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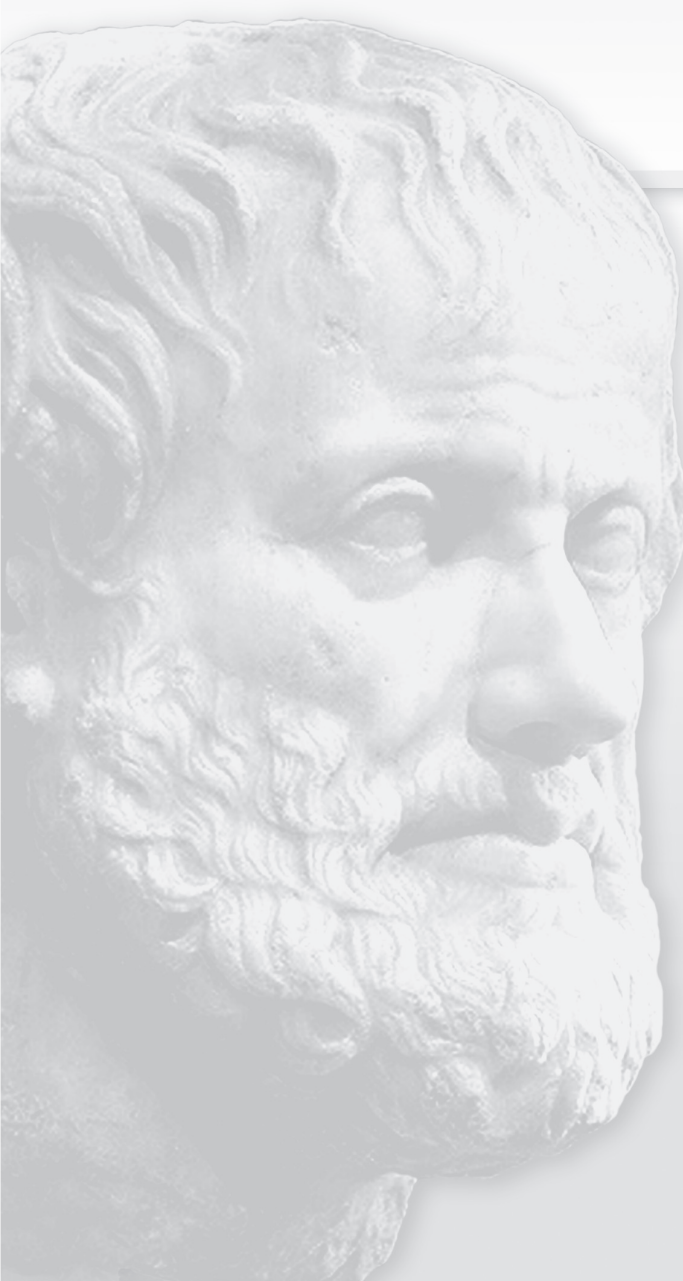
Proceedings of the World Congress

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2400 Years

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Edited by
Demetra Sfendoni-Mentzou



ARISTOTLE UNIVERSITY
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Aristotle's (*Organon*) Kosmology —Teleological Organicist Naturalism— As the Type of Rationality and Its Actual Position

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Introduction

To Rehabilitate Urgently Aristotle's Authentic Scientific Language

Aristotle and Plato, who occupy the unique position in the history of world culture, for their super-systems of knowledge, have been taken, explicitly or implicitly, as the foundations (archetypes and patterns)—the types of rationalities—for building the contemporary philosophical paradigms and models of scientific investigations. But, we strongly argue in the newly formed Biocosmological Association,¹ that Plato's Type of cosmology (currently influencing and dominating all the existing forms of comprehensive rational knowledge, reduced to Platonist Dualism and Idealism)—dictates the method of analysis. While, in contrast, the polar Aristotle's naturalist Type of all-encompassing knowledge (essentially Entelechial and Hylemorphic) and his Type of (Organicist) rationality falls into a disadvantaged position within the global scholarly discourse. The urgent task, therefore, is to rehabilitate the genuine significance of Aristotle's super-system of knowledge, taken as a whole—as the autonomic (one of the main three) type of rationality and type of cosmology—(*Organon*) Kosmology—of the Organicist naturalism essence. Herein, with respect to the term ὄργανον, we refer to the essential note of Mariska Leunissen:

