

## The Originality of Leszek Nowak's Philosophical and Epistemological Thought

Giacomo Borbone\*

Received: 30 November 2022 / Accepted: 15 February 2023

*Abstract:* One of the central aspects of contemporary epistemology lies in the difference between abstraction and idealization. While the former consists of the generalization of empirical facts, with the latter, those factors deemed secondary are neglected in order to operationalize instead those factors deemed essential. In the early years of the twentieth century, authors such as Cassirer and Husserl acutely pointed out the limitations of abstraction, reevaluating instead the idealizing character of scientific concepts. This distinction was also the subject of an important epistemological work published in 1980, namely *The Structure of Idealization* by Polish philosopher of science Leszek Nowak. At this point a question arises. In what does the originality of Leszek Nowak's reflection consist of? It could be said that Nowak's importance here is twofold: terminological and systematic. From the terminological point of view Nowak made a very clear distinction between abstraction and idealization, which instead in authors such as Cassirer and Husserl are much more blurred or veiled. From the systematic point of view Nowak has extensively analyzed the way mature science works. In other words, Nowak highlighted the limits – but also the values – of contemporary epistemology by comparing the latter with the idealizational approach to science.

---

\* University of Catania

 <https://orcid.org/0000-0003-4935-0231>

 Department of Formative Processes, University of Catania, Piazza Bellini 19 I-95131 Catania, Italy.

 [giacomoborbone@yahoo.it](mailto:giacomoborbone@yahoo.it)

---

© The Author. Journal compilation © The Editorial Board, *Organon F*.



This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International Public License (CC BY-NC 4.0).

---

*Keywords:* Cassirer; Husserl; idealization; Leszek Nowak; Neopositivism; Poznań School of Methodology.

It is a real pleasure to discuss on the thought of Leszek Nowak with such illustrious scholars as Theo A. F. Kuipers, Stephen Turner, Igor Hanzel, Rafał Paweł Wierchosławski, Adolfo Garcia de la Sienra, Francesco Coniglione and Krzysztof Brzezczyń. The English translation of my book on Nowak (Borbone 2021) a revised version which first appeared in Italian (Borbone 2016) is a good opportunity to address the figure of Leszek Nowak, Polish thinker and important philosopher of science. My interest in Nowak stemmed from discussions with Professor Francesco Coniglione, who was my supervisor during my PhD. I had just graduated with a thesis on the relationship between Marxism and science in the thought of Antonio Labriola, an Italian Marxist philosopher. One of the aspects I most appreciated in Labriola's thought was not only his non-dogmatic Marxism, but also his openness towards science. I had just started my international PhD in the humanities and Professor Coniglione advised me to study Nowak, if only because the latter had also dealt with the relationship between Marxism and science. In this regard, the possibility of going to Poznań at the Adam Mickiewicz University for 4 months, turned out to be fundamental, during which I was able to study closely with the main students of Nowak, including Andrzej Klawiter – my supervisor in Poznań – Krzysztof Brzezczyń, Jerzy Brzeziński, Krzysztof Łastowski and so on.

The first Nowak's book I started to read was *Property and Power* (Nowak 1983) and I must confess that I was really impressed not only by the originality of the arguments and reasoning, but also by the massive presence of formulas and schemes. After all, it is a common feature of the Poznań School of Methodology to have made use of modern tools of logic. However, the work *Property and Power* was a systematic exposition of Nowak's social theory, the so-called non-Marxian historical materialism. A good summary of this theory is provided by Brzezczyń in the following manner:

