

Application for 2018 Central-Kolleg at Humboldt-University Berlin

Armin Schneider (HU-Berlin), Martin Vrba (Charles-University Prague), Wolfgang Herold (University of Vienna)

To Begin with... Dialectics, Materialism and Mathematical Formalism in Hegel and Badiou. Or: Thinking between Philosophy and Science.

Description of the research project

The philosophies of G.W.F. Hegel and Alain Badiou, despite the many differences which can be observed between them in particular, share a common gesture on a very general level: both of them present themselves as philosophical *systems*. While Hegel's system has been widely discussed since its first presentation 200 years ago (the first edition of the *Encyclopedia of the Philosophical Sciences* was published by Hegel in 1817), the systematic project of Badiou is just about to be completed with *Being and Event III. The Immanence of Truths*, the publication of which is announced for 2018. The research project we propose seeks to confront those two philosophical endeavours; it does so by investigating the particular relation between *science and philosophy* and certain moments of *beginning* in the thought of Badiou and Hegel.

Approaching the relation between Hegel and Badiou one can first of all follow the series of comments by Badiou on Hegel. Since his—never realized—plan to write a book on 'Hegel and mathematics' together with Jean Hyppolite in the 1960es, Badiou has, throughout his minor early and major later books, been continuously addressing questions mostly concerning Hegel's *Science of Logic*. Together with Badiou's own philosophical positions, his ongoing Hegel comments form a general backdrop for the search of a new reading of Hegel, which is relevant to contemporary philosophical debates. Such a 'macro perspective' is partly taken by the recent project of Rebecca Comay and Frank Ruda; their book *The Dash – The Other Side of Absolute Knowing* (forthcoming in Mai 2018) is announced to present an interpretation of the end of Hegel's *Phenomenology of Spirit* and the beginning his *Logic*, which takes recourse to general motives and results of Badiou's project. Our research project wants to further zoom in a particular direction which is already suggested by Ruda and Comay: We want to take a very detailed 'micro perspective' 1st on the beginning of Hegel's *Science of Logic* and 2nd on the comment Badiou wrote on this short passage in his book *The Rational Kernel of the Hegelian Dialectic*.

By taking this small text sample (altogether just about 50 pages) as our center point of departure, we not only focus a most crucial starting point within the architecture of Hegel's system (Hegel himself headlines this point with the infamous question 'With what must the beginning of science be made?'). But we also move to the 'beginning period' of Badiou's own philosophical project: *The Rational Kernel...* was published in 1977 when Badiou had not yet outlined his systematic foundation (*Being and Event I* was published only in 1988) and Badiou was still moving back and forth between philosophy and science (that is, for Badiou, mathematics) to find the starting point of his systematic thought. One could say: In focussing the beginning of Hegel's *Logic* and Badiou's comment on it, we intend to *begin* our research project with... the *beginnings*.

To elaborate a little bit more on this point of departure one can determine a crucial difference between Hegel and Badiou in respect to the beginning of *thinking between science and philosophy*. In Hegel's case the beginning of *Logic* inaugurates the trajectory which comes to an end in its last chapter by determining the absolute idea as dialectical method; this result of the *Logic* then provides the methodological means to work through the two other parts of the system (nature and spirit). Those three parts together form the different disciplines of the philosophical sciences, as Hegel puts it, for example in the full title of the *Encyclopedia*.... To speak of 'philosophical sciences' seems to suggest that philosophy and science are, for Hegel, in fact synonymous. Accordingly the beginning of *Logic* asks for a 'beginning of science', meaning philosophy. And while identifying science and

philosophy in this way Hegel at the same time asks philosophy/science to find a beginning without any presuppositions, an 'absolute beginning' as he puts it. That is, Hegel seems to force philosophy/science to perform an *unconditioned* beginning. – Badiou, in sharp contrast, insists on the *difference* between science and philosophy, while the relation of those two fields is characterized as a *condition*: Philosophy is conditioned by science. This difference indicates not a mere schism but a certain affirmation between the two fields. That is, while distinctively separating science and philosophy but at the same time affirming their relation, Badiou develops large parts of the architecture of his system by philosophically working through the novelties of sciences, in particular of mathematics (especially set theory and category theory). This means that for Badiou, other than for Hegel, there is no unconditioned beginning of philosophy, philosophy is always conditioned by other fields, as (among others) science.

