

COMPTE RENDU

***Moderne Aristotelische Forschungsergebnisse in Rumänien* (Hildesheim, Zürich, New York: Georg Olms Verlag, 2020), herausgegeben von: Alexandru Surdu, Niels Offenberger, Marius Augustin Drăghici, Oana Vasilescu, ISBN 978-3-487-15881-5, 282 pages.**

The volume *Moderne Aristotelische Forschungsergebnisse in Rumänien* is the 13th in the series *Zur modernen Deutung der Aristotelischen Logik (About the Modern Interpretation of Aristotelian Logic)*, that was founded by Albert Menne and Niels Offenberger and is currently edited by Niels Offenberger at the distinguished Georg Olms Verlag. It brings together several papers concerning Aristotelian logic written over the years by Romanian researchers Dan Bădărău (1893–1968), Alexandru Surdu, Athanase Joja (1904–1972), Niels Offenberger and Șerban Nicolau.

The volume opens with Dan Bădărău's extensive study entitled "L'individuel chez Aristote" ("The Individual in Aristotle"). Bădărău begins with a review of the general topics of ancient Greek philosophy before Aristotle, briefly sketching Platonian theory of Ideas and Aristotle's critique of it. In this respect, he argues that for Aristotle, but not for Plato, the universal cannot pre-exist in relation with the individual (p. 18). The only pre-eminence of the Forms that Aristotle acknowledged is a logical anteriority, but not a chronological one. Suppose our analysis shows that the universal is a necessary determination. In that case, it is a concept, and if this necessary determination is absolutely simple in terms of its content, we call it a category (p. 20). By means of this interpretation, Aristotle tried to reconnect with the orthodox Socratic tradition, that also conceived the universal as a concept. In contrast, Plato transformed Socrates' view into idealism. However, Aristotle admitted that the universal makes possible the individual. The principle '*man*' makes human beings possible, the principle '*flower*' makes flowers possible, and so forth; therefore, the principle is the supreme reality from which all individual things emerge as if from their model. Aristotle used again the Socratic method of induction, an operation that seizes the universal within the individual, distrusting the Platonian method of division (p. 22). This is why he can claim that the premises of a syllogism are based on a knowledge of the objects in the sensible world, but express the grasping of real being in these objects (p. 22).

While constantly relating to Plato's theory, Bădărău shows that the ancient philosopher conceived reality as involving two realms that have to join together to produce reality: one is the Receptacle, the realm devoid of any determination, that receives from outside the determination of the Ideas, of the absolute Forms that exist in themselves and are immutable. Plato's view is taken over almost identically by Aristotle, the difference being that the Receptacle becomes here *matter*, and the Ideas are no longer seen as existing independently, in themselves.

Bădărău argues that for Aristotle, the individual is not simply the point of intersection between matter and Forms, but it is that realm where both matter and Forms acquire full reality, that without the individual, neither of these two principles would have existence. However, despite this important role that he concedes to the individual, the spirit of ancient Greek culture made Aristotle to recognize the pre-eminence of the Forms, and to conceive them as the foundations of science. Indeed, his preference is not ontological, as in Plato, or at least it is not fully ontological. Bădărău concludes that Aristotle did not fully develop a theory of the

secondary substances that could solve the system's ultimate contradictions and that he discusses them mainly in an epistemological framework: he treats them as the ultimate, immutable being within primary substances that correspond to our concepts. Bădărău says that maintaining the two types of substances in the entire system – representing values that cannot be in harmony with each other – involves the lack of a unitary line of thought in Aristotle, which is a real ferment of anarchy (p. 112).

On the other hand, despite his emphasis on individual's role, Aristotle was unable to impose in the Western tradition a real interest in it. His insistence on the value of Forms for knowledge could later easily lead to an overvaluing of Forms at the individual's expense. If Aristotle, says Bădărău, had not clung to the dogma of Form's immanence in the individual being and had he chosen either a materialist or an idealist solution, the modern world would find itself in the presence of an already solved problem (p. 112).

