

On Heidegger on Logic

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Abstract. This paper interprets Heidegger's frequently misunderstood criticisms of logic by presenting them in their historical context. To this end, it surveys the state of logic in the late 19th century and presents the main systematic conception of neo-Kantian logical idealism, noting Heidegger's own early involvement in these schools of thought. The paper goes on to present arguments from Heidegger's earliest lectures in which he develops both the phenomenology of everydayness and his criticisms of logic in an attempt to undermine the neo-Kantian conception. These two approaches turn out to be inseparable in Heidegger's thought. Heidegger's criticism of logic amounts to a rejection of the claim that the possibility of experiencing objects is entirely grounded in logical constitution by the spontaneous understanding. There are other, more fundamental modes of disclosing objects. Heidegger is defended against the charge of irrationalism. The paper ends by interpreting the most important logic-related claims of *What is Metaphysics?* and outlining a Heideggerian response to Carnap's famous criticisms.

1. An uneasy view

In the middle decades of the twentieth century, Heidegger was perhaps best known among anglophone philosophers for a series of seemingly incomprehensible statements about logic. He claims that logic is worse than useless in the study of philosophy. Such pronouncements made Heidegger into a highly effective foil for Carnap and Ayer's advocacy of logical empiricism and his thought has been a bogeyman for analytic philosophers ever since.

Heidegger's claims are striking: "If the power of the understanding in the field of questions concerning the nothing and being is thus broken, then with this the fate of the dominion of 'logic' within philosophy is also decided. The idea of 'logic' itself dissolves in a vortex of more originary questioning" (1929/1992, p. 37). Where Heidegger does not invent words, he does not mince them either. There is no way to misread this thundering statement from his flashy inaugural lecture and no way for interpreters, sympathetic or not, to skirt the issue. Heidegger announces a banishment of logic from philosophy. Logic, he writes in *Sein und Zeit*, "has its foundation in a rough ontology of the occurring. It cannot be made more flexible in principle, no matter how many im-

provements and expansions might be made. These reforms of logic [. . .] only increase the ontological confusion” (1927/1993, p. 129). However, it is equally hard to simply take Heidegger at his word. His banishment of logic is buttressed by more inventive language. “The Not does not come to be through negation; instead negation grounds on the Not, which springs from the nothing-ing of the Nothing” (1929/1992, p. 36). Let us echo Heidegger and say that this prose cannot be made more flexible in principle, no matter how many improvements and expansions might be made in translation.

It has been easy and common to dismiss Heidegger’s estimation of logic as not serious, or not rigorous. It has been even easier and more common to ignore such passages altogether and instead rescue what seems worthwhile in the remainder of his writings. Occasionally there are attempts to defend Heidegger’s reputation either by explaining his view on logic away, or by stubbornly endorsing it at face value. So, for instance, we read in his defense that “certainly the great pre-Socratics, the poets and Eastern thought have not proceeded along strictly ‘logical’ lines. One would, however, be rather reluctant to condemn all this as ‘irrational’” (Fay 1977, p. 115). Aligning Heidegger with mysticism instead of argument also gives us the Tractarian view that at its best Heidegger’s philosophy aims to *show* us what language can not *say*; hence the need to go beyond logic (Philippe 1998, p. 15). Such strategies should make interpreters of Heidegger uncomfortable. They admit that Heidegger banishes logic in favor of irrationalism in philosophy and then try to make a case that this leads to results. Perhaps, but at what cost? When we do philosophy, logic dissolves. I know of no detailed and sustained attempt to explain this claim that does not turn Heidegger into a mystic, a polemicist, or an irrationalist.

I am loath to say that these interpretations of Heidegger’s *What is Metaphysics?* lecture and related condemnations of logic are wrong. Their demerit is that they are partial and do not hint at the whole story. The whole story about Heidegger’s stance on logic is complicated and most of it has escaped the attention of past decades of philosophy. It is, however, a story well worth investigating. We have much to learn about the origins of current doctrine on logic, metaphysics, and the foundations of the sciences.

2. A plea for context

In 1879 Frege published the *Begriffsschrift* and Wundt established his first laboratory for experimental psychology. 1932 marks Carnap’s publication of the manifesto-style *Elimination of Metaphysics* paper. In the intervening half

century philosophers from all areas of the discipline debated the relation between logic and human experience. Some maintained that a few refinements of existing nineteenth century logic would yield a complete Kantian account of human experience. Others responded that the nascent science of experimental psychology made such traditional logic obsolete. A third, smaller group was quietly developing a radically new type of logic. We are familiar enough with the debates surrounding psychologism and the foundations of the human sciences, as well as with Frege's invention of modern logic, Russell's *Principia*, and the emergence of logical empiricism. But it is worth pointing out that these dramatic developments take place on the basis of a widespread and fundamental re-assessment of the nature of logic and its role in philosophy, an assessment that by no means produced easy agreement. The title "logic wars" is ugly, but not too far fetched.