Non-Marxian historical materialism was an attempt at resolving the contradictory nature of historical materialism. According to

that theory, there are three independent class divisions in a society, in the realms of economy, culture, and politics. Those social divisions arise as a social minority appropriates: the means of production in the economy (which creates the division into the owners and the direct producers), the means of coercion in politics (leading to the division into the rulers and the citizens), and the means of spiritual production in culture (which results in the division into the priests and the followers). Social divisions can cumulate, so apart from class societies (with three separate classes), there are supraclass societies, in which the same social class controls politics, the economy, and culture. Real socialism turned out to be such a supraclass system, as the apparatus of the communist party controlled political, economic, and cultural life. According to that approach, the socialist system was the most oppressive social system in history because it involved a triple monopoly. The basic interest of the class of triple-lords was to maximize its political range of regulation. Therefore, the control over economy and culture was instrumentally subordinated to the maximization of power. For that reason, phenomena considered to be the 'absurdities' of planned economy were not caused by the 'unreason-ableness' of the rulers, weakness of political culture, political errors, or distortions of the idea of socialism – they were structurally determined by the realization of the political interest of the triple rule. (Brzechczyn 2022, xvi-xvii)

For a better understanding of this work – as well as of the three volumes devoted to unitary metaphysics – the preliminary study of his epistemological works was necessary. For this reason, Coniglione borrowed me Nowak's main epistemological work, namely *The Structure of Idealization* published in 1980. In this work is contained, as you know very well, the idealizational conception of science, which is mainly based on the difference between abstraction and idealization. See, for example, what Nowak writes in his *The Structure of Idealization* about the difference between Aristotle and Galilei (Nowak 1980, 36-37).

But now, allow me here a brief digression, both historical and personal. For about 6 years I have been studying the complete works and posthumous works of the German philosopher Ernst Cassirer. Both in the first two

volumes of his monumental work *Das Erkenntnisproblem in der Philosophie und Wissenschaft der neueren Zeit* as well as in the important epistemological work *Substanzbegriff und Funktionsbegriff*, Cassirer showed that he was fully aware of this difference. Edmund Husserl, in his *Logische Untersuchungen* and in his *Die Krisis der europäischen Wissenschaften und die transzendente Phänomenologie* also pointed out this difference (Borbone 2019). Both Cassirer and Husserl highlighted the limits of the theoretical procedure of abstraction, showing how in reality mature science makes systematic use of ideal entities that are certainly not accessible to direct observation: such as, for example, the ideal gas, a perfectly smooth plane, a perfectly elastic body, a society with only two classes, etc. As you all know, abstraction is the simple generalization of empirical facts, while through idealization one proceeds to a kind of *epoché*, that is, one puts in brackets those aspects of phenomenal reality that are considered secondary to operationalize functionally the factors that are considered essential. Well, this difference was quite clear both to Cassirer and to Husserl, who dedicated many pages to the critique of Aristotelian abstraction and to the development of a new theory of concept-formation (*Begriffsbildung*). The latter is based precisely on those concepts that Cassirer calls idealizations or limit-concepts (*Grenzbegriffe*) and Husserl ideating abstraction (*ideierende Abstraktion*). From a historical point of view, we understand therefore that the distinction made by Nowak is not new in the history of philosophy and epistemology.

At this point a question arises. In what does the originality of Leszek Nowak's reflection consist of? It could be said that Nowak's importance here is twofold: terminological and systematic. From the terminological point of view Nowak made a very clear distinction between abstraction and idealization, which instead in authors such as Cassirer and Husserl are much more blurred or veiled. The merit of Leszek Nowak, in this case, consisted in having clarified, once and for all, this difference. From the systematic point of view – which I consider the most important – Nowak has extensively analyzed the way mature science works. Nowak operates a methodological reconstruction of Marx' economic works, Darwin's biological works, and Galilei's scientific writings. Nowak shows that the advanced empirical sciences work based on the method of idealization, concretization, and

successive approximations. Another rather extensive part of the work *The Structure of Idealization* is devoted instead to the comparison between the idealizational conception of science and contemporary epistemology. Nowak highlights, for example, the limits of the neopositivists, whose epistemological dream was to reduce all the theoretical terms to what is immediately observable. There is also a vehement and strong critique of Karl Popper's interpretation of Marx' thought; in fact, Popper regarded the society with only two classes – which is an ideal concept – as something of imaginary. In other words, Nowak highlighted the limits – but also the values – of contemporary epistemology by comparing the latter with the idealizational approach to science. Obviously, we cannot find something like that in the scientific and systematic works of the already mentioned Ernst Cassirer and Edmund Husserl.

