

Huaping Lu-Adler. *Kant and the Science of Logic: A Historical and Philosophical Reconstruction.* Oxford University Press 2018. 272 pp. \$74.00 USD (Hardcover ISBN 9780190907136).

Undergraduates are sometimes surprised to learn that ‘classical’ logic was invented only around the turn of the twentieth century. Yet logic has a long and labyrinthine history, with one significant chapter culminating in Kant’s various (and varied) writings on it.

Huaping Lu-Adler’s focus is expressed in the book’s title: *Kant and the Science of Logic*. Or at least its focus is mostly the science of logic, since Lu-Adler contrasts logic as a science, in Kant’s sense of a system of a priori rules; as an organon, or instrument; as a canon, or standard of assessment; and as some combination. Her methodology is expressed in its subtitle: *A Historical and Philosophical Reconstruction*. Thus Lu-Adler joins a growing number of Kant scholars employing what the subtitle of Henry Allison’s *Kant’s Transcendental Deduction: An Analytical–Historical Commentary* (Oxford 2015) expresses: a mutually informed mix of philosophy and history. By guiding her readers through the long and labyrinthine ‘history of the philosophy of logic told from a Kantian perspective’ (7), Lu-Adler is better able to explain Kant’s. The author then closes by considering why for Kant pure general logic requires a ‘critique’ and how this connects to Kant’s quip in the *Critique of Pure Reason* that with Aristotle logic ‘seems to all appearances to be finished and complete’ (viii).

Kant and the Science of Logic begins with a short Preface, or Note to the Reader, describing the book’s contributions to the field; a less short General Introduction, discussing how the history of logic has been studied and the book’s plan; and—opposite them—a short Conclusion, summarizing its results. Between are five substantive chapters.

Chapter 1, ‘Kant and a Philosophical History of Logic,’ catalogs Kant’s writings on logic as including his *Logic*, compiled by G. B. Jäsche; handwritten notes, or *Reflexionen*; transcribed logic lectures, or *Vorlesungen*; and publications, pride of place belonging to the *Critique of Pure Reason*. It explains the challenges of bringing these into a coherent account. It discusses Kant’s approach to philosophy. And it identifies three divisions that Kant drew within logic: general (rules of all thinking) vs. particular (rules of thinking about particular kinds of objects); pure (general logic independent of thought’s empirical conditions) vs. applied (general logic dependent on those conditions); and general (as before) vs. transcendental (rules of thinking insofar as cognition can relate to objects *a priori*).

In ‘The Nature and Place of Logic,’ the author examines the history of logic via the views of Aristotle, the Stoics, philosophers from late antiquity (pausing on Boethius), the medievals (from the Arabic world, including Avicenna, Averroës, and al-Farabi, and the Latin, including Peter Abelard, Thomas Aquinas, William of Ockham, and many lesser-knowns), and concluding with Peter Ramus and Jacopo Zabarella in the 16th century. The chapter determines whether each philosopher thinks that logic is a science, instrument, or canon; if a science, how it differs from other sciences; if an instrument, what justifies its use; and if both, how it can be so used. This anticipates those of Kant’s in chapter 5.

Chapter 3, ‘The Making of a Scientific Logic from Bacon to Wolff,’ turns to four of Kant’s more immediate predecessors, the titular two plus Locke and Leibniz. It describes Bacon as initiating a natural-historical approach leading to Locke’s examining the ‘human understanding.’ It describes Leibniz’s and Wolff’s mixed approaches, retaining a psychological function for logic yet insisting on a priori elements, treating logic as a demonstrative science like Euclidean geometry.

In chapter 4, ‘Kant on the Way to His Own Philosophy of Logic,’ the author shows how these early modern conceptions—and those of Kant’s teachers and contemporaries—lay the groundwork for Kant’s own. It compares the views of G. F. Meier, from whose *Vernunftlehre* (1752) Kant lectured, with Kant’s emerging view. And it explains one aspect of that emergence, Kant’s conception of ‘transcendental logic.’ Ultimately, transcendental logic would differ from Baconian and Lockean logic by being a priori, and from Leibnizian and Wolffian logic by being concerned with rules of thinking not generally but specifically regarding objects of possible experience. The chapter then considers how this conception of transcendental logic arose in Kant’s science of ontology.