At the end of this period a deep and influential split had taken shape. On one side were logical empiricist using quantificational logic as a central tool in epistemology. On the other were phenomenologists claiming that careful description is the only possible basis of a pure analysis of human experience. This opposition, it seems, comes to a head in Heidegger and Carnap's pronouncements on logic (and Carnap's pronouncements on Heidegger). Heidegger announced in 1929 that logic was not useful in philosophy, and Carnap replied that without logic there could be no philosophy, only gibberish. Let us beware, though. The very concept of "logic" and its role in different areas of philosophy changed a lot over the course of these five decades. Neither of these two philosophical positions was available prior to this tangle of changes.

Taken by itself, Heidegger's "the dominion of logic is broken" borders on the unintelligible. We need to remind ourselves of the relevant background. Most German academic philosophers until the 1920s were quite happy to agree with Kant that logic has not changed significantly since Aristotle, and would never do so. The same philosophers called Frege a mathematician (a slight put-down from their perspective) and drew a distinction between his "logistic" and proper logic. Wilhelm Wundt, the pioneer of experimental psychology who advocated giving chairs of philosophy to psychologists, wrote a *Logik* that went through five editions in the 1880s and 90s. Like most logic books at the time, it included virtually no formal symbolism. These traditional logicians maintain that the law of sufficient reason is one of the axioms of logic. Heidegger develops his anti-logic claims in *this* context, with limited attention to the advances of formal logic.¹

A salient aspect of the context emerges if we note the following. Heidegger gave his *What is Metaphysics?* lecture in July of 1929. Weeks before, in April of 1929 he completed *Kant and the Problem of Metaphysics*, an interpreta-

tion of the *Critique of Pure Reason*. This Kantbook, as Heidegger calls it, concludes that the *Critique* “itself shakes up the dominion of reason and the understanding. ‘Logic’ is deprived of its long evolved pre-eminence in metaphysics. Its idea becomes questionable” (1929/1991, p. 243). Obviously Heidegger’s point here is closely related to the claim of the inaugural lecture. The Kantbook provides a guiding thread for unraveling the single most important element of the context of Heidegger’s rejection of logic: the attempt to rework Kant’s critical philosophy by absolutizing transcendental logic at the expense of the transcendental aesthetic. This was the ambition of the Kant-interpretations of the so-called Marburg school of neo-Kantianism. Heidegger resists it and its implications.²

What Heidegger repudiates is not what Carnap exalts. Heidegger directs his criticism of logic against what we might call the “transcendental ambition” of some neo-Kantian systems of logic: the claim that the forms of logic constitute the entire origin of human experience, i.e. that there is no element of experience that is not so constituted. His claims will make little sense if we do not keep this context in mind. For sure, Heidegger finds the same overbearing tendency hidden in “logistics,” which he takes to be the “consequent degeneration” of the logic he criticizes (1943/1992, p. 48), just as he also maintains that this tendency has affected philosophy since ancient times.³ It is obscure where this tendency is hidden in Carnap and contemporary logic, but understanding Heidegger’s claim in its original neo-Kantian context will show us where to look.

3. Nineteenth century logic

Below I turn to the Marburger position and the arguments Heidegger develops against it. But first we need to survey the main features of logic as the field was commonly taught and understood in Heidegger’s academic context at the turn of the century. This helps make sense of the Marburgers and makes Heidegger’s railings against logic more palpable.

Two facts are striking. First, traditional academic logic on the continent from the 1870s right up until the 1920s blithely ignores Frege and Russell’s revolution of formal logic. The central concern of traditional logic was not the development of a formal system of inference. A common opinion was that the formal nature of Frege’s “logistic” prevented it from touching the proper logical issues. A list of the most influential logicians at the time by acclaim might have read: Lotze, Sigwart, Wundt, Rickert, and Natorp. Prominent neo-Kantians all.

A second striking fact is that the young Heidegger was himself shaping up to be a logician and commanded a good working knowledge of most of the important views and trends in traditional logic. Between 1912 and 1915 he wrote a lengthy essay, several book reviews, and two dissertations on logic. They amount to four hundred pages of philosophical writing and include detailed surveys of the range of existing positions.⁴ Heidegger refers to and quotes from thirty-nine different contemporaneous authors of logic books. He discusses at least a dozen in detail.⁵ His goal is to make an original contribution to some of the burning issues in philosophical logic. This field, he writes, is “the philosophical discipline that, to this day, interests me most”.⁶ He, too, distinguishes between properly philosophical logic and formal logic.⁷

Traditional philosophical logic consists of three parts: the theories of concepts, judgments, and consequence. As far as the theory of consequence is concerned, logicians agree with Kant that “logic has not increased much in content since Aristotle’s times, and indeed cannot do so by its nature” (1800/1996, p. A18). Accordingly, logicians from Wolff to Kant and the neo-Kantians maintain Aristotle’s list of perfect and imperfect syllogisms, adding a number of schematizations of quasi-syllogistic format that are meant to capture consequences drawn by induction, by proportional reasoning and by analogy.⁸ Some authors also include modal differences into the theory syllogistic consequence. In all cases the result is less elegant and also less powerful than modern formal systems of inference.