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 ὄργανικόν 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 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.²

Fundamental reinstatement of the true significance of Aristotle's philosophy and science, taken as a whole, is urgently required. In this, we are to aim at its comprehension as the autonomic substantive (super)system of knowledge—all-encompassing (Bio)cosmology or (*Organon*) Kosmology, that is based on its own teleological (*entelechia* hylemorphic) naturalism—of Bipolar and Triadic essence, and which comprehends (substantiates) all the domains of science and philosophy, thus uniting them into the one overall scheme. Therefore, we strive to propose a contemporary exploration of the basic Aristotelian science theory (i.e., his foundational scientific naturalism—teleological physics), but taken as a whole—the true Aristotle's (*Organon*) Kosmology, which is the (Organicist) Type of rationality, i.e., a historical—actual in all epochs of the contemporary cultural history (including the coming era of a better, safer future). First and foremost, using this approach, and independently from the modern dominant points of view, either formal, or material, we are to recognize, basically, that there are only two polar Types of rationality. They ultimately are reduced: (i) to

1. The Biocosmological Association (BCA) launched in Veliky Novgorod, Russia, in 2010; <http://en.biocosmology.ru/>

2. Mariska Leunissen, *Explanation and Teleology in Aristotle's Science of Nature* (Cambridge: Cambridge University Press, 2010), 53.

Aristotle's Entelechism and Hylemorphism; and (ii) to Plato's Dualism and Idealism (Materialism). In turn, in distinguishing these Two poles of rationality, we primarily need to rehabilitate their original scientific languages (the conceptual frameworks—definition apparatuses), starting from the authentic original meanings of their crucial conceptions and notions.

In 1960, John Herman Randall Jr. stresses that modern scholars “have come at Aristotle from the standpoint of the later medieval developments and problems;”³ and that the early modern scientists (including Bacon, Descartes, and Kant) had “discarded Aristotle in rebellion against his religious interpreters;” and, thereby, Randall seriously doubts, “whether Aristotle can survive translation into the Latin substantives of the scholastic tradition, or whether it is possible to state his fundamental functionalism in the Latin tongue.”⁴

1. Aristotle's Bipolar Triadic (*Organon*) Kosmology

It is worth drawing attention to the significant judgment made by Miguel Bruno Duarte, at the site of IAI: “For Aristotle, the motion of natural things is determined *from within* them, while in the classical mechanics motion is determined *from without*.”⁵ Thus, in principle, we can defend the equality of the two polar Types of rational knowledge—Aristotle's *internal* aetiology and gnoseology, which studies the Organicist world-κόσμος, i.e., is (τέλειο)driven by inherent Naturalist Entelechial (*from within*) causes and forces; and the contrary Plato's *external* ontology and epistemology, driven *from without* and are basically Dualist and Idealist.

In *Physics*, Aristotle stresses the essential Bipolarity and Triadicity of the real world, and emphasizes the decisive role of analogy in realizing scientific pursuits:

So there is a sense in which the ultimate principles of the sum of changing things are two, but a sense

in which they are three.⁶ (*Phys.* 190b30-31)

these two principles (‘the contraries’) are inadequate, for they cannot possibly act or be acted upon directly each other. This difficulty, however, disappears if we admit, as a third principle, a non-antithetical ‘subject’ (ὑποκείμενον). (*Phys.* 190b34-35).

we may escape the duality of the opposition by considering one of its terms taken singly as competent, by its absence or presence, to accomplish the whole change (μεταβολή). Then there will only be the ‘ultimately underlying’ factor in Nature (ὑποκειμένη φύσις)... And of this ‘underlying’ factor we can form a conception by analogy. (*Phys.* 191a7-11).

to be regarded as the more ‘essential’ factor (οὐσία, τὸ εἶδος) of a thing (ὑποκείμενον); but that there are three principles altogether. (*Phys.* 191a7-11).

Primarily, we need to focus on Aristotle's foundational theory of potency (δύναμις) and activity (ἐνέργεια), which are the principles of an important dichotomy, i.e., essential for the Bipolar and Triadic—dynamic and cyclic existence of each real (evident, tangible) natural thing. At present, the notion ἐντελέχεια (which is crucial in Aristotle's *potency/activity* theory) is hardly applicable in the practice of a modern scholar due to its misunderstood original meaning.

