

## OPINION

by Associate Professor Dr. Darin Voinov Tenev, Plovdiv University  
regarding the Associate Professor habilitation procedure at Plovdiv University  
in Area of Higher Education 2.3. Philosophy (Logic)  
announced in *Darzhaven vestnik*, No. 96/ Nov 11, 2025

Martina Stoilova Mineva-Nikolova is the only candidate in the Associate Professor habilitation procedure in Area of Higher Education 2.3. Philosophy (Formal Logic and the Logic of Practice) announced by Plovdiv University "Paisii Hilendarski" in *Darzhaven vestnik*, No. 96/ Nov 11, 2025. The candidate has submitted for the procedure 15 scholarly publications, two of which are monographs, eleven are studies and two are articles. Her submitted publications and her scholarly and educational academic work meet the legal requirements for the position of Associate Professor at Plovdiv University.

Martina Stoilova Mineva-Nikolova teaches philosophy at Plovdiv University "Paisiy Hilendarski". She has developed over thirteen lecture courses, participated in the organization of 14 conferences, national and international; participated in over thirty scientific forums; she was the editor of two issues of *Sociological Problems in Bulgarian and English*, compiler and editor with Milena Tasheva of the collection *Social Vulnerability: Socioanalytical Perspectives*, member of the editorial board of the journal *Heterodoxy*, editor-in-chief of the journal *Kairos*; member of the Institute for Critical Social Studies (2008-2021) and of its successor, the Institute of Socioanalysis, and member of the Institute for Critical Studies of Supermodernity. She was a member of the Scientific Activity Committee of the Faculty of Philosophy and History of Plovdiv University, member and secretary of the Ethics Committee of the same faculty, as well as a member of the Accreditation Committee. For the period 2019-2025, she participated in seven national scientific projects.

The reference for compliance with the minimum national requirements for holding the scientific position of "associate professor" shows that the candidate exceeds these requirements. From what has been said above, it is clear that Martina Mineva does not simply exceed the formal requirements, but that her scientific and teaching activities testify to rare dedication. It is worth noting that the name of the candidate is increasingly recognizable in the field of Bulgarian humanities, and not only because of Martina Mineva's activity, but above all because of her targeted research efforts in paving new paths for philosophy and logic, efforts that have created a clearly defined profile for her. And if her work in recent years has been on innovation, it should be pointed out that this very philosophical conceptualization of innovation is innovative. A conceptualization that not only brings promises, but also fulfills them in an impressive way.

Among the scientific works submitted for the competition, the monograph *Innovations. Abduction, induction, transduction in the logic of practice* (Sofia, 2025) occupies a central place. Therefore, within the narrow limits of this opinion, I will focus on it. As stated at the beginning of the monograph, it is the product of a long work on whether and how innovation can be thought of in terms of logic. Some of the studies for the competition can be read as separate steps of this work and were later, in a more or less modified version, included or referred to in the book.

It is worth mentioning, however, that *Innovations* has a broader research framework, which is related to the tasks before a non-classical logic of the dialectical, which can be used as a tool for developing a theory of structures of mediation in various spheres of human activity (science, economics, politics, etc.). Martina Mineva's texts, which do not directly relate to the monograph, are contributions to this broader framework. The Appendix in the monograph outlines the connections with the non-classical logic of the dialectical. This allows us to clearly highlight the impressive consistency not only of *Innovations*, but of her entire scholarly activity. In this sense, the candidate's book is only part of a larger project, for the implementation of which she has been working for many years, in a team of like-minded people, the most important figure among whom is that of

Deyan Deyanov. Martina Mineva's perseverance, her ability to work in a team, her ability to make discoveries, but also associations between these discoveries and what has already been done, are admirable aspects of her ethos as a scholar.

The main question in the monograph, as I mentioned, is that of the logic of scientific discovery. Discovery is reconceptualized as participating in innovative practice, and therefore the question can be more accurately formulated as a question of the logic of non-deductive inferences in innovative practices.

The task before the book obviously does not allow one to remain only in the field of logic, it implies taking into account the philosophy and history of science, but *Innovations* does something more. Not only is there an intensive conversation with the ideas of Alexander Koyre, Thomas Kuhn, Imre Lakatos, etc. woven into the development of the logical argument, but the very boundaries within which the logical is traditionally thought of are actively redrawn, without abandoning the logical problematic itself. The main direction of expanding the field of logic is in the direction of non-classical intentional, or more generally phenomenological, problematics, on the one hand, and rethinking the field of the transcendental, on the other. Both directions are set by the work of Deyan Deyanov, who can be called a privileged partner in the conversations that Mineva's research leads. Below I will return to the theoretical implications of this so intense exchange.