To make up for its weakness, the theory of consequence is coupled with the theory of judgments. Most sentences that we use in natural language arguments are grammatically more complex than straightforward predications. The theory of judgments explains how such stubborn sentences, for example disjunctive or hypothetical assertions, can be transformed to fit the syllogisms. Lotze explains: “No matter how complex their articulation may be in individual cases, they all return to the basic scheme of two judgments of the form S is P” (1874/1989a, p. 69). Central to the project is a theory of the relation between grammar and logic; Lotze provides this theory with his claim that the grammatical copula “is” expresses the more basic logical relation of “Geltung,” validity. Understandably, this massive project gave rise to thorny puzzles of squeezing grammatical form into putative logical structure. In his first dissertation the budding logician Heidegger participates in the project. He turns “*Es blitzt*” into “*von dem Blitzen gilt das jetzt Stattfinden, das momentane Existieren*” (1978, p. 186). Negation presented another source of difficulties. “The book is not yellow” becomes “Not-being-yellow is valid of the cover” (“*Vom Einband gilt das Nichtgelbsein,*” p. 182). Heidegger’s gloss on the validity of negative judgments: “If something does not exist, I can not

say: it exists, only this existing is a nonexisting. However, that which is not valid, is nevertheless valid, only this validity is a not-validity” (p. 184).

The theory of concepts legitimates constructions such as *Nichtgelbsein*. Its point is to elaborate the conditions that make it possible for humans to think determinate concepts which function as the logical elements of judgments, the things that a logical judgment holds to be valid, or not-valid, of one another. As such, the theory of concepts has a double aim. Primarily it aims to explain the relations that order a hierarchy of concepts: generality, subordination, etc. Further, the theory of concepts also explains the genesis of concepts. Kant, for instance, held that concepts are formed from representations through reflection, comparison, and abstraction, three innate operations of the understanding (1800/1996, p. 525). Later logicians take a variety of different views, ranging from Hermann Cohen’s “logical idealist” claim that there are no other representations, only concepts all the way down, to Rickert’s contention that concept formation differs according to subject matter.

After Hegel, whose attempt to make syllogistic forms fluid was influentially rejected by Trendelenburg and Lotze, all authors of logics took the theory of consequence as established. Page for page, the most work was done in the theory of concepts which philosophers saw as the weakest part of Kant’s legacy. A typical cottage industry of logic around 1910 was the debate whether the concept of number is equal to or a determination of the concept of the quantity of unity.⁹ The theory of judgment presented similar technical puzzles, like the ones Heidegger tinkered with in 1914. More importantly, with its discussions of logical validity and truth the theory of judgment was seen as the center of meta-logical questioning. Here, logicians saw the philosophical pay-off of their labors: a precise and systematic account of how a collection of representations can be a meaningful thought that is objectively true of the world. This explains why Frege’s *Begriffsschrift*, for instance, did not make a splash among neo-Kantian logicians. Who needs a newfangled version of syllogistic inference, especially when it does not fit any available theory of judgment? The neo-Kantians anticipated exciting breakthroughs on other fronts.

Unfamiliar as it now is, this was the state of the art of logic in philosophy departments in Freiburg, Marburg, Göttingen, and even Jena at the end of the 19th and beginning of the 20th century. Lotze, Sigwart, Rickert: these logics are stuffy and seem antiquated. But they are quite recent. Sigwart’s *Logik* was standard fare throughout the 1920s; Rickert continued to elaborate his theory of concept-formation into the 1930s; Carnap wrote his dissertation in Jena under the supervision of Rickert’s student Bruno Bauch. Of course Carnap recognizes and seizes upon the difference between the “old and new logic”.

He is quite correct, though, to point out that “the majority of philosophers have even now taken little cognizance of the new logic” (1930/1959, p. 134). Heidegger is one of them. In his 1928 lecture course, the *Metaphysical Foundations of Logic*, – in the midst of his various condemnations of logic – Heidegger maintains the basic division of the old logic: theories of concept, judgment, and consequence (1928/1990, p. 30). Note an interesting contrast. Carnap claims that philosophers shirk the new logic because they sense that “before the inexorable judgment of the new logic, all philosophy in the old sense, whether it is connected with Plato, Thomas Aquinas, Kant, Schelling or Hegel, or whether it constructs a new ‘metaphysics of Being’ or a ‘philosophy of spirit,’ proves itself to be not merely materially false, as earlier critics maintained, but logically untenable and therefore meaningless” (1930/1959, p. 134). All the while Heidegger calmly maintains that “logic experiences in the course of its history through Leibniz, Kant, Hegel and lately in the so-called mathematical logic, essential adjustments, which are however such that they do not rattle its basic scaffolding” (1934/1998, p. 6). *Plus ça change. . .*

4. Marburg neo-Kantianism

Aristotelian syllogistic has been bettered by modern formal inferential systems, together with a host of meta-theorems about the limits and applicability of these systems. The theory of judgment, insofar as it was concerned with the connection between the form of a judgment and its objective truth in the world, is handled today in epistemology and metaphysics. The theory of concepts is hardly recognizable. Its tasks are dispersed among fields as disparate as semantics and genealogy. 19th century logic was nothing if not ambitious in its scope.