2. Aristotle's 'Ἐντελέχεια Cannot Be Translated by the English “Actuality”

In modern dictionaries, “entelechy” is habitually defined as “A realization of actuality as opposed to a potentiality.” At the same time, many authors disagree with the dualist opposition between potency and activity; including Aristotle himself, the author of the foundational *potency/activity* theory. In his science and philosophy, potency and activity are the principles of a dichotomy (natural Bipolarity of a thing), which the Stagirite used to analyze motion and change (κίνησις και μεταβολή). In Aristotle's edifice (type) of knowledge, the notion of ἐντελέχεια has cornerstone significance. We

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

4. Ibid.

5. See, the website of “The Inter-American Institute for Global Change Research,” accessed October 28, 2017, <http://theinteramerican.org/illuminati/>. Italics mine, K.K.

6. Translations are taken from: Aristotle, *Physics. Books I–IV*, trans. P. H. Wicksteed and F. M. Cornford, Loeb Classical Library 228 (Cambridge, MA: Harvard University Press, 1957).

fully agree with Will Durant who, showing *The Story of Philosophy*, essentially concludes that “ἐντελέχεια—having (ἔχω) its purpose (τέλος)⁷ within (ἐντός); one of those magnificent Aristotelian terms which gather up into themselves a whole philosophy.”⁸ 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 the teleology which Plato had only set up as postulate, and developed in mythical, figurative form.⁹

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).¹⁰ He concludes below that: “The fulfillment (ἐντελέχεια) of what exists potentially (δυνάμει), in so far as it exists potentially, is motion (κίνησις)—namely, of what is alterable *qua* alterable (ἄλλοιωτόν), alteration” (*Phys.* 201a10-13). Stated differently, we argue that “ἐντελέχεια” constitutes equally “δυνάμει,” “κίνησις,” and “ἄλλοιωτόν,” thus the Thing’s (*entelechia*) natural potency is congenerous with the naturalist (equally *entelechia*) active movement and efficacious (Functionalist-Organicist) development. Therefore, ἐντελέχεια of the thing (subject) has the cornerstone significance and brings into effect the natural *telic*—ontogenetic ascending hierarchical—Organicist stages of life de-

velopment; also, ἐντελέχεια can never be identified exclusively with “actuality.” Indeed, ἐντελέχεια is in existence synchronously both in potency and activity of the Thing (the latter is the self-realization of the former, in *telic* aiming (at) 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 citations below), and as Soul cannot be present only in activity, and (at the same time) be absent in potency—the Thing’s ἐντελέχεια naturally falls as much onto activity, as to the potency. As well as, the statement that “substance is actuality” is a direct logical contradiction in reasoning. However, for instance, in Barnes’ edition of *The Complete Works of Aristotle*,¹¹ 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)

In Robert Drew Hicks’ edition of Aristotle’s *De anima*,¹² the word “actuality” that replaces “ἐντελέχεια” also is used; however, therein, the translation is more conform to Aristotle’s original Organicist (archetype of) rationality that is 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: for *sleep, as well as waking, implies the presence of soul*; and, whilst waking is analogous to the exercise of knowledge, sleep is analogous to the possession of knowledge without its exercise; and *in the same individual the possession of knowledge comes in order of time before its exercise*.¹³ (*De an.* 412a21-28)

7. 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.”

8. Will Durant, *The Story of Philosophy: The Lives and Opinions of the Greater*, Time Reading Program Special Edition (1926; reprint, New York: Time Inc., 1962), 69.

9. See Wilhelm Windelband, *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., 1914), 140.

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

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

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

13. Significantly, in this passage of *De anima*, Aristotle speaks about the polar Sleeping and Waking cycles of life activity. The italics are mine.