By affirming the thought of *mathematics* (against Hegel's skeptical suspect towards it) Badiou does not invent a completely new philosophical position, he rather situates himself in a tradition with prominent representatives such as Plato and Descartes. But Badiou also affirms the legacy of *dialectics*, therefore inscribing himself in the tradition reaching from Plato to Hegel and Marx. This general two sided position of Badiou also orients his particular reading of the beginning of Hegel's *Logic*. Badiou obligates himself to the task of dialectical thinking, but he at the same time makes two objections to the opening of Hegel's dialectical *Logic*: 1st he acknowledges in it a rational kernel, but claims that this “rational kernel ... concerns analytic logic and numerical thought, and not the dialectic”¹; 2nd he accuses Hegel's inaugurating passage from “being” to “nothing”² of an “idealism”³, seeming to articulate this accusation from a *materialist* position. That is, Badiou generally affirms Hegel's *dialectics* while at the same time criticizing it from a position which—allegedly in contrast to Hegel—affirms *mathematical formalism* on the one hand and a certain kind of *materialism* on the other.

To develop a precise understanding of those two objections, concerning *materialism* and *mathematical formalism*, in relation to their underlying affirmation of *dialectics*—this is the main goal of our research project. To achieve this task we will 1st do a detailed reading of the first subchapter of Hegel's *Logic* on 'being', 'nothing' and 'becoming' and the preceding section entitled 'With what must the beginning of science be made?'; this reading can be supplemented with the prefaces and the introduction of the two editions of the *Logic*, as well as with the introductory chapter to the *Logic* in the *Encyclopedia* (on the three positions of thought in relation to reality); for a specialized interest in Hegel it would also be possible to go even further and discuss the final chapter of the *Logic* on “The absolute idea”, to understand more precisely what is meant to be 'dialectical method'. We will 2nd read the comment on the opening of Hegel's *Logic* by Badiou in his book *The Rational Kernel of the Hegelian Dialectic*; to understand the central claims of this comment we shall supplement it with readings clarifying a) the notion of 'materialism' (and 'idealism' accordingly) and b) the use of the terms from mathematical set theory (such as 'set', 'void', 'set of voids', 'forcing', etc.). To investigate set theory we will consult the respective common introductory text books and could also go to parts of *Being and Event I*, to understand the use of set theory in Badiou's elaborated system; to make sense of the term 'materialism' we can follow Badiou's explanation of it by the terms 'atom' and 'void' and take a look at the doctoral dissertation of Marx on ancient greek atomism (*The difference between Democritean and Epicurean natural philosophy*).

Those readings, centered around the beginning of Hegel's *Logic* and Badiou's comment, will be guided by several groups of questions. Concerning Hegel we want to ask: How is an absolute

1

Badiou, *The Rational Kernel of the Hegelian Dialectic*, 52.

2 Hegel, *Science of Logic*, 59.

3 Badiou, *The Rational Kernel of the Hegelian Dialectic*, 53.

(unconditioned) beginning of science/philosophy possible, if the system emerging out of it at the same time claims to grasp the concrete reality of nature and spirit? In other words, is Hegel's system indeed 'unconditioned' in the strict sense or is not rather depending on a reality (of nature and history/spirit) which does not give an a priori certainty to present itself as adequate to logical forms? But then, in turn, if one argues for such an openness of Hegel's system, how can one at the same time affirm the need to find an absolute beginning of science in pure thought, which is the necessary starting point for the beginning of *Logic* and therefore also for the system in general? Concerning Badiou we want to ask: How does his philosophical choice of a 'materialist' position find its counterpart in the condition of science as mathematics? On what ground is the interaction between those two fields possible, how resonate the basic terms of Badiou's particular philosophical materialism ('atom', 'void') with the vocabulary and syntax of set theory ('multiple', 'empty set', etc.)? And, following from that, how does the position Badiou takes within the relation between philosophy and mathematics orient his critique of the beginning of Hegel's *Logic*? Finally we want to ask questions which go beyond the purpose of investigating the relationship between Badiou and Hegel, trying to determine the situation within which contemporary thinking is located: Is the polemic distinction between idealism and materialism still able to address substantial questions today? Was Badiou's philosophical choice of a materialist position made in a field, which is still the same today⁴? Are there alternatives to Badiou's way of relating to science today⁵? After all we want to ask: How is an affirmation of dialectics possible that takes into account the novelties of science and mathematics especially? How to think between science and philosophy today?