This ambition was deliberate. For the neo-Kantians the comparatively modest title *Logik* stands in turn for “foundation of the system of philosophy” and for *Erkenntniskritik*. This latter term shows its close kinship to Kant’s critical philosophy, with its epistemological and metaphysical import. For Kant, of course, logic was a separate topic, less lofty and ambitious than critique. How did Kant’s critical project come to be conceived as a logic? Here we need to tell the story of Hermann Cohen and the Marburg school of neo-Kantianism.

When he wrote his interpretation of Kant’s *Critique of Pure Reason* in 1871, Cohen found philosophy in a state of crisis. He blamed this on the “metaphysical rhapsodies” of romanticism. “The new truths were concepts of the intuition of genius and intellectual intuitions; but the rigorous concept of pure knowledge, which limited itself to the principles of mathematical science, lost

its stature and its trace was blurred” (1914, p. 11). He hoped to return to more solid ground through “a continued construction of Kant’s system” (p. xii). Cohen argued that Kant’s *Critique* was primarily a philosophical foundation of Newtonian science. For this reason, he announced that “we shall here begin at the beginning once again. That is to say, we shall place ourselves once again on the ground of the principles of mathematical natural science” (p. 11). The “return to Kant” won acclaim, and Cohen’s work became the founding conception of the Marburg school.¹⁰

That philosophy provides the foundation for natural science means that it explains the objectivity of scientific cognition. Under what conditions can the statements and theories of science be true of the world? Philosophy shows how basic concepts, such as matter and motion, are objectively real. Cohen emphasizes the mathematical character of Newton’s physics more than Kant, taking special notice of the role of differential calculus. He thought that differentials, infinitesimals, and continuity are central to the philosophical grounding of physics. Cohen therefore paid close attention Dedekind and Cantor’s work on continuity.

By talking about infinitesimals, Cohen thinks that he can explain the possibility of physical reality without presupposing any atomic simples. He acknowledges two basic strategies for analyzing matter, substance atomism and a relational account. Atomism is flawed, for it can only reduce matter to smallest, or most primitive substances. It always takes some extended thing as basic. Atoms “still lie within being, though at its limit, and they are supposed to represent and account for the ground and origin of being” (1914, p. 33). However, a relational account of the possibility of matter can cover the transition from nothing to something through infinitesimals. Matter and motion are not reduced to smaller extensions, but to the relational properties expressed in differential functions that determine the continuity of motion, or the intensive quality of matter.

Cohen’s return to Kant, then, includes plans for a substantial alteration. By avoiding presuppositions in his explanation of the possibility of objectively cognizing the natural world, Cohen asserts that thought has no beginnings outside itself, and thus contradicts the most basic claim of Kant’s *Critique*. In Kant’s *Critique*, Cohen writes, “thought was preceded by an intuition. . . . Thought had its beginnings in something external to itself. Here lies the weakness in Kant’s foundations. Here lies the ground for the offal that soon fell upon his school” (1914, p. 12). His amendment is to expand and refine the transcendental logic and do away with the transcendental aesthetic altogether. Space and time are not forms of receptivity, but belong among the concepts of the spontaneous understanding. Cohen’s follower Natorp similarly says that

“placing time and space ahead of the laws of thinking an object is a serious mistake in the Kantian system of transcendental philosophy” (1910, pp. 276–277). What phenomenally seems like pure intuition must be determined by thought. “Given”, for Cohen, means the same as “capable of being found by thought”. “Only that can count as *given* to thought what it itself is capable of finding” (1914, p. 82). Transcendental idealism becomes logical idealism.¹¹