But what are these limits and deficiencies that Nowak identifies within contemporary epistemology? In the case of Rudolf Carnap, his main task is to define all the concepts of science thanks to their reduction to what is immediately observable. But such a reduction is not able, however, to account for the ideal concepts because it is impossible to reduce a concept like that of “ideal gas” to others that are equivalent to it. Between the “ideal” and the constitutive basis there is a gap that can hardly be cancelled out by a chain of reductive definitions. The so-called Standard View, restricted the field of science only to the empirical basis, thus mortifying the indispensable theoretical character of science, since it is precisely within science that we see the need for theoretical terms. The problem of the difference between observational and theoretical terms remained open and unresolved. It was Hempel who tried to deal with this question. According to Hempel, the purpose of scientific systematization is to establish an explanatory order between the “data” of experience so as to allow prediction; but if the question is so posed, then the need for theoretical terms immediately becomes obvious, given that such a task is possible to the extent that recourse is made to laws referring to objects that are not directly observable. Hempel is perfectly aware of this, but he is nevertheless convinced that one could do without theoretical terms in a theory. Therefore, it is not possible to reduce theoretical terms to the mere observative basis, since they derive much of their meaning from the theoretical context in which they are

inserted; and it is precisely this incomplete empirical definability that lies at the basis of their fertility and that allows their extension to new fields of experience. What is evident in this moderate positivism is that there is no place for idealization. Also quite relevant is Nowak's critique of Popper, especially Popper's rejection not only of so-called historicism, but also of the theses developed by Marx in his works on political economy. For example, Popper criticizes with vehemence the theory of the two classes, arguing that it was actually completely imaginary, because in reality there is not a society with only two classes. But Popper, according to Nowak, does not do anything other than completely neglect the presence, within the scientific works of Marx, of idealized statements.

In conclusion, I think that Nowak's merit consists not so much in the distinction between abstraction and idealized constructs – which, as we have seen, had already been made by Cassirer and Husserl – but in having clearly distinguished these two concepts from a strictly terminological point of view and in having compared in a systematic way the idealizational approach to science with contemporary epistemology, thus showing the limits of both neopositivism and Karl Popper's thought.

### Replies to my critics

Professor Turner, in the final part of his paper, “Nowak, Models, and the Lessons of Neo-Kantianism”, hints at an alleged relativity of the method of idealization in relation to concretization procedures. This is because, as he states, “What appears to us as essential in a model, or a neo-Kantian transcendental inquiry, seems to depend on us, on our purposes and tacit preferences as much as on the thing itself” (Turner 2023, 170). But here it is not at all a matter of formulating arbitrary idealizations in the derogatory sense of the term, that is, in terms of radical subjectivism. The ideal, as the old Immanuel Kant teaches us, is a perfection that, as such, does not exist, which is why any approximation we make from a model should be understood as gradually closer to reality, which is always more complicated than the model. In the construction of a model, very rigid criteria are used that have nothing subjective about them, as in the case of the H<sub>2</sub>O water formula, which indicates pure water but nevertheless is never given in concrete

reality. Yet any chemist cannot avoid the use of this ideal formula and therefore may not be accused of relativism. In this sense, the perspective of Neo-Kantism – and of Ernst Cassirer in particular – seems to me very similar to that upheld by Nowak and his School.

As for Professor Theo Kuipers' contribution (Kuipers 2023), I will focus my attention, very briefly, on how he interprets my definition of “conceptual concretization.” In fact, Professor Theo Kuipers is right when he states that in the case of conceptual concretization the initial idealized explication recurs as the extreme special case of concretized explication. This, in fact, is what he elaborates on in his contribution entitled *On two types of idealization and concretization. The case of truth approximation* (Kuipers 2007). From this point of view, it seems to me that the convergence between what I understand as “conceptual concretization” and what Kuipers explicates in his mentioned essay is remarkable.

