary life organization.

Substantively, *Entelechist cause* (by virtue of its physical properties) most closely corresponds to the sought-for (by William Ritter) the Ultimate Cause. At the same time,

⁸⁰ See: Alam, Edward J. (2008). “Soul Reflections: Apes, Anthropology, and Aristotle,” *Metanexus*. URL:<https://metanexus.net/soul-reflections-apes-anthropology-and-aristotle/> (last retrieved – 2021.02.25)

naturally, *Entelechist cause* exists and operates only within the Organic complex unity with other naturalist causes, that are discovered and defined (or, at least, outlined) by Aristotle, in his *Corpus*. In listing them, these causes definitely are : the four ‘classical’ causes (*hyletic*-Material; *morphogenetic*-Formal; *generative*-Efficient; *telic*-Final); and also the afore stated *Information cause* (likewise of ontogenetic, basal and integrative significance); *resonance cause* (“κατά συμβεβηκός αιτίον”; usually termed in English translations as “incidental” cause); and the foundationally significant – *steresis-gravitational* (Aether-Noetic) physical cause.

Aristotle reveals that the structural scheme of natural processes has a fundamental commonality: in all cases we have; first, something arising; second, that which is opposite to the arising; and, third, that is out of which something arises. To these three principles the Stagirite gives the names of *morphe* (“form”), *steresis* (“privation”), and *hyle* (“matter”). He explains the following: “For we distinguish between ‘matter’ and ‘shortage’⁸¹ (or absence of form) and assert that the one, namely matter (ύλην) as such, represents the incidental (κατά συμβεβηκός) non-existence of attributes,⁸² whereas the other, namely shortage (στερησιν) as such, is the direct negation of the form of which it is the shortage.” (*Physics*, I. 9. 192 a 4-8)⁸³

The aetiology of the real natural Organicist world, holistic and self-evolving, which is presented to the world by the Stagirite, but is currently “lost in translation” : now an obvious task is in urgent restoring the Aristotelian aetiology (as stated above). At the same time, such goals will require serious research efforts. According to the BCA’s standpoint, the focus on the primary application of aetiological theory to current issues of biological knowledge – such a strategy could be effective and double-edged : both in terms of the speedy restoration of the true Aristotelian Organicist aetiology (and theory in general); and in addressing the pressing issues of biological knowledge.

At the end of this section (and the work as a whole), we should point out a few important points. First, to stress the uniqueness and universality (in relation to the living Cosmos, in general) of the *Entelechist* and *Information* causes. Both leading causes are determining the existence and self-evolvement of each living thing (subject of life) : their uniqueness and universality is expressed in the ability to integrate (in the life process – ontogenesis) all the Three world (cosmic) Types of life order and processes, starting with their controlling systems – thus ultimately uniting both polar spheres *dunamis/energeia*; and the third (or the first, in significance) basal-carrying

⁸¹ These words of translation : ‘matter’ and ‘shortage’, are spelled out in the original text as «ύλην και στερησιν» (*hyle* and *steresis*). – **Authors.**

⁸² In the original text – «και την εγγυς και ουσιαν πως» : which can be translated as: «and that *hyle* is close to essence and in some sense is essence, but *steresis* – by no means.»

⁸³ Cited from: Aristotle. (1957). *Physics*, ed. by P. H. Wicksteed and F. M. Cornford, Loeb classical library, Harvard University Press.

(*axial*) intermediate Integralist (Homeostatic) foundation and binding force of the organism – for undergoing all ontogenetic events and processes in the subject's life. At the same time, the *Entelechist cause* acts on the Dynamic (Bipolar and Cyclic – Triadic) grounds; while the priority for the *Information cause* is the Homeostatic grounds (but also having the Triadic essence). It is essential that processes of Self-ascending (cyclic) evolvment of the subject of life are controlled by its *Entelecheia*; but the effective functioning of the latter is impossible without proper activity of the subject's *Information cause*.