The cat is coming out of the bag. Cohen and his Marburger followers want to reduce Kant’s critical philosophy to an analysis of the spontaneous conceptual contributions of the understanding, the “laws of thinking”. This takes the form of a typical 19th century logic: the categories are placed in a ramified theory of concepts and their objective reality is vouchsafed by the theory of judgment.¹² This reduction includes showing that space and time belong among the conceptual hierarchy, and asserting that Kant’s schematism, which explains the applicability of pure concepts to intuitions, needlessly bridges a non-existent gap. Heidegger, true to his basic claim that time *qua* originary temporality is the grounding condition of all human experience, including thought as well as sensibility, resists this reduction. Time cannot be a category, if it makes categories as such possible. The schematism is far from useless: it is the moment in which philosophy has come closest to seeing the proper role of originary temporality. “What logic calls a ‘concept’,” writes Heidegger in his Kantbook, “is grounded in the schema.” And in a marginal note he later adds: “Here we already see what is the matter with ‘the’ logic” (1929/1991, p. 98). When the Marburgers eliminate Kant’s proto-Heideggerian inkling in the schematism, philosophy takes a retrograde step. Or rather a progressive one in the progression determined by the age-old dominance of logic in metaphysics. But when Heidegger uncovers originary temporality, he shows the non-conceptual origins of possible human experience and begins to break the dominance of logic.¹³ The questions that occupy neo-Kantian logic – the nature of the logical copula, or whether time precedes number in the hierarchy of concepts – are absorbed by fundamental ontology’s search for a complete and cohesive explanation of originary temporality. They dissolve in the infamous vortex.

This is still too telegraphic to satisfy as an explanation of Heidegger’s anti-logic claims. Here I only want to indicate how pieces of the context fall into place, giving us a fuller and less puzzling picture. I need to show in detail that Heidegger’s logic-bashing is first and foremost a response to Marburger logical idealism. This makes sense of Heidegger’s immediate claims and indicates what his more general objection to contemporary logic is. The Kantbook contains plenty of evidence that the Marburgers are on Heidegger’s mind. Cohen’s interpretation is Heidegger’s foil throughout his reading of the *Critique of Pure*

Reason. The retrograde step, as Heidegger puts it here, is to “take [the transcendental logic] by itself and make it absolute” (p. 243). This very idea is a “non-concept” and derives from the “tendency to take [the *Critique*] as a ‘Logic of Pure Cognition’,” thereby missing the more originary basis on which it rests (pp. 66–67). *Logic of Pure Cognition*, of course, is the title of Cohen’s logic of 1914.¹⁴ In what follows, however, I will focus on an earlier group of texts by Heidegger, his lecture courses from 1919 and 1920. In these courses, which are among his first, Heidegger develops his initial phenomenological arguments against the position of the Marburg school. It will be clear that these arguments are early versions of Heidegger’s later, more pronounced criticisms of logic. His view of logic develops along with his positive hermeneutic phenomenology; so much so, that they become inextricable.

In these early lectures, Heidegger’s direct target is Cohen’s friend and collaborator, Paul Natorp. Natorp had a wide variety of interests in philosophy, psychology, and pedagogy, and one of them was to develop and refine Cohen’s system of logic. The chief work in which Natorp expounds the Kantian basis of logical idealism is his 1910 *Die Logischen Grundlagen der Exakten Wissenschaften*.¹⁵ I want to close this section by looking at the analysis of time that Natorp develops here. It is a striking illustration of the Marburger approach and it will set up the following section on Heidegger’s early responses.

Like Cohen, Natorp integrates space and time into his system of logic, dissolving intuition and eliminating the need for schematization. For Cohen, time-cognition is a condition for number cognition, i.e. time is a more originary concept than number. Natorp turns this priority around. He derives the sequence of numbers from such high-level concepts as identity and difference and derives time only subsequently. Either way, this derivation is crucial for logical idealism. Natorp claims that a spontaneous intellect produces the transition from pure mathematics to empirical time and space. In this transition, says Natorp, “number itself becomes concrete *as* time and space”. It gains “a direct relation to existence, [which] . . . as such is foreign to pure mathematics; [this relation] effectuates, in strict continuity, the step from mathematics to mathematical physics” (1910, p. 279). This step “does not mean the empiricalization of mathematics, but the mathematization of the empirical” (1910, p. 280). Natorp thus wants to show that time and space *qua* the conditions of the cognition of empirical reality are identical to time and space *qua* mathematical concepts, and thus reducible to logic. Consequently, time and space “demand a twofold consideration: as mathematical constructs and as grounding conditions of the determination of existence in possible experience” (1910, p. 280).

Analyzing time as a mathematical construct is fairly straightforward (and the analysis of space is predictably equivalent). In the physical sciences time is “a stationary, immobile singular order in which all objects of nature fall into place”. It is characterized by “absolute singularity, immobility, and therefore also uniformity and continuity”. This is the conception of time that operates in mechanical equations. “According to this conception, however, the order of time, as far as its purely mathematical properties are concerned, is completely congruent with the one-dimensional, linear, serial order of number” (1910, pp. 281–282). In other words, the concepts that enable an intellect to think the number-series are *eo ipso* the conditions of the cognition of mechanical time.