The book is divided into three parts, accompanied by a long introduction, conclusion and the already mentioned Appendix on the non-classical logic of dialectics. The first part develops a precise analysis of non-deductive inferences, whose starting point and constant reference point is C. S. Peirce's theory of abduction. This theory is reconstructed in all its complexity, with attention to the changes in it that the American philosopher introduced over time, changes that affect not only the change of words to denote the basic concepts (e.g. hypothesis, retrodution and abduction denote the same concept at different moments of the theory), but also the relationship between them (e.g. initially deduction, induction and abduction were thought of as three separate, independent types of inference, and subsequently as interconnected stages). Peirce, always neglected in Dejan Dejanov's work, is given here the necessary space here to logically highlight the problem of discovering the new, but Mineva also points out the shortcomings in Peirce's theory and continues beyond it in two directions. On the one hand, she reveals how abduction and abductive induction point essentially to an enabling of new possibilities (thereby highlighting the modal basis of the question of abduction). This point is more fully developed in one of the articles submitted for the competition, "Abduction vs. abductive induction: from demarcation to relation", published in the same year as the book. On the other hand, Martina Mineva constructs in a different way, different from Peirce's theory, the relationship between the non-deductive inferences she demarcates: abduction, abductive induction, induction. In her theory, abduction sets a new pattern, and with it a new form of following the pattern. Abduction is revolutionary, it changes the paradigm, even if Mineva sometimes speaks simply of an "extension of the paradigm". In view of the newly discovered quality in abduction, Mineva introduces the concept of abductive quantum, which she understands as the quality that allows for indefinite following of a new pattern, while at the same time preserving the logical openness of the pattern achieved through abduction, but also already charts the path towards the traditionalization of the pattern in further scientific work. Abductive induction is a step in this direction, insofar as in it the inference is an extension within the limits of the new paradigm. The conclusions here simultaneously go towards the everyday-ization of the scientific discovery and the new paradigm, and yet science is not yet normalized. This suggests that these conclusions are wavering between the abductive and inductive aspects. Gradually, "abductive induction becomes less and less abductive and more and more inductive, until it turns into an induction through which puzzles of "normal science" are solved." (p.87) It is in abductive induction that the innovator's theoretical thrust will unfold, i.e. the theoretical thrust is first and foremost "openness to future abductive inductions [...], in which the new pattern can be followed through analogization" (p.91). Induction is also an expanding inference, but it remains within the limits of a normalized and traditionalized paradigm, i.e. the anom-

aly and the pre-predicate contradictions that led to the abduction in a non-predetermined way are "forgotten".

In the reconstruction of Peirce's conception, where Mineva begins to build her own theory, she also points out the particular inconsistency in the American philosopher's understanding of analogy, and behind this inconsistency she discovers a theoretical problem (p. 81), the systematic solution of which she herself will propose in the second part, where she suggests the distinction between three types of analogization, following the three types of non-deductive inference: in abductive inference, the analogization pattern comes from another paradigm in a non-predetermined way; in abductive-inductive inference, the analogization follows the new pattern synthesized by the abduction; in inductive inference, a pattern from an already established paradigm is followed (pp. 193-197).

After critically examining various commentators and interpreters of Peirce, Mineva concludes the first part of the monograph with a discussion of Vladimir Bibler's concept of transduction. The candidate interprets transduction not as an independent form of inference, but as "a characteristic of a given revolutionary practice, referring to its logical dimensions" (p. 127), i.e. to the non-deductive conclusions leading to the emergence of a new paradigm. It is transduction that allows her to take into account not only individual logical inferences, but an overall context in which, overwhelmed by anomalies, the scientist is faced not with a separate problem, but with an anomalous world (p. 132). In other words, transduction as a revolutionary scientific practice allows one to explore work with a whole cluster of anomalies.

A concrete example of an analysis of transductive practice in scientific discovery, uniting the three types of non-deductive inferences, is given in the third part of the book, where a careful and in-depth analysis of Kepler's discovery of the elliptic form of Mars' orbit and the consequences of this discovery for the change of the astronomical paradigm is proposed. Mineva traces the four transformations in Kepler's thinking, noted by Koyre, analyzing in what sense they form a cluster. If we ask how it actually turns out to be possible to overcome the pre-predicate contradiction that the astronomer encounters so as to reach the discovery of the elliptical orbit, as Mineva emphasizes, "the answer lies not only in the isolated studies of Mars' orbit, but also in the interrelationship between these four transformations in his thinking" (p. 234).