In his thorough examination of Aristotle's use of the term ἐντελέχεια and interpreting Aristotle's studies precisely as naturalist explorations, William E. Ritter¹⁴ brings into focus that Aristotle already had the term ἐνέργεια (another invention), especially in discussing "the actual as contrasted with the potential," but he felt "the need of a new term."¹⁵ We are to highlight likewise the thoughtful conclusion of Ritter that ἐντελέχεια is the term of the entire process of ontogeny and the issue of ontology;¹⁶ 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.¹⁷ Ritter speaks about "the deplorable perversion of Greek, especially of Aristotelian," and emphasizes Aristotle's "intrinsic 'principle of motion' (growth and differentiation)"¹⁸—"a whole series of stages till the full-fledged, functionally mature organ is present, i.e., has come-to-be."¹⁹ 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.'"²⁰

3. The Organicist Reinstatement of Aristotle's Authentic Conceptions and Notions

In general, we cannot fail to recognize that Aristotle (Father of science) and his all-encompassing super-system of knowledge [(*Organon*)Kosmology] is greatly misinterpreted in our current cultural epoch—we call this deplorable situation as the contemporary "cosmological insufficiency." In the result, a (post)modern scholar has the right to use exclusively Plato's Dualist Type of rationality, but Aristotle and his Organicist—entelechi-*hyl-morphist*—approach is forbidden. Evidently, we

are to rehabilitate Aristotle's original theories of *substance* (ὑποκείμενον), of *potency and activity* (δύναμις καὶ ἐνέργεια), and of *motion and change* (κίνησις καὶ μεταβολή); and, eventually—to reintegrate into the contemporary scholarly life his essentially Organicist (of entelechial scientific naturalism) type of rationality. Thus, the first task is to return to Aristotle's essential notions: ἐντελέχεια, ὕλη, μορφή, τέλος, κίνησις, τόπος, etc.; and, accordingly, in respect to the use of his super-system and archetype of Organicist Naturalism [(*Organon*)Kosmology] to prohibit the use of Latin and English "synonyms," like *actuality*, *matter*, *form*, *end*, *motion*, *place*, etc. Ultimately, the whole terminological basis for Aristotle's genuine Organicist knowledge—the Organicist language of Stagirite—ought to be rehabilitated in essential (original) terms. At least, it would be useful to draw attention to the conclusion of John Monfasani:

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.²¹

To start with, we are to reinstate, substantially, that Aristotle's Κόσμος (or Biocosmos, thus the scope of Biocosmology) originated "from within," wherein each Thing is essentially *qualitative* (entelechi-*al*), and predetermined for realizing the dynamic and cyclic fulfillment of the needed (Functional-*Organicist*) effect, hence each Thing is *finite*; and the whole Κόσμος is basically heterogeneous and hierarchically organized (having bipolar, triadic, and of *entelechial ontogenesis* essence). In this (*Organon*) Κόσμος, each Thing is predisposed to achieve the ultimate τόπος (place), but doing this not for the sake of further eternal movement in the chaotic space (as in Plato's biocosmology).

14. William E. Ritter, "Why Aristotle Invented the Word *Entelecheia*," *Quarterly Review of Biology* 7, no. 4 (1932): 377-404.

15. *Ibid.*, 380.

16. See *ibid.*, 386.

17. See *ibid.*, 383.

18. *Ibid.*, 390.

19. *Ibid.*

20. *Ibid.*

21. John Monfasani, "George of Trebizond's Critique of Theodore Gaza's Translation of the Aristotelian 'Problemata,'" in *Aristotle's Problemata in Different Times and Tongues*, ed. P. De Leemans and M. Goyens (K.U. Leuven: Leuven University Press, 2006), 291.

Quite the reverse, in Aristotle's Κόσμος, each entity is the manifestation of *entelechism* and *hylomorphism*, carrying into execution, eventually, the natural *telic* functionalist (entelechial) unity of ὅλη καὶ μορφή, and the Organicist (wholesome efficacious) *hylomorphist* activity. In respect to the philosophy and science of the Stagirite, speaking about Aristotle's τέλος, F. E. Peters stresses the importance that "the doctrine of teleology is basic in Aristotle: it appears in his earliest works (see, *Protrepticus*, fr. II) and it finds its completion in the *Metaphysics*."²²

Essentially, in Aristotle's Organicist κόσμος any change (movement and development) is based on the fundamental *entelechism* and *hylomorphism*, thus primarily on the Organicist aetiology and the four *telic* causes. This is all the more necessary, therefore, to use exclusively Aristotle's original terms in defining, at present, his aetiological notions that have the cornerstone significance for the whole cosmological edifice of the Stagirite. We strongly propose to designate and use the terms of *hyletic* cause (instead of *causa materialis*), *organic* or *morphogenetic* cause (instead of *causa formalis*), *generative* cause (instead of *causa efficiencie*), and *telic* or *effective* cause (instead of *causa finalis*).

