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Review

Clayton Bohnet. *Logic and the Limits of Philosophy in Kant and Hegel*. London: Palgrave Macmillan, 2015. ISBN 978-1-137-52174-3 (hbk). Pp. 270. $95.00.

The title of this monograph alludes to Bernard Williams's well-known *Ethics and the Limits of Philosophy* (1985). In this book, Williams famously held that modern moral philosophy is unable to provide us with a faithful and accurate representation of its subject matter, i.e., of ethical life. Unlike Williams, however, Clayton Bohnet does not wish to argue that modern philosophy misconstrues and distorts logic. His focus is rather on how Kant's and Hegel's respective treatments of logic represent different approaches to a philosophical reflection about the limits of philosophy.

The primary goal of this book is not so much to determine the role of Kant and Hegel within the history of philosophical logic—notwithstanding the very brief sketch of this topic in the introduction—but rather to compare Kant's and Hegel's understandings of logic. Bohnet does this by means of a close reading of relevant passages of Kant's *Critique of Pure Reason* and his *Logic*, on the one hand, and Hegel's *Science of Logic*, *Encyclopedia*, and his *Lectures on Logic*, on the other. Comparisons with Aristotelian and Wolffian logic are not part of this agenda, and the same is true of Fregean logic, in spite of the author's praise of Frege, whose achievement he even compares to that of Einstein in physics (256).

The investigation focuses on the category of quantity in Kant and on how this concept is treated by Hegel. This is a happy choice, given both the significance of quantification in post-Fregean logic in general and the emphasis on purely extensional, i.e., quantificational, analysis in Quinean philosophy of language in particular. Besides, since quantificational reasoning has been a central topic ever since Aristotle, this definitely is a point of continuity between traditional and modern logic. It goes without saying that a full-blown history of modern logic would also have to instruct us about how the set-theoretical understanding of manifolds that emerged in the late nineteenth-century has altered the common understanding of the relation between logic, mathematics and metaphysics after Kant and Hegel. This, however, is beyond the scope of Bohnet's study.

Bohnet claims that, for Kant, the concept of quantity in general logic does not concern quantities in the usual sense, i.e., numbers, sets and the like, but rather the relation between different concepts: 'Logic does not "do the math"' (92).

So according to Bohnet's reading of Kant, a judgment of the form 'Every *A* is *B*' should not be taken to mean that there is a determinate number of *A*s and that all of them are *B*s but rather that *A* is a species concept whereas *B* is a genus concept such that *A* belongs to the sphere of *B*. On this reading, quantification is purely intensional. When general logic 'treats of extension, … it is an extension without an object' (59). This seems a bit exaggerated, since the distinction between the intension and the extension of a concept is a basic element of traditional logic, and it is in fact Kant himself who stresses that the extension of a concept varies with the greater or lesser number of things that fall under it.[1] Yet that does not speak against Bohnet's main point, which is that according to Kant, general logic cannot account for determinate quantities, since counting and measuring take place in intuition. This means, on Kant's mature view, that these acts fall into the domain of aesthetics rather than logic. According to Bohnet, this is one of the observations that eventually motivated Kant's distinction between general and transcendental logic. Whereas general logic abstracts from the origins and subjective conditions of knowledge, transcendental logic is sensitive to intuitive content. So unlike general logic, it provides us with the means to compute intuited quantities in spite of the fact that it cannot generate quantitative contents itself. The details are spelled out in the schematism chapter and in the 'axioms of intuition' in the *Critique of Pure Reason* (cf. 110–20).

The relation between general and transcendental logic in Kant takes centre stage in Bohnet's investigation. First, the author meticulously reconstructs the distinctions between general and special logic, on the one hand, and between pure and applied logic, on the other, in order to point out that the difference between general and transcendental logic cannot be reduced to either of these differences. He then examines the complex relation between general and transcendental logic as such. On the one hand, transcendental logic seems to depend on general logic since the table of the categories (transcendental logic) is derived from the table of judgments (general logic). On the other hand, transcendental logic 'encroaches into' (142) or 'intrudes upon' (92) general logic, most notably in those passages of general logic where the singular judgment is added to the judgments of quantity with an argument that refers to transcendental logic. Thus, the author neither sides with those Kant scholars who take transcendental logic to be general logic as interpreted from a transcendental perspective, nor does he agree with those who consider transcendental logic to be more fundamental than general logic. He even goes so far as to state that 'logic remains an ungrounded assumption for Kant's philosophy' (256). In his view, general and transcendental logic ought to be regarded as 'heterogeneous' but 'isomorphic' varieties of logic (125). In other words, the duplication of logic into general and transcendental logic continues to be a core problem of Kant's transcendental philosophy.