However, in order to understand her impressive analysis of the Kepler case, we must also turn to perhaps the strongest and riskiest part of the book, the second part, dedicated to the phenomenological and transcendental problems brought about by the question of non-deductive inferences in scientific innovation. Already at the end of the first part, shortly before moving on to the consideration of transduction, Mineva poses the question of what abduction and induction involve and answers: "as a practicological inference, especially in the theoretical practices of scientists, it [abduction] involves, like induction, practicological efforts to implement a successful a priori synthesis conceived in a non-classical manner." (p. 109) In other words, insofar as it is a question of a comprehensive practice, and not of an abstract logical conclusion, the analysis of the process becomes key, since it is precisely as a process that synthesis occurs. Hence the focus on "practices of inference as multidimensional a priori syntheses, rather than [on] the products of these practices." (p. 110) The process before the product. Inference as a process before inference as an end-result. In this way, attention is turned to the subject of innovation, the innovator, and not empirically-biographically or psychologically, since this cannot be directly logically relevant.

Thus, a transcendental problematic is introduced, which was never thematized by Peirce, and is most often ignored by the entire tradition of analytic philosophy, even when its traces are noticeable.

More specifically, the transition to transcendental problematics has begun already in the first part, through the taking up of Peirce's concept of play, which leads back to Fr. Schiller, and according to John Kaag quoted in the book, beyond Schiller leads to Kant and the third critique. Based on this connection, Mineva associates Peirce's concept of reflection with Kant's concept of imagination, which in turn allows her to turn to the Davos debate between M. Heidegger and E. Cassirer,

which concerns imagination. This debate is examined at the beginning of the second part of the monograph in order to clarify the question of the role of ‘imagination’ and ‘will’ in a priori syntheses in cases of non-deductive inference. The problem comes from the fact that if one stays with the Kantian framework, ‘schematism’, ‘imagination’ and ‘will’ will work in a predetermined way, dictated by the transcendental unity of apperception. If, however, abductive and abductive-inductive inferences allow for the achievement of a truly new isomorphism between reason and sensibility, this requires a non-classical understanding of transcendental schematism. Mineva writes: “This became possible by rethinking the problem as non-Kantian, non-Cassirerian and non-Heideggerian – as related to a will to form, and thereby to achieve an isomorphism between the forms of sensibility and reason as an undetermined successor to Kant’s productive faculty of imagination.” (p. 241) The Davos debate makes it possible to think of non-classical moves to escape from the presupposed predetermination, even when this requires going beyond both Heidegger and Cassirer. Mineva borrows from Cassirer the idea of a will to form and the related distinction between *forma formans* and *forma formata*, but redefines them in a non-Kantian and non-Cassirerian sense. The will to form for her is “a will that is non-predetermined and in which the very achievement of isomorphism between forms of reason and sensibility through it [...] is also non-predetermined.” (pp. 149-150) This allows both a priori synthesis and the transcendental schematism associated with it to be thought of as non-predetermined and occurring in the very practices of inference.

The will to form, however, means that along with the a priori synthesis of the non-deductive inference, the scientist's self is synthesized in a new way, in such a way that this synthesis simultaneously changes it (creates a new ego-identity) and along with this, the possibility of intersubjectivity is synthesized, guaranteeing the isomorphism between the ego and alter ego of any two or more scientists. (p. 159) Together with Deyanov and following Kolyo Koev, Mineva uses the concept of the transcendental third to denote the “third” that makes possible and directs the intersubjective relationship between ego and alter ego, but emphasizes the role of the transcendental third in non-deductive inferences. To unravel the difficulties with the new synthesis of the ego in discovery and with intersubjectivity in scientific revolutions, Mineva turns to phenomenology and intentional analysis to trace how one passes from the intra-subjectivity of the endogenous logic of discovery to the inter-subjectivity of its exogenous logic, which allows its sharing. Her analysis of the intentional trajectories of innovative practices, which should complement on the side of the ego the analyses of synthesizing the abductive quantum, shows that there is a transition that leads from the appearance of the anomaly that overwhelms the scientist to the a priori synthesis as the removal of the pre-predicative contradiction, which, according to her, is the anomaly for the scientist.