In his study, "Les *Catégories* d'Aristote et le problème de l'universel" ("Aristotle's *Categories* and the Problem of the Universal"), Alexandru Surdu argues that the universal is an age-old topic of philosophy that begun to be discussed again in the 20th century, at such a level that we almost witness a new quarrel of universals. He reminds us that over time philosophers tried to locate the universals either in things, in the mind, or in language (*in voce*). None of these hypotheses has been completely accepted, neither rejected. Surdu states that although the problem of universals can be identified in the Presocratic philosophers' works, it was Aristotle who acknowledged its historical significance. He also maintains that a detailed analysis of the works of the Stagirite shows that his solution to this topic was an originary synthesis (p. 118), meaning that the solutions tried out later in the European philosophy were foreshadowed in that synthesis. Aristotle was neither a realist nor a conceptualist or a nominalist, because each of these orientations means implicitly rejecting the others. The Aristotelian solution is not a synthesis of these orientations (p. 129), because the way the universal is understood by Aristotle changes as he uses the term in what could be seen as a realist, a conceptualist, or a nominalist context.

In his study "Le fondement de la prédication dans les *Seconds Analytiques*" ("The Foundations of Predication in *Posterior Analytics*") Athanase Joja argues that the origin of Plato's theory of Ideas has a gnoseological necessity since one cannot ground predication and science if there are only individuals that continuously change (p. 133).

While developing his mentor's theory, Aristotle insists on the idea that universals are not only common traits but also unities. As such unities, their knowledge, which is the product of intellect's activity, is not entirely specific to the human beings.

Joja speaks about Aristotle's description, in the 19th chapter of the *Posterior Analytics*, of the origin and development of the (passive) intellect in the animal world. This intellect evolves from sensibility. Of course, animals are not endowed with the capacity of conceptual thinking. However, they possess the ability to discriminate between their sensations. This discrimination is also based on memory: repeated sensations are identified and related to certain things because they are kept in memory (In this sense, we could add that later thinkers, such as Schelling, Hegel, Eduard von Hartmann, Bergson, Scheler, or Whitehead, certainly following Aristotle's insights, would speak again of a spiritual or intellectual activity, unconsciously manifested in the animal world). On higher levels of biological world, this discrimination gives way to conceptual knowledge and thus, to the so-called active intellect, the real source of creativity in the world. Generally speaking, intellect is the cognitive faculty that makes possible the grasping of things not in their singularity, but according to their general aspects, "*sub specie universalitatis et aeterni*" (p. 143).

This is why the universal is naturally the subject-matter of concept, and the concept is essentially universal, being a result of abstraction and generalization (p. 153). However,

concepts are not used in isolation, but they usually appear in propositions, where they become subjects or predicates. Although one must not confound the metaphysical subject with the logical one, we must not underestimate the echo of the first on the latter in Aristotle's thought, observes Joja (p. 154). Because of this continuity between them, Aristotle could build his logic and overcome the metaphysical aporias related to Platonic Ideas (p. 145). In logic, the subject plays to a certain extent the role of the metaphysical matter, since, if it is not related to a predicate, it remains isolated, inert, a pure abstraction (p. 157). Through its relationship to the predicate in a proposition, the subject's notion becomes temporal, enters the world of becoming.

Joja believes that, to a certain extent, Aristotle seems to have underestimated the role of the relation (p. 161). He always conceives it by starting from the related things. This is due to his substantialism. Unlike the Stagirite, the modern scholars in the logic of relations seem to ignore the related things, overestimating relations too much. Here Joja enters into a short polemic with Bertrand Russell, arguing that relation, seen as independent of the related entities, is a phantasm (p. 161), while, at the same time, underestimating relation in favour of the related elements means an impoverishment both of reality and of logic (p. 161).