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Bohnet argues that the only way to overcome the dualism of general and transcendental logic within Kantian thinking would be to allow for intellectual intuition, because intellectual intuition would be a form of cognition that is both thought and intuition, which means that it would overcome the dichotomies of concept and intuition, form and content, spontaneity and receptivity, etc. Hence the idea of a merely formal general logic would simply become pointless (129). Kant himself rejects this option with respect to the human intellect, as we all know. This marks a first and obvious contrast with Hegel, who advocates, at least in his earlier writings, intellectual intuition as a means to overcome dualistic oppositions in a truly speculative manner. As Bohnet observes, however, intellectual intuition gives way to dialectical mediation in Hegel's mature writings; yet the necessity to overcome Kantian dualisms remains a vital motive in Hegel's thought. In this vein, Hegel still argues in his *Science of Logic* that the fixed opposition between form and content is constitutive of Kant's philosophy of logic, that it is operative in both general and transcendental logic, and that Kant is ultimately committed to the view that both are merely formal and lack content. Against this, Hegel asserts that logic has a content of its own, i.e., thinking. This *prima facie* simple claim allows him to argue that logic is the most universal of all the philosophical sciences since the range of possible contents of thought cannot be delimited in advance. At the same time, it gives him a licence to drop the distinction between general and transcendental logic. So when Hegel eventually identifies logic with metaphysics (cf. 200, even though Bohnet does not say much about what this identification entails), this seems to be a Kantian move in one sense, and an entirely anti-Kantian move in another. It is Kantian insofar as Kant himself seeks to establish his project of critical metaphysics on the basis of a critical reflection on the limits of logic. It is anti-Kantian insofar as Hegel does not accept the very transcendental limitations that Kant wants to impose on pure thinking.

In the final chapter of the book, Bohnet returns to the concept of quantity and examines how quantitative judgments are treated in the third part of the *Science of Logic*, i.e., in the passages on judgments of reflection that form an important part of the Doctrine of the Concept. Surprisingly enough, though, he does not connect this topic with Hegel's treatment of the category of quantity in the first part, the Doctrine of Being. This means that Hegel's extensive discussion of quantity, quantum, measure, finitude and infinity are not discussed here, not to mention his in-depth criticism of the infinitesimal calculus in Leibniz and Newton. True enough, the most obvious point of comparison between Kant's and Hegel's treatment of quantity can be found in their respective analyses of quantificational judgments and inferences. Yet Hegel himself apparently thinks that the different layers and forms of quantificational thought cannot be disentangled unless they are backed up by a more fine-grained analysis of quantity as a category. This is a path that Bohnet does not trace.

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This book is a comparative study of Kant's and Hegel's philosophical reflections about the limits of logic and of philosophy in general. It touches upon many topics in this field, some of which cannot be commented on here, such as the notion of the unconditional (Kant) or the absolute (Hegel), respectively. The logic of quantification is used as a key example of how Kant and Hegel differ with respect to the philosophy of logic. For Kant, the respective treatments of quantity in general and transcendental logic necessarily differ in kind. For Hegel, however, who does not accept the dichotomy between the general and the transcendental, quantificational thought rather operates on different layers of reflection. Seen from a Hegelian perspective, this is an important example of how logic generates its own content and its own necessary truths. How this might eventually have had an impact on twentieth-century logicism remains to be explored in the future.

Henning Tegtmeyer
Katholieke Universiteit Leuven, Belgium
henning.tegtmeyer@kuleuven.be

Notes

[1] Cf. §8 of the *Jäsche Logic*. On the origins of representing conceptual relations in Euler diagrams (better known as Venn diagrams), see Stekeler-Weithofer (1995: 97–104). Stekeler-Weithofer traces back the underlying idea to Plato's dialogue *Parmenides*. He also shows that the diagrams can be interpreted both intensionally and extensionally. In the first reading, a Euler diagram is taken to represent entailment relations between concepts. In the second reading, by contrast, it is taken to represent inclusion relations between classes or sets.

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