Only after having constructed this multidimensional philosophical theory of the logic of discovery does the monograph arrive at the analysis of the Kepler case. Thus, in addition to the already mentioned transductive practice of the astronomer, concerning the cluster of transformations, the syntheses of an abductive quantum, and the expansion through abductive-inductive and inductive inferences, Mineva also traces the intentional trajectory of the scientist to show how the efforts of the will to form lead, on the one hand, to the restoration of the isomorphism between sensibility and reason, restoring also the lost unity of transcendental apperception, and, on the other, to the synthesis of a transcendental third (in this case, *homo astronomicus*), which guarantees the claim to general validity and promises a transition from the intra-subjectivity of the scientist to the intersubjectivity of a future scientific community.

As is clear even from this quick reconstruction, Martina Mineva's book is not only serious, consistent, and coherent in its development, but also impressive with – to use one of her terms – its thrust. This is a book that redraws the boundaries of dealing with logic.

In the last part of my brief opinion, I will present some notes related to aspects that, I hope, may prove fruitful for the candidate's future work.

There are interpretations and uses of thinkers in the monograph that could arouse some surprise. This is undoubtedly due, on the one hand, to the general framework in which they are considered, the framework of a non-classical theory of the practical logic of innovation, from the point of

view of the endogenous and exogenous practical logic of the dialectical through the methods of non-classical transcendental logic; and, on the other hand, it is due to the strategy of thinking of one thinker against another, indicated at the beginning (p. 28). That is why the problems that I discover in this regard do not particularly concern me. I will only point out a few things. It seems that in the study Cassirer's concept of form is reduced to a logical form (see, for example, p. 146), but this requires additional argumentation. The transition from Peirce through Kant to the Davos debate also seems problematic to me. First of all, Schiller is practically not discussed, and his understanding of play, developed in the letters on the aesthetic education of man, although inspired by the Königsberg philosopher, is not at all that of Kant. The basis for the transition from Peirce to Kant goes through Kaag's interpretation, who, however, refers to the Third Critique, where there is no question of transcendental schematism, apperception, etc. The monograph seems to assume that there is complete continuity between the Critique of Pure Reason and the Critique of Judgment, but this is not at all obvious; often commentators (W. Manninghaus, C.-O. Appel, J.-F. Lyotard, J. Derrida, etc.) are inclined to see a rupture and something essentially different in the Third Critique and its attempt to build a bridge between the other two. Is the creative imagination of the Third Critique, for example, equal to the productive transcendental imagination of the first, or is there something fundamentally different in its operation? Also, when the analogy between non-deductive inferences in theoretical innovative practices and the free play of cognitive faculties in judgments of taste is considered in *Innovations* (pp. 152-154), the difference is justified by examples from the field of art. However, for Kant, judgments of taste about the beautiful and the sublime refer primarily to nature (the naturally beautiful and the naturally sublime, cf. the examples with flowers, oceans, etc.), where there can be no question of the function of the image being only "to make possible, and not to make actual, non-predetermined possibilities" (*Innovations*, p. 153). The concept of free play is introduced in the second moment of the judgment of taste (it states that beautiful is that which is universally liked without a concept), where the central example before the paragraph on free play is with "the rose that I am looking at", i.e. an actual rose. But above all, the reader asks why work on abduction has not at all thematized the reflective faculty of judgment, key to the entire Third Critique, in which precisely the general is not given and judgment must only give, invent the law that it cannot borrow from elsewhere?

In a similar way, one can raise the question of the appropriateness of the use of "analogizing apperception" when it is transferred from the relationship between ego and alter ego to the relationship between ego and cogitatum (pp. 90-91). Analogizing apperception, or appresentation, presupposes that I think the other as myself; even in the reverse-analogizing apperception, which Deyan Deyanov speaks of, there is a need for consciousness. In what sense can we speak of analogizing apperception when working with "scissors, pendulum, planet" (p. 91), if the word "apperception" retains its basic meaning of "consciousness of oneself," which it has since Kant? The use of Husserl's concept of intentional analysis also seems to be problematic: firstly, because the intentional analyses in the book are not done in the first person, they are reconstructions (this difficulty can be partially overcome by thematizing the transcendental history of meaning, which goes through constitutions and re-constitutions); secondly, because while Husserl's classical assumption of the universality of transcendental structures allows for generalization of the results of intentional analysis, in the non-classical situation of singular events of discovery there is a uniqueness that does not allow for generalization.