In his writing, Professor Francesco Coniglione (2023), namely Italy's foremost expert on twentieth-century Polish philosophy and the works of the Poznan School of Methodology, believes that the cause of the failure to recognize the importance of Nowak's works was not, at least at an early stage, solely the problem of the Polish language. Coniglione, rightly, points out that by the 1980s the production of Poles in the English language had already become more conspicuous, and this should have ensured them a certain resonance in the international epistemological scene. Yet even today Nowak's name, although somewhat known and appreciated by leading international epistemologists, is not mentioned as it should be. In this Professor Coniglione is undoubtedly right and has captured with extreme lucidity a problem that still persists in the Anglo-American tradition, namely the ignoring of what is produced outside their circle because of the almost total lack of historical sense.

As for Professor Garcia de la Sienna's contribution, the latter focuses his attention on the part of my book devoted to Marx' economics, especially the notion of concretization. In the concluding part of his paper Garcia de la Sienna states as follows:

Marx's idea of raising from the abstract to the concrete cannot be explained by means of Nowak's idea of concretization, as it is not an intra or inter-theoretical relation. Rather, it consists of

describing a real-concrete economic system out of abstract determinations (*Bestimmungen*) yielding a non-idealized description of the same. The construction of idealized models of the system starts after this description has been given; this description is a way of fixing the reference for further investigation on the system. (Garcia de la Sienra 2023, 162)

However, I hold that abstraction as Marx understands it plays a cognitive, gnoseological function for the purpose of selecting—from the immense grid of real data—the essential, constituent, principal elements of a given phenomenon. Abstraction, of course, is not conceived as an end in itself, since at a later stage a real synthesis of the essential elements abstracted from the phenomena must be made in order to recompose them into unity, that is, the unity of the manifold. In this sense, it seems to me that the transition from the abstract to the concrete falls within the notion of concretization as conceived by Nowak.

Igor Hanzel focuses his analysis on Chapters II and III of my book, the former of which focuses on Marx' economic method and the latter on Nowak's comparison with the nomological-deductive model. I must admit that Igor Hanzel acutely grasps what I have tried to highlight about the explanatory richness of the method of idealization and gradual concretization. And indeed, Hanzel states:

Nowak provides – compared to Hempel – a more fine-grained view of scientific explanation. For Hempel explanation involves two steps: subsumption of the explanandum-event to be explained under the respective explanans-laws and (deductive or inductive) inference of the explanandum-event. In Nowak's approach explanation involved not two, but three steps: subsumption, concretization of the idealized law to the modification conditions of the explanandum-event or explanandum-law, and only then inference of these explananda. (Hanzel 2023, 164)

In his paper, Professor Wierchosławski (2023) raises a more than legitimate question and that is whether Nowak really drew fundamental insights from the Marxian method for the development of the idealizational conception of science or whether he was not instead almost “forced” to mention Marx because of the communist regime present in Poland. The question

raised by Professor Wierchosławski is certainly interesting from the point of view of the history of ideas, but I find Nowak's reconstruction of the Marxian method as a paradigmatic case – along with Galilei and Darwin – of the idealizational approach to science solely for reasons of political expediency highly unlikely. Indeed, during the 1970s there were heated debates about the nature of Marxism not only in Poland, but throughout Europe. One need only think of France, Germany, and Italy, where the famous epistemological rupture in Marx or so-called Western Marxism was being discussed. In Italy, for example, the literature on Marx and Marxist thought in the 1970s is enormous and this despite the fact that there was no communist regime at all.