This purely spontaneous action of the intellect already gives us “the grounding conditions of the determination of existence”. Since we can think mechanics, we can cognize concrete empirical objects. This claim obviously puts Natorp in line with Cohen’s insistence that the objects of natural science are not receptively intuited, but entirely spontaneously thought. Natorp finds a nice phrase for this feature. He calls it “the highest pregnancy of thought”, i.e. thought’s ability to “*actually posit* the object, not simply to condition or even demand it according to some general regularity . . ., but to *give* it ‘concretely’, i.e. in its full objectivity” (1910, p. 272). Thought is object-pregnant because objects are parts of events, and we think events as series of changes. “The temporal order of events can only present itself in a continuous dependence-(functional-) relation between various, in the end all, traceable series of changes” (1910, p. 331). The intellect produces the orders of time and space and hence ordered positions of existence. In fact, existence is nothing but “occupying” a position in this order. Events are changes in what occupies given positions of time and space, and objects are what makes sense of events. Logical idealism treads between a Newtonian and a Leibnizian view of space and time: they are the pure conditions of existence; however, they are always already tied to relations between different positions of existence. Here I will not pursue the question whether this view is tenable.

5. Early steps in phenomenology

In his logical phase the young Heidegger thought the Marburgers had it right. In his doctoral thesis of 1914 he writes that “today the question of the interpretation of Kant is pretty much decided in favor of the transcendental-logical conception held since the seventies of the past century by Hermann Cohen and his school. . . . This logical Kant-interpretation and continuation has not

merely pointed out in all clarity what is genuine in the *Critique of Pure Reason*, namely Kant's 'Copernican deed'; it has above all strongly paved the way for knowledge of the logical as such" (1914/1972, p. 5). Strong words, but we should not forget that at that time Heidegger thought of himself as a "non-historical mathematician" (p. 3). Both assessments change soon.

Heidegger finished another dissertation on neo-Kantian logic and then began to dabble in Dilthey, history, and Husserl. In his first lecture course, in 1919, he criticizes the Marburger approach. This criticism prefigures his mature philosophy of the late 1920s and his repudiations of logic; indeed, it shows them to be deeply intertwined. Not surprisingly, perhaps, Heidegger starts by claiming that the "concrete, empirical object" that Cohen and Natorp construct is not so concrete after all, but rather abstract. The Marburger conception of "concrete" objects stands in marked contrast to a phenomenological description of objects encountered in ordinary experience. Prefiguring his later analyses of everydayness, Heidegger points out that we experience ordinary objects in our surroundings as immediately significant. For example he, the lecturer, sees the lectern as the place to talk from, and as too high for himself. "Something gives itself to me out of an immediate environment". Things in this environment "are not objects that additionally are grasped as signifying something, but the significance is primary, gives itself to me immediately, without any cognitive detour via grasping the object. Living in an environment, it signifies to me always and everywhere" (1919/1999, pp. 72–73). Heidegger here forms "it signifies" grammatically like "it rains": In living, it always signifies.

Signifying is not the result of cobbling together particulars. "In the lived experience of the lectern it is the lectern that is given to me immediately. I see this as such and do not see sensations and sense-data" (p. 85). Of course we can analyze the lived experience, strip it down and investigate it. We can ignore the immediate significance of the object. However, this additional step creates a different encounter. Our personal sphere drops out of the experience and the encounter is disengaged. We are still contemplating the same object, but we are no longer living its significance. "If I try to explain the environment theoretically, then it collapses" (p. 86). To experience significance in living means to remain unconcerned by theory; to theorize about the constitution of objects means to suspend the living experience. If a theoretical stance collapses the significance of ordinary experience, how can this significance become a topic of philosophy? Heidegger claims that only phenomenological description manages to preserve significance. Marburger logical, or "objective," idealism cannot capture the immediate significance of objects.

The Marburg school has its own answer, expounded by Natorp in *Allgemeine Psychologie*.¹⁶ Experiencing the lectern in one's own personal sphere is in the first instance a logically complex judgment about an empirical object. It attains its peculiar significance as a result of the psychological state of the subject. Phenomenology grasps lived experience by reconstructing this psychological state. This reconstruction is only possible on the basis of a prior construction, and this possibility is grounded logic. Phenomenology fits neatly into the system of philosophy and the sciences as the Marburgers envision it. Rain drops after clouds form and "it signifies" only after the spontaneous intellect has posited empirical objects.

Is reconstruction of the psychological sphere an adequate thematization of the significance of lived experience? This is an important question, for it asks about first philosophy: which philosophical method can do without presupposition? The question is also impossible to answer, for any answer is bound to be circular: if you know what "adequate" insight into lived experience is, then you have already thematized it. The Marburgers pre-define objects of experience as those that are determined by their function in basic mechanical equations. For a phenomenologist, like Heidegger, it follows that the Marburger conception does not recognize lived experience at all. The awareness of environmental significance as such is no awareness at all for them. In their preconception Heidegger finds the "fundamental shortcoming of the objective idealism of the Marburg school: the one-sided, absolutizing restriction of cognition and the object . . . to mathematical natural science" (p. 83). When the task is to get a sense of the significance-relations in which we always already live, then the Marburger conception of objects and consciousness is of no use. Natorp's "systematic, panlogistic basic orientation prevents him from any free access to the sphere of lived experience, to consciousness. . . . [He] has not exhausted all the possibilities and with his purely theoretical disposition, i.e. the absolutization of logic, can not exhaust them" (pp. 108–109). When Cohen wrote "only that can count as given to thought what it itself is capable of finding" he argued against receptive intuition. For Heidegger this is an admission of circularity; if logical idealism only looks for logically constituted objects, then it remains blind to other, possibly more fundamental types of experience.