As evident from the above, we have every time the Dynamic—Entelechial cyclic—interrelation of the synchronous, but polar and autonomic (independent in their organization) and successive realms of Potency and Activity. On the contrary, Plato's (bio)cosmology is essentially static, basically dealing with a created (*from without*) world within the space (with its dimensions of height, depth and width, within which all things chaotically exist and mechanistically move. Wherein all things are objects for the mathematical-physicalist application, rooted in Plato's Dualism and Idealism, but not relating to the inherent τόπος (place) that makes the Functionalist integration of the Thing and the surroundings possible. Essentially, therefore, Aristotle's basic principles of *entelechism* and *hylomorphism* and the notion of τόπος directly stress the unity of the living thing and their environment, and the Organicist dynamic Unity of the thing (subject) and Κόσμος (Biocosmos) on the whole.

22. Francis E. Peters, *Greek Philosophical Terms: A Historical Lexicon* (New York: New York University Press, 1967), 192.

Significantly, Helen S. Lang also refers to Aristotle's theory of potency and activity. She stresses "the active orientation of potency toward actuality," and that it is crucial to the account of "things that are by nature."²³ 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."²⁴ Lang 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."²⁵ Likewise, the author argues that "this position stands in sharp contrast not only to Plato, but also to the later philosophy, including the Stoics and Philoponus."²⁶

Conclusion

To Overcome the Current "Cosmological Insufficiency"

We pay particular attention to the currently used misinterpretation of Aristotle, i.e., the dissolution of his realistic Teleological, *entelechial* and *hylomorphist*, (of Organicist Scientific Naturalism) type of perception of the real world in contrast to the currently used Plato's Dualist realms of knowledge. All this has produced the "cosmological insufficiency," eventually culminating in the loss of the essential integral tool for rational (scholarly) evaluation of Aristotle's super-system of Organicist knowledge [(*Organon*)Kosmology], which is both the archetype and, as we strongly propose, the ahistorical type of rationality (one of the essential three), essentially all-encompassing teleological naturalism and scientific organicism. However, as the result of the past and still running medieval and modern concepts of historical development and their conventional rules, a present-day scholar has no other choice than to follow Plato's Dualist cosmology and its derivative "modern scientific method" of mathematical physicalism. In fact, this is entirely the unacceptable state of affairs! The

23. Helen S. Lang, *The Order of Nature in Aristotle's Physics: Place and the Elements* (New York: Cambridge University Press, 1998), 47.

24. *Ibid.*, 64.

25. *Ibid.*

26. *Ibid.*

overriding today's priority is to overcome the existing "cosmological insufficiency" and decisively rehabilitate Aristotle's teleological naturalism and the Biocosmological (Organicist) approach, in general, starting with the restoration of the authentic scientific language of the Stagirite. In this, the key challenge is to reinstate the natural status of Aristotle's (*Organon*) Kosmology, both as the comprehensive super-system of scholarly knowledge, and as the equal pole and type of (Organicist) rationality. In fact, the latter is essential and crucial in resolution the topical issues of current sociocultural development.

Taking all things together, we should agree with Anna Makolkin, who suggested the complete postmodern revision of the translated corpus of Aristotle's texts.²⁷ In the first place, in our approach, we try to clarify that Aristotle's (*Organon*)

Kosmology is originally *entelechia* and *hylemorphic*, i.e., inherently Telic (Organicist); and essentially Bipolar, Dynamic and Cyclic—Triadic (regarding the alternation of the cycles of Potency and Activity, and united by the thing's Organicist *ἐντελέχεια*), and thus naturally hierarchic and heterogeneous. In this order, essentially following the dynamic cyclic theory of Pitirim Sorokin (primarily disclosed in his *magnum opus Social and Cultural Dynamics*), we introduce the notion and proposal of the dynamic naturalist triadicity (and triadologic approach) in reflecting and studying the natural interrelation between the three realms of life processes of all levels; and of their knowledge: two polar (AntiKosmist and RealKosmist); and the third intermediate and basal (axial) Integralist (AKosmist).

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27. See Anna Makolkin, "Sema/Sign, Semasia/Meaning and Toying with Semantics in Aristotle's Translated Texts," *Biocosmology – Neo-Aristotelism* 7, no. 1 (2017): 85–89, accessed November 4, 2017, <http://en.biocosmology.ru/contributors>