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### POTENTIALITY AS A SOURCE OF BECOMING IN ARISTOTELIAN PHILOSOPHY

The modern science is so far away from its own beginnings that there is no need to consider them in order to proceed in creating new technologies. But when the science reflects upon itself, sooner or later it comes to the consideration of its own sources and the ways it followed in its development. Perhaps these reflections are able to stimulate somehow scientific creativity.

Western science started in Ancient Greece as the philosophical conceptions, which tried to explain the existence of this world by indicating its origins or, in other words, tried to solve the problem of becoming. This problem is the meeting point of the modern philosophy and science. Aristotle is the first Greek philosopher who, considering and solving the difficulties faced by his predecessors, created the systematically elaborated theory of genesis. There are several ways to come to its understanding. One of them is to follow the path proposed by Aristotle himself, i.e. to start with principles or elements and gradually to come to the whole picture. But it seems that the other way round is more convenient to the contemporary researcher that is to start with reconstruction of Aristotelian picture of universe and only after that on the background of it to inquire the selected problem. Modern scientists have no need to deliberate upon the picture of the universe each time they make their researchers, for that picture is already present in their minds. The situation changes when one deals with ancient theories, for their background is quite different. For instance,

Aristotelian and modern picture of the universe differ as spherical and linear. Aristotle's universe is eternal and spherical.

Any temporal segment within it can be referred to the whole and understood with certainty. In linear universe, on the contrary, the only point of reference for knowledge is the past. Hypothesis and probability substitute the certitude<sup>1</sup>. One has to bear these differences in mind in order to escape their confusion while working with particular problems of Aristotelian philosophy.

Aristotelian model of the universe can be easily constructed relaying on his treatises: *On the Heavens*, *On Generation and Corruption* and *Metaphysics*. His perceivable world looks this: the sphere of the first heaven encloses the stars and planets with the spherical earth at the center. The first eternal and immutable heaven moves in a circle eternally, continuously and regularly. The planet earth does not move and the Earth as an element seems exempt from the eternal transformation of the elements: the Water, the Air and the Fire. This grants eternity for the earth.

The cause of the transformation is the sun's movement along the inclined circle. Therefore the seasons come-to-be in a cycle, i.e. they return upon themselves, and the things, whose genesis the seasons initiate, do the same. It seems quite natural that every process in the spherical universe is circular, but Aristotle sets limit to the circularity, saying that starting from the elements the perishable things return upon themselves in the sense, that what recurs is the same 'specifically', not 'numerically'. Thus on the level of individuals becoming constitutes a rectilinear sequence. That many things do not 'return upon themselves' is obvious from sense experience. Human intellect intuitively grasps the principles of this becoming.

Aristotle calls them matter, form and privation. These terms can be predicated to each particular case of generation or corruption but only analogically, for there is no uninformed matter or not materialized form in the perceivable world. Without qualification they can be predicated to the extreme limits of reality alone. Aristotle sets these limits in order to escape the reduction to infinity, which would make the existence of the universe impossible. They are pure form, pure matter and pure privation in the sense of the absolute absence of form. These terms make us to transcend the

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<sup>1</sup> *Porphyry the Phoenician. Isagoge*, Translation, Introduction and Notes by E. W. Warren, „The Pontifical Institute of Medieval Studies”, 1975, p. 20-21.

perceivable universe. They signify the ontological entities, the extreme limits of the reality, we have to include them into the model. Thus on the periphery of the spherical first heaven we have the pure form and at the end of the rectilinear generation and corruption – the pure matter. In between these intelligible entities lies the perceivable world, which can be subdivided into the huge region of regular continuous and circular motion and the comparatively small region of generation and corruption. Now, having the macro model completed, we can rise the question – how it works? So far we know that genesis is caused by the sun's movement, the latter – by the movement of the first heaven. But we still do not know why the first heaven moves? The possibility that it moves by itself is excluded by the presupposition that everything, what moves, moves because it is moved by something else.

The perceivable passivity of the matter and the mentioned causation chain naturally directs our attention towards the pure form. But as the limit of the universe the form is immobile. Moreover it has no magnitude. It is quite difficult to think the immobile perpetuum mobile, which has no magnitude in order to have an infinite power. Let us consent that there is such mover. Then it is necessary to explain how its infinite power causes the eternal movement of the first heaven. What kind of power can be exercised without the involvement of any movement? To answer this question we need to know another set of strange things. First, that what we call the pure form and the first mover is the thought, which has itself for its object, i.e. it thinks thinking on thinking. It seems that thinking has no magnitude but, obviously, it is the manifestation of power, the psychic power. Can this power move heavens? Even if telekinesis is possible it would not since it is directed exclusively to itself. So, how it moves? Aristotle explains that the thinking moves as a final cause, i.e. as an object of desire and love. In this case a magnitude of power does not matter much. What matter is the power of desire. It is infinite and eternal and belongs to the first heaven. Does it follow that the actual cause of the heaven's movement is its desire and power to move? By no means, for such conclusion is forbidden by Aristotle's definition of movement as the fulfilment of what exists potentially as far as it exists potentially<sup>2</sup>. Hence the heavens must be in potentiality