Athanase Joja's paper "La Modalité dans la cosmologie d'Aristote" ("Modality in Aristotle's Cosmology") begins with a discussion about generated and corruptible things. Aristotle believes that they must be conceived of as existing between two extremes: on the one hand, that which is not generated and is therefore incorruptible, and that which never exists, on the other. What is not generated and corruptible – conceived in terms of modality – is also necessary, since it always exists, while what never exists is impossible (p. 169). The main realm of necessity is the heavens, while the sublunary world is the realm of corruption. In the heavens, we perceive the eternal motion of stars and planets, while on earth we see that things continuously change and disappear. Still, what does not disappear here is time itself. These remarks make Aristotle conclude that act precedes possibility: if act always followed possibility, eternal motion and time would be impossible (p. 172). Divinity, the Unmoved Mover, is the entity that accomplishes those pure acts while the whole of reality strives to embody them. Such a process of embodiment is the development of an individual thing, from its elementary stage to its prime and then to its decline and disappearance. Heavens and nature depend on this Unmoved Mover. The latter is one, identical, immobile, is actuality excluding all potentiality, necessity excluding all possibility, because possibility can both be and not be, while the Thought Thinking Itself always exists and is necessary. If divinity is eternal, so too is the world – although not the concrete things that compose it. The world is an eternal process first embodying and then eliminating the eternal substances through imitating as much as possible the divine plan thought of by the Unmoved Mover (p. 174). The world consists of things that can simultaneously be and not be; that is to say, it is the place of generation and corruption. But the ultimate condition that is the origin of these processes is matter (p. 176). "Matter is *dynamis*, but in a passive sense, in the sense of bearing and suffering. What defines matter is to suffer and be moved, while moving and producing defines another power. This power that moves and acts is the Form, power in an active sense." (p. 176). Therefore, matter is logical possibility transferred into cosmology (p. 177). The interplay between matter and Forms is the source of generation and corruption. However, there are things that are closer to the pure forms, like the stars of the heavens, and others closer to matter, like some things on earth. This is why, believes Joja, the Aristotelian view of modality involves a hierarchy of hypotheses concerning modality, a hierarchy that is based on the principle that, inasmuch as a thing has being, it has also truth.

In his paper, "Zur Wahrheits- und Richtigkeitsfrage in der Aristotelischen Syllogistik" ("On the Questions Concerning Truth and Validity in Aristotelian Syllogistic"), Alexandru Surdu

attempts to reject some theses that follow from Łukasiewicz's interpretation of the Aristotelian syllogism: 1. That Aristotelian syllogism is a logical function. As a logical proposition, it is always true, its truth depending only on the logical values of the propositions that build it. 2. That the truth of syllogism would not depend on correspondence with reality, but with its own components. 3. That syllogism's truth depends on the correspondence of the syllogism with itself (p. 188).

The author shows that in *Prior Analytics*, Aristotle says indeed that the truth value of a logical operation depends only on its logical form. However, while the components of the syllogism (the premises and the conclusion) can be true or false, from the possible combinations of their truth values does not arise the logical value of the concrete syllogism, but its logical structure. Only a concrete syllogism, built in this or that way, can be true or not.

Thus, concludes Surdu, the syllogism's truth value does not depend exclusively on the truth values of its components, which means that the syllogism cannot be seen only as a logical operation (p. 208). The analysis of syllogism components that Aristotle undertakes – according to quality, quantity, and truth values of the premises and conclusion – does not concern the truth value of the syllogism in itself, but syllogistic validity. The latter depends not only on the quality and quantity of the premises and the conclusion but also on their truth value. If one interprets syllogism as a logical operation, writes Surdu, one must equate truth with validity (p. 208). The validity of syllogism consists of its correspondence to its own structure.

This is the usual way in which the formal truth of the syllogism is understood. However, this formal truth is not sufficient to express the material truth of syllogisms. The latter presupposes the formal truth as an essential condition, but formal truth is not a sufficient condition. This is why, concludes Surdu, a syllogism is a form of thought that relates to external reality, and could be in correspondence with this outer reality (p. 209).