Finally, Chapter 5, ‘Logic and the Demands of Kantian “Science,”’ explains how Kant’s now-developed view of pure and applied logic, as kinds of general logic distinct from transcendental logic, allows him to treat pure general logic as a science of rules of thinking generally—thereby determining answers to those questions posed of his predecessors in chapter 2. The chapter then takes up the challenge posed by Salomon Maimon, in a 1793 letter and two 1794 books, that pure general logic qua science requires a critique. ‘Having no explicit answer from Kant himself,’ Lu-Adler claims, ‘we can still find materials to build a considered one on his behalf’ (162). Lu-Adler explains that Kant would need to uncover a priori conditions of the possibility of thinking similar to what he claimed to have done for the categories as a priori conditions of possible experience. This returns Lu-Adler to Kant’s quip that logic has been apparently ‘finished and complete’ since Aristotle. Interpreting this in the sense, not of needing no further exploration, but of recognizing it as a system meant to encapsulate rules of thinking, Lu-Adler closes with a ‘conjectural coda’ that pure general logic is reason’s self-cognition.

Lu-Adler’s interpretation of Kant seems correct or at least reasonable to me, and when on shaky ground, as at the end of chapter 5, she says so. I do not know how correct the author’s interpretation of Kant’s predecessors is, though it seems reasonable too. Further, her argumentative structure and the prose expressing it are always clear, and her distinctions among conceptions of logic in Kant’s predecessors, Kant’s pre-Critical works, and the *Critique of Pure Reason* are always illuminating. Moreover, her historical thoroughness is breathtaking in something like the way that running a marathon is: exhausting in the moment but rewarding from the finish line. The greatest strength of *Kant and the Science of Logic*, however, is in filling a gap in the literature by providing a methodologically consistent, philosophically informed account of Kant’s place in the history of the philosophy of logic.

At the same time, the book may leave some readers wanting more. Some of this is due to Lu-Adler’s methodology. Rather than criticism, I offer what follows as a *caveat lector*. The history of philosophy is practiced along different axes. One axis measures the relative attention paid to biography. Lu-Adler veers clear of biography for philosophers other than Kant, whose intellectual biography she does consider (albeit observing that ‘[f]or our purposes, there is no need to investigate what transpired between Kant’s announcement of the work on transcendental philosophy in 1772–73 and its completion in 1781’) (131). Another axis measures the relative emphasis of interpretation vs. evaluation of ideas. Lu-Adler veers entirely toward interpretation generally, making the book feel more exclusively ‘historical’ than similar works (e.g., not just of Allison’s mentioned above, but also his classic *Transcendental Idealism: An Interpretation and Defense* (Yale 1983, revised 2004), and more recently Lucy Allais’s *Manifest Reality: Kant’s Idealism and His Realism* and R. Lanier Anderson’s *The Poverty of Conceptual Truth: Kant’s Analytic/Synthetic Distinction and the Limits of Metaphysics* (both Oxford University Press 2015)). A third axis is the degree to which evaluation is anachronistic or period specific. Already veering toward interpretation, this does not arise for Lu-Adler until the end of chapter 5, where she veers entirely toward the period specific.

Even recognizing this methodology, I do have one criticism. The *Critique of Pure Reason* is not Kant's last word on logic. Even if it reaches its apotheosis there, Lu-Adler could have said more (other than brief mentions, e.g., of the *Critique of the Power of Judgment* (192) about whether Kant's conception of logic continues to develop. The categorical imperative depends on logical contradictions. Do the *Groundwork of the Metaphysics of Morals* and *Critique of Practical Reason* partly return Kant's 'science of logic' to ethics, as Bacon and Locke might have wished? The logical functions of judgment are established in pure general logic and are connected to the categories, which Kant correlates with Newtonian laws of motion. Does Kant say anything relevant to his philosophy of logic in the *Metaphysical Foundations of Natural Science*? These are exceedingly broad questions, and it is unreasonable to expect Lu-Adler to have answered them in detail. Still, for all the attention given Kant's pre-Critical writing and the first *Critique*, a few more words about whether Kant's philosophy of logic developed afterward would have been welcome.

Regardless, this is an indispensable account of Kant's place in the history of the philosophy of logic. It belongs on the shelf of anyone interested in Kant, the history of the philosophy of logic, or both.

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