The inability of a consistent logical idealism to analyze the immediately significant experience of living, existing subjects continues to occupy Heidegger. The following year he assimilates Dilthey's notion of lived experience (*Erlebnis, Leben*) to a Kierkegaardian notion of existence (*Existenz, Dasein*).¹⁷ Still arguing against Natorp, he insists that "the radicalization of the theoretical in the idea of constitution in principle never leads – even if it is carried

out most rigorously – to concrete, actual existence [*Dasein*]” (1920/1993, p. 143). Such “concrete self-worldly *Dasein*” provides the elusive “yardstick” for adequate thematization of the originary layer of experience (p. 146). The Marburger system is based on an idea of logical constitution and at every juncture grounds its claims on the same idea. Its justification and its pre-conception are the same. Phenomena can not unsettle this system. Nothing about the things in themselves as they show themselves can lead the Marburger philosophy to a revision of its own grounding. This is not a vicious circularity; but if Heidegger is right that philosophical grounding must be sought in *Dasein*’s concreteness, then this circularity entrenches the Marburgers in “a philosophy that with its own pre-conception makes its task impossible – and that is nevertheless a philosophy, because the philosophical motive is alive in it” (p. 143). Or, as Heidegger puts it more dramatically: “The system brings about that the dead is made alive, not for the living, but for the dead who have ventured the suicide of existence [*Existenz*] in order to gain for it the life of thinking” (p. 193).

It is obvious that this argument about lived experience is an early instance of Heidegger’s banishment of logic from first philosophy. He claims here that “panlogicism,” “logisticism [*Logistizismus*]” (1919/1999, p. 110), or “the absolutization of logic” does not have access to the sphere of experience that an “originary science [*Urwissenschaft*]” (p. 13) needs to take as its beginning. The same trope governs the *What is Metaphysics* claim that “the idea of ‘logic’ itself dissolves in a vortex of more originary questioning”. It also fits with the concluding claim of the Kantbook, that an absolute transcendental logic makes no sense. Further, this early argument reveals the scope that the critique of logic has in Heidegger’s *Being and Time* philosophy. What Heidegger calls “lived experience” in these early lectures is an as yet unrefined conception of *Dasein*’s being-in-the-world.¹⁸ Indeed, all of Division One of *Being and Time* can be seen as Heidegger’s analysis of immediate significance. Here he shows us that human consciousness can be intentionally directed at objects in non-cognitive ways. Bodily skills or moods, for example, disclose objects without constituting them logically. Such disclosure is part of human “transcendence,” and its analysis is part of ontology, to “let that which shows itself be seen from itself in the very way in which it shows itself from itself” (1927/1962, p. 58). Strict logical idealism cannot analyze this kind of transcending, because it is systematically committed to the premise that object-hood as such means “constituted logically,” that all transcendental philosophy is transcendental logic. Such a focus on logic thus forestall entry into ontology, first philosophy. Conversely, when we do philosophy, this commitment to logic dissolves. In its proper context, Heidegger’s claim is not indigestible at all.

Heidegger never claims that philosophy should be irrational, that it is better off with allusion instead of inference, obfuscation instead of clarity, myth instead of reason. From Carnap onwards, critics have maintained that Heidegger's thought belongs with myth, lyricism, or other expressive uses of language.¹⁹ Heidegger already blocks this charge in 1920. Having completed his argument that logical idealism can not penetrate the originary sphere of lived experience, he writes: "Thus philosophy should dispense with thought and leave itself to rhapsodizing and intuiting – or so one would have to say if one were arguing and philosophizing in words." Not so, he continues, ". . .it is not said that philosophy dispenses with thought. The very question is whether the theoretical does not have a more originary Gestalt" (1920/1993, p. 144). For more than a decade he continues the same tack in his critique of logic, and throughout this time he insists on rigor. "Philosophizing – and it especially – must always proceed through rigorous conceptual knowing and must remain within this medium" (1928/1990, p. 22). Ontology articulates the conditions for the disclosure of entities. The disclosure itself is not limited to processes of spontaneous constitution by the understanding, but its articulation is, as Heidegger says, bound by conceptual rigor.