In his article “Zur Frage der Entstehung der mehrwertigen Logik in der Gestalt der Dreiwertigkeit” (“On the Question regarding the Emergence of Multi-Valued Logic in the Form of Trivalence”), Niels Offenberger, begins by discussing the classic principle that two contradictory statements cannot have the same truth value, which means that if one is true, its negation is necessarily false. The third possibility – that the contradictory statements are both true or both false – is excluded: *tertium non datur*. However, the author argues that such a possibility exists. In this sense, he quotes Łukasiewicz, considered the discoverer of the third truth value (besides truth and falsity), who showed that there are propositions that are neither true nor false, but neutral. Such propositions are those that refer to the future, for example. They express a possibility. On the other hand, Offenberger says, Łukasiewicz is only developing an Aristotelian suggestion, which means that despite a prehistory lasting more than two thousand years, the three-valued logic had a difficult time to develop. The reason for this difficulty, believes the author, lies mainly in the pre-eminence of the ontological concerns. The particularity that such propositions show is that they have no objective correlates, which stripped them of the universal value required by logical propositions. Their value seems restricted to the so-called universe of discourse. Another reason for this delay, argues the author, is the fact that the Aristotelian distinction between truth and falsity was interpreted in the framework of bivalent logic, because one did not have yet at hand the concept of fundamental and derivative truth values. With this concept, one could have introduced many-valued logic much earlier.

In his article “Bemerkungen zur Frage der Entstehung der mehrwertigen Logik in der Gestalt der Trivalenz und Tetravalenz” (“Comments on the Question of the Emergence of Multi-valued Logic in the Form of Trivalence and Tetravalence”), Alexandru Surdu discusses the ideas of Offenberger presented earlier, concluding that, despite the fact that Offenberger had

emphasized the counter-intuitive character of the third truth value, he had not sufficiently proved that the trivalent truth value table involves the negation of the function of mutually opposed operators, i.e., contravariance and equivalence (p. 229).

In the last paper included in the volume, “Quatre types de démonstrations dans le traité Aristotelicien *De Caelo*” (“Four Types of Demonstration in the Aristotelian Treatise *De Caelo*”) Șerban Nicolau argues that the demonstrations developed by Aristotle in *De Caelo* are not ordinary demonstrations, but rather complex forms that are not reducible to a simple syllogism, being chains of syllogisms, which do not always conform to the strict rules of syllogistic (p. 231). The author believes that the demonstrations in the treatise *De Caelo* are meant to support Aristotle’s cosmological doctrine, which involves a theory of heavens – all the celestial bodies that make up the universe – and a theory of elements, about the five elements that compose the celestial bodies, on the one hand, and the sublunary bodies, on the other. The criteria allowing the classification of demonstrations in this treatise, according to Nicolau, are:

1. the type of arguments that Aristotle uses in the premises,
2. the relation of demonstrations with the idea of goal,
3. the modality of demonstration,
4. the number of times the theses to be proved are reworked from the beginning.

In his demonstrations in *De Caelo*, Aristotle uses two types of arguments, according to Nicolau: the first ones are based on empirical observation, while the others are related to the realm of logic, to dialectics, rules of reasoning, to principles and notions that do not pertain to a particular science. According to their goal, demonstrations can be concerned with fact or with cause, in other words with existence or with its explanation.

The next type of demonstrations, according to the modality criterion, includes direct and indirect demonstrations: the first begins with two premises accepted as true and draws ‘directly’ the required conclusion. The indirect demonstration is known usually as *reductio ad absurdum*: it starts from one of the premises of the direct demonstration and replaces the other with a proposition that contradicts the conclusion of the direct demonstration. In *De Caelo*, such demonstrations have a preparatory character for the demonstrations of the theses in which Aristotle is really interested. For example, the final thesis is “all the celestial bodies have a spherical shape.” For it, the preparatory thesis which has to be proven through *reductio ad absurdum* is “the Moon has a spherical shape.” (p. 267).

The last type of demonstration concerns the number of times a thesis is proved anew without taking into account the previous results. In this respect, demonstrations can be divided into simple and multiple. If the thesis demonstration is not resumed, we speak about a simple demonstration, as opposed to multiple demonstrations in which the thesis demonstration is repeated *ab initio* several times. Multiple demonstrations may be thought of as being composed of many simple demonstrations that have in common the thesis that needs to be proven.

The present volume shows an abiding interest for Aristotelian topics in Romanian philosophical culture, while offering valuable contributions to some age-old, but still current, intellectual debates.

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