Such questions are not so important in view of the tasks and goals of the book, but the individual arguments in it would benefit from further discussion.

There are, however, a few points in the unfolding of the argumentation of *Innovations* that I would like to point out. I will begin with a general formulation of what I see as the main unaddressed problem: the study insists throughout on the non-predetermination of discoveries and the mechanism of innovation, but at the same time it deduces a general mechanism tracing the specific steps (abductive inference – abductive quantum – extensions through abductive-inductive and inductive infernces, on the one hand; and anomaly – pre-predicative contradiction – sublation of the

contradiction through a series of affirmations in which a new self-identity and a transcendental third are synthesized, on the other). If this mechanism is repeated every time, the same steps, the same procedures, then in what sense can one speak of non-predetermination of form? Doesn't this result in a classical logic of non-classical innovation? Or is it a question of a different level, the level of a particular meta-logic? What would it be?

I will give three specific examples of the presence of this problem. When talking about anomaly, Martina Mineva interprets anomaly as a “pre-predicative contradiction” and it seems as if the pre-predicative contradiction has different contents, but all of them share the same form. Why is it called “contradiction”? Isn't this already imposing a measure that may be fundamentally foreign to what happens in innovation in science? Why “contradiction” and not aporia, difficulty, difference, paradox, antinomy? It seems that talking about contradiction comes from Hegelian dialectics, which, although taken in a non-classical key, assumes that everything is described through contradictions and sublation (even with a remainder).

The same can be seen with the concept of the will to form. Does the will to form have a form? If the answer is affirmative, we would fall into the classical hypothesis. If not, all the general things said about it and the non-deductive inferences related to its efforts should not be deducible. The will to form is often mentioned in the monograph in combination with effort (effort of the will, see e.g. pp. 150, 164, 170, 175, 176, 181, 190, 193, etc.). Whose effort is it if the will to form leads to a new form of the subject? If the will to form is *forma formans*, if the will itself is a form (and a strong philosophical tradition from Schopenhauer through Nietzsche rejects this), but in forming it changes itself, what makes it recognizable as the same will to form in each unique case of innovation?

The logic of non-deductive inferences is seen as a general endogenous logic of innovation in science, but it seems to only consider cases with a lone discoverer – Pythagoras, Galileo, Kepler, Edison in the conclusion. How should the analysis be developed and supplemented, or modified, if discoveries due to teamwork are taken into account? What type of intentional analysis do they assume? How would the will to form be defined in this case, would there be a common will to form and what does this mean? How would the abductive quantum work? And if the processes in team practice are different, what does this mean for the book's conclusions about non-deductive inferences in innovative scientific practices?

In *Innovations*, whose subtitle speaks of the logic of practice in general, and not of scientific practice, the direct object of analysis is innovations in science, but it is suggested that similar processes (of abductive deduction, of efforts of the will to form, cf. pp. 19, 129, 175, 248) can be observed in other practices as well. In science, however, innovation presupposes not simply the incommensurability of scientific paradigms, but the overcoming (which in the monograph is seen as proceeding from the removal of a pre-predicate contradiction) of the earlier paradigm, that is, the question is not raised about the cases in which several paradigms, or several incommensurate worlds, must be kept active simultaneously. Would the pre-predicate contradictions in this case presuppose sublation? Would the will to form work in the same way, practically repressing or colonizing one of worlds?

To some extent, I find some of the questions I raised, implicitly outlined at the end of *Innovations*, in the chapter on the challenges for future research, and I would be happy if Martina Mineva finds them as an incentive for her further work.

At the end of my statement, I will confirm that the documents and materials provided for the competition meet all the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB), the Regulations for the Implementation of ZRASRB and the relevant Regulations of the Paisii Hilendarski University. The candidate's teaching activities and scientific participation testify to a dedication to academic life, which I do not often see. But her scientific works testify to something much more, they testify to original scientific thinking and to the creation of new paths for the development of philosophical and logical thought.

Based on all that has been said, I can confidently state my positive assessment and categorically recommend to the Scientific Jury to prepare a report for the appointment of Martina Stoilova Mineva-Nikolova to the position of "Associate Professor" at Plovdiv University "Paisiy Hilendarski" in the professional field 2.3. Philosophy (Formal and Practical Logic).

28.02. 2026 г.

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(signature)

Assoc. prof. Darin Tenev, PhD