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<sup>2</sup> Aristotle, *Physica*, 201 a 10, transl. by R. P. Hardie, R. K. Gaye, [in:] *The Basic Works of Aristotle*, ed. by R. McKeon, New York: Random House 1941. The passage indication is according to Bekker.

to be moved by the thought and its real movement is fulfilment or actualization of that potentiality. It is easy to give analogous empirical examples of such actualization when moving body moves another body. But it is difficult to think that the thought and the heaven, for according to Aristotle, actuality is the different kind of process from motion and all considered characteristics of the thought and the heaven gives us more information about their separation from each other than about their interaction. In order to think that interaction we need to find a term, which would allow us to bridge the gap between the thought and the heaven. It seems that such term could be potency, provided we accept it in its total content, which extends from the pure possibility, the prime matter, to the absolute power, the pure form. It seems that such move is possible since Aristotle himself says in *Metaphysics* that we not only ascribe potency to that whose nature it is to move something else, or to be moved by something else... but also use the word in another sense. And as it appears later, this sense is actuality<sup>3</sup>. Therefore now we can think potency as the axis of the Aristotelian universe. It goes through the whole perceivable world and connects its extreme intelligible limits – the prime matter as pure possibility to be something, and pure form as absolute power to make the universe to be actually present. Going through the different regions of the universe the potency changes its name: in the pure form it is absolute actuality; in the heavens it is perfect motion; in the sublunary world it is genesis; in the pure matter it is pure possibility. Nevertheless it always is potency, otherwise the principal parts of the model would be separated and the universe would go to pieces or at least all the processes would stop in it. Thus potentiality is the source of genesis not only from the side of matter but also from the side of form. Aristotelian picture of the world can be criticized as incompatible with Christian Weltanschauung and modern science. It is obvious that, in terms of Umberto Eco, the modern continuum of empirical, scientific and language usage experience makes impossible the contractual realism in discussion between the realism of Aristotle and realism of our days<sup>4</sup>. Nevertheless the critique must not overshadow the fact that the modern science, philosophy and theology borrow much from Aristotle, that

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<sup>3</sup> Id., *Metaphysica*, 1048 a 26-29 ff., transl. by W. D. Ross, in the indicated edition.

<sup>4</sup> U. Eco, *Kant and the Platypus. Essays on Language and Cognition*, translated from Italian by A. McEwen, Vintage 2000, p. 5.

in the history of science and philosophy the Aristotelian model of the universe occupies the respectable place along with others and therefore it is worth of consideration.

POTENCJALNOŚĆ JAKO ŹRÓDŁO STAWANIA SIĘ  
W FILOZOFII ARYSTOTELESA

S t r e s z c z e n i e

Z nicości nie pochodzi nic, ponieważ nicość jest niczym. A nic nie pochodzi od bytu, ponieważ byt już jest. Stąd jak możliwe jest stawanie się oraz ginięcie? Problem ten powinni rozwiązać ci, którzy pragną zrozumieć i wyjaśnić widzialny świat, gdyż jest on pełen rzeczy, które zaczynają istnieć. Nie może istnieć nauka dotycząca zmieniających się jednostek, zatem świat genezy, natury należy pozostawić doksie. Taki też był wybór Sokratesa i Platona. Arystoteles zdecydował inaczej i stworzył pierwszą teorię naukową natury, teorię dominującą przez ponad 1500 lat.

Mój artykuł opiera się na refleksjach dotyczących Arystotelesowskiej fizyki i metafizyki. Najpierw wskazuję, w jaki sposób Arystoteles rozwiązał ontologiczne, logiczne i epistemologiczne trudności, zajmując się problemem genezy. Naczelnym zagadnieniem jest tu Arystotelesowskie pojęcie dynamiki jako naczelnego terminu dla rozwiązania problemu. Sam ten termin jest problemowy. Rozbija się na wiele innych kwestii, kiedy przetłumaczymy go na łacinę oraz inne języki, a ostatecznie staje się możliwością czynną w przeciwieństwie do biernej. To, jak się wydaje, stwarza wiele filozoficznych i teologicznych pytań. Niektóre z nich starałem się sformułować na końcu artykułu.

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