The next most important moment involves the recognition of both the opposing essences and the equal importance (for science) of both great rational systems of knowledge, Plato and Aristotle. The recognition of their equal importance and challenge to their uniting is really crucial. At the same time, it should always be kept in mind that the Aristotelian *OrganonKosmology* is founded on a *naturalist* Dynamic Triadological basis, while the system of Plato is Dualistic and Static. But in the long run, what essentially is needed : this is the comprehension that the world we are living in is factually Dynamic, Bipolar, Cyclic and moving round a Circle (thus, Triadic and Triadological). On the basis of this scientific truth, it is in fact time for us to become resolutely aware of Biological (Biocosmological) laws, with their subsequent recognition and acceptance into scientific theory and practice.

First of all, the issue concerns the laws of natural Dynamism, Bipolarity, and Triadicity of the real world, with the natural cyclic alternation (and alternating dominance) of the two polar Types of reality and knowledge (*Transcendentalist* and *Naturalist* – Dualist and Organicist; initially rationalized respectively by Plato and Aristotle) : the Platonic *Transcendentalist* (*idealist* – mathematical-physicalist) – *Dualist* – Top-Down reality that is essentially Static (and knowledge of it, with the consequent practical action); and the Aristotelian *naturalist* (Functionalist, Self-evolving) – *Organicist* – Bottom-Up reality that is essentially Dynamic (and the consequent natural-Organicist science theory and practical activity).

Conclusion

The point of departure for this study is the fact that Aristotle's (the Father of Science) *OrganonKosmology* turned out (in the world history) to be "lost in translation". Confronted (with) and in an attempt to rectify this utterly unacceptable situation : the authors have chosen the course, initially – at decisive rehabilitation of the true (Organicist) Aristotelian aetiology (in the general direction of rehabilitating the whole *OrganonKosmology* of the Stagirite). As a result, in addition to the already rehabilitated *naturalistic* (physicist) aetiological causes of Aristotle (carried out in the works of the BCA-scholars) : the authors in this study substantiate and introduce the

concept of *Entelechist cause*. The latter is asserted as a unique (the subject's) and universal *Organon* Kosmic physiological force. In general, in their study the authors sought as much the recognition of the opposing (Plato's vs Aristotle's) cosmological essences, as the equal importance (for science) of both two great rational comprehensive systems of knowledge, Plato's and Aristotle's.

In such a way, authors aimed at meeting the challenge, concurrently, of both disuniting and uniting the great cosmologies of Plato and Aristotle. The latter means, (A) the revealing of their primary essential opposition, by distinguishing and appreciation of Plato's *Transcendentalist (idealist)* Static *Top-Down* Dualism, and Aristotle's *naturalist* Dynamic *Bottom-Up* Organicism; but, concurrently, (B) authors pursued the goal of eventual integration (uniting) the potentials of both polar (super)systems of rational knowledge. Such a possibility is provided on the grounds of modern Integralist efficacious approaches : of all, based on the foundational Kosmic (Biocosmic) Dynamic Triunity of the real world; and, respectively – reality of the Three Types (and their Triunity) of knowledge (rationalities) about it.

The authors carry out in their work the position that all the Three Types of cosmological (all-encompassing) knowledge – Organicist, Dualist, and Integralist : each (of the Three) Type has the same naturalist importance and should be equally considered in the world scientific process; but their importance must be directly (and clearly) correlated with the (Integralist) essence of the current historical epoch (in the 21st century). Essentially, in the 21st century, in our current “time of change” and global transformations – the significance of the Organicist (and, consequently – of the efficacious kinds of Integralist) cosmologies increases essentially. Otherwise, without taking into account (and not following) the Naturalist-scientific (Organicist) laws : thus, without the urgent development of the Organicist (neo-Aristotelian) and Integralist (in Triunity with Transcendental Dualism) scholarly approaches – the cultural world will inevitably face the inability to meet and overcome the current crisis issues and challenges.

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