Professor Krzysztof Brzechczyn's (2023) contribution entitled *Leszek Nowak, Idealization and Interpretation* shows a brief but very detailed analysis of the contents of my volume. An interesting aspect of Brzechczyn's contribution concerns the question of Leszek Nowak's use of the unpublished works of Marx and Engels. As Nowak pupils and experts well know, the latter exhorted scholars to examine only an author's published works and not manuscripts. After all, if an author had decided not to publish a work, he must have had his own good reasons. Yet, as I have shown in my volume, Nowak, in his reconstruction of Marxian method, took into account works such as Marx's *Theories of Surplus Value* or Engels' *Dialectic of Nature*, both of which were published posthumously. But Brzechczyn provides an interesting explanation of this aspect:

Nowak applied two criteria at once: the criterion of having been published and criterion of the time of creation. The second criterion was crucial for Nowak – whether the work was created in its author's youth or mature age. Of the works created in the author's youth, those which fulfill the criterion of having been published can be the subject matter of reconstruction. However, the criterion of having been published does not apply to the works written in the mature age. (Brzechczyn 2023, 150).

I must confess that this dual criterion identified by Brzechczyn proves quite convincing, as it allows us to discern why Nowak – despite his mistrust of manuscripts – in his reconstruction of Marxian method used posthumous works by both Marx and Engels.

## Acknowledgements

Special thanks are due not only to the participants mentioned here, namely Stephen Turner, Francesco Coniglione, Igor Hanzel, Theo Kuipers, Adolfo García de la Sierra and Rafał Paweł Wierchosławski, but also to Professor Krzysztof Brzechczyn who in cooperation with the Faculty of Philosophy of Adam Mickiewicz University in Poznań and the Polish Philosophical Association, Poznań Division organized this online seminar on December 13, 2021.

## References

- Borbone, Giacomo. 2016. *Questioni di metodo. Leszek Nowak e la scienza come idealizzazione*. Acireale-Rome: Bonanno.
- Borbone, Giacomo. 2019. *Pensieri al limite. Sostanza, funzione e idealizzazione in Cassirer e Husserl*. Naples: Diogene Edizioni.
- Borbone, Giacomo. 2021. *The Relevance of Models. Idealization and Concretization in Leszek Nowak*. München: Grin Verlag.
- Brzechczyn, Krzysztof. 2022. Preface, In *New Developments in the Theory of the Historical Process. Polish Contributions to Non-Marxian Historical Materialism. Poznań Studies in the Philosophy of the Sciences and the Humanities*, vol. 119 edited by Krzysztof Brzechczyn, vii-xxviii. Leiden-Boston: Brill.
- Brzechczyn, Krzysztof. 2023. "Leszek Nowak, idealization and interpretation." *Organon F*, 30(2): 148-152.
- Coniglione, Francesco. 2023. "Leszek Nowak, a neglected thinker." *Organon F*, 30(2): 130-136.
- García de la Sierra, Adolfo. 2023. "Comments on Borbone's The Relevance of Models." *Organon F*, 30(2): 160-162.
- Hanzel, Igor. 2023. "Comments on Borbone's The Relevance of Models". *Organon F*, 30(2): 163-164.
- Kuipers, Theo A.F. 2007. On Two Types of Idealization and Concretization. The Case of Truth Approximation. In *The Courage of Doing Philosophy: Essays Dedicated to Leszek Nowak*, edited by Jerzy Brzeziński, Andrzej Klawiter, Theo A.F. Kuipers, Krzysztof Łastowski, Katarzyna Paprzycka and Piotr Przybysz, 75-101. Amsterdam – New York: Rodopi.
- Kuipers, Theo A.F. 2023. "Conceptual Concretization". *Organon F*, 30(2): 153-159.
- Nowak, Leszek. 1980. *The Structure of Idealization. Towards a Systematic Interpretation of the Marxian Idea of Science*. Dordrecht – Boston – London: Reidel,
- Nowak, Leszek. 1983. *Property and Power: Towards a Non-Marxian Historical Materialism*. Dordrecht: Reidel.

Turner, Stephen. 2023. "Nowak, Models, and the Lessons of Neo-Kantianism." *Organon F*, 30(2): 165-170.

Wierchosławski, Rafał Paweł. 2023. "On Historical Context of Poznań School of Methodology." *Organon F*, 30(2): 137-147.