Bibliography

- Arndt, Andreas, and Christian Iber. *Hegels Seinslogik: Interpretationen und Perspektiven*. (Berlin: De Gruyter, 2000)
- Badiou, Alain, *Being and Event* (New York: Bloomsbury Academic, 2013)
- Badiou, Alain, *The Concept of Model. An introduction to the materialist epistemology of mathematics* (re.press, 2007)
- Badiou, Alain, Joel Bellassen, and Louis Mossot, *The Rational Kernel of the Hegelian Dialectic* (re.press, 2011)
- Comay, Rebecca, and Frank Ruda, *The Dash - The Other Side of Absolute Knowing* (Cambridge, MA: The Mit Press, 2018)
- Dolar, Mladen, 'Being and MacGuffin', ed. by Frank Ruda and Agon Hamza, *Crisis & Critique*, 4 (2017), 83–101
- Dolar, Mladen, 'The Atom and the Void. From Democritus to Lacan', *Filozofski vestnik, Volume XXXIV*, Number 2, 2013, 11–26
- Hegel, Georg Wilhelm Fredrich, *Georg Wilhelm Friedrich Hegel: Encyclopedia of the Philosophical Sciences in Basic Outline* (Cambridge: Cambridge University Press, 2015)
- , *Georg Wilhelm Friedrich Hegel: The Science of Logic*, trans. by George Di Giovanni, (Cambridge: Cambridge University Press, 2015)
- Houlgate, Stephen, *The Opening of Hegel's Logic: From Being to Infinity*, Purdue University Press Series in the History of Philosophy, 1. ed (West Lafayette, Ind: Purdue Univ. Press, 2006)
- Marx, Karl, *Werke. Bd. 40: Schriften bis 1844, 3., überarb. und Aufl* (Berlin: Dietz, 2012)
- Takeuti, Gaisi, and Wilson M. Zaring, *Introduction to axiomatic set theory*, Graduate texts in mathematics, 1, 2. ed (New York Heidelberg Berlin: Springer, 1981)
- Vernon, Jim, and Antonio Calcagno, *Badiou and Hegel: Infinity, Dialectics, Subjectivity* (Lexington Books, 2015)

4 On several occasions Badiou has depicted his original philosophical choice of 'materialism', that is the affirmation of being as pure multiplicity without one, as a negation of other possible options. Those other options treat 'being' either 1) as an empty word without any positive content (Wittgenstein, Comte), or 2) as itself positive although refusing all positive knowledge of it (Kant, Heidegger), or 3) as positive allowing positive knowledge of it in the infinite form of the one (Parmenides, religion, classical metaphysics), or 4) as a composition of relations and relations of relations (Heraclitus, Bergson, Deleuze).

5 In a recent interview the philosopher Catherine Malabou made the proposition to distinguish four different ways of treating the relation of philosophy and science today: 1) by following Badiou's affirmation of mathematical formalism (in this line she also situates Quentin Meillassoux), 2) by relating to physics (as for example Karen Barad), 3) by relating to biology and neurosciences (as Malabou herself), 4) by elaborating the question concerning technology (as for example Bernard Stiegler or Friedrich Kittler).

Work Plan and Schedule

To achieve our research goal we want to work in **three main research steps** and follow **three main directions in terms of content**, each of which requires different specializations. The three main directions in terms of content are the philosophies of 1) Hegel and 2) Badiou as well as 3) mathematical set theory. We want to dedicate the **first research step** (the starting session in Berlin) to a close reading of our main text corpus (the beginning of Hegel's *Logic* and Badiou's comment) to discuss and develop the questions mentioned above. In the starting session we also want to enable the participants of the project to decide on their own in which of the three directions they want to specialize and determine according reading materials and precise questions to follow. To work through those particular materials and questions in self organized smaller groups will be the **second step** of the project. During that period there might also be exchange between the groups, because we want to document the ongoing discussion on a wiki and especially because we want to encourage the participants to specialize in more than just one of the three directions. In the **third step** (final session) the results of the work from the three main directions will be presented to the whole group and against the backdrop of those results we will do together a repeated second close reading of our initial textual corpus.