So Heidegger does not think irrationally or alogically. Yet these labels do not crop up randomly. They are endemic to the neo-Kantian debates concerning the status of receptively intuited material. Conceptual spontaneity and the application of categories belong to the "logical" component of the constitution of objectivity. The sensual remainder, if there is any, is called "irrational," "alogical," or even "logically naked".²⁰ Heidegger himself uses this terminology, alternatively calling his "problem of lived experience" the "problem of the irrational" (1920/1993, p. 23). The Marburgers maintain that the entire putative sphere of the alogical and the irrational does not exist. The stuff that gives the impression of being alogical is at bottom logically objectified existence. Natorp states this succinctly: "I contend the full logicity, the full formlikeness, thorough formedness of all the allegedly alogical" (1918, p. 454). Heidegger opposes this Marburger viewpoint, so his claim that philosophy must concern itself with a type of experience that is not logically constituted is, in a straightforward sense, a philosophy of the irrational. The same, of course, is true of all empiricist, positivist, and sense-data theories, including Kant's own version of transcendental philosophy: given this dichotomy of rational and irrational, these all turn out to be philosophies of the irrational. Obviously a philosophy of the irrational is not therefore an irrational philosophy, just as a philosophy of the logically naked need not itself be naked.

Strictly speaking, Heidegger does not aim at a philosophy of the irrational, even within the neo-Kantian application of that term. True, Heidegger is in-

vestigating the “problem of the irrational”. But his goal is explicitly “to loosen and overcome the tension between the irrational and the rational” (1920/1993, p. 27). This is an important point in light of the development of Heidegger’s thought up to *Being and Time* and beyond. In his Kant interpretation he does not aim to dissolve the understanding in sensibility, but both of them in a more fundamental faculty, the transcendental imagination. In his own terms, this fundamental faculty is the originary temporality of human existence and all comportment towards entities, both thinking and unthinking, is grounded in it. So, finally, Heidegger does not propose to dissolve an analysis of logical constitution of objects in talk about the pre-predicative immediacy of lived experience, but both of them in the philosophical articulation of the “understanding of being” that conditions them. In his first lecture course as professor in Freiburg, mere weeks before delivering the inaugural *What is Metaphysics?* lecture, Heidegger states this as clearly as possible: “The issue is not about the struggle against rationalism, no more than it is about taking up the cause of irrationalism, but solely about the possibility of a more radical interpretation of transcendence, the understanding of being, in face of the fact that the *logos* only has an interpreting and determining function, which does not mean that it has no role at all in the problem of being. . . . We must see that understanding of being lies before all logical asserting and determining and makes possible even this” (1928/1996, p. 320).

6. Conclusion: Carnap and *What is Metaphysics?*

This detour through Heidegger’s neo-Kantian context now enables us to say a few things about the relevance of Heidegger’s thought to contemporary logic. Two interconnected questions stand out: First, how should we interpret the striking claims of *What is Metaphysics?* Second, is Carnap right to say that Heidegger’s statements violate logical form and are therefore meaningless? By way of concluding I will briefly indicate how these questions can be answered on the basis of what I have said so far.

What is Metaphysics? was Heidegger’s inaugural lecture, an affair of pomp and circumstance, some of which found its way into the flamboyance of Heidegger’s language. The text of the lecture is rich, and deserves a full interpretation, which I cannot give here. But I will indicate how it fits the picture about logic that I outlined above. This lecture is not the only place where Heidegger rebuffs logic, but it is the most notorious and the most frequently misunderstood. It contains one claim that needs explanation, and its 1943 postscript contains another. The lecture announces that “if the power of the

understanding in the field of questions concerning the nothing and being is thus broken, then with this the fate of the dominion of 'logic' within philosophy is also decided. The idea of 'logic' itself dissolves in a vortex of more originary questioning" (1929/1992, p. 37, cf. 40). The "field of questions" is ontology, the investigation into transcendental preconditions for the experience of objects, and consists of question such as "what is being" or "what is the nothing".²¹ Logic does not dominate ontology; other faculties besides the understanding make human experience of objects possible. Note that what dissolves is not logic *per se*, but its "idea," and its "dominion". On the basis of Heidegger's confrontation with the neo-Kantian logical idealism, I take this "idea" to mean the explicit systematic commitment to an ontology of logically constituted objects. "Dominion" means the inexplicit such commitment.

The postscript once again emphasizes that rejecting logic in this sense in no way amounts to endorsing a "philosophy of mere feeling" (1943/1992, p. 45) or an "anxiety philosophy" (p. 47). It then explains in what respect the understanding is powerless in ontology, by distinguishing between "rigorous" thinking and "exact" or "calculating" thinking.²² If thinking *only* follows the "forms and rules grasped in 'logic'", then it is merely exact, but not rigorous and cannot be ontological, insofar as it cannot "experience the truth of being" (p. 48). Two points make sense of this. First, Heidegger presumes the ontic-ontological difference, the difference between all kinds of objects and the preconditions of their objecthood, or between beings and their being.²³ The rules of logic govern conceptual encounters of ontic entities according to relations of genus, species, identity, negation, etc. Being, however, is not related to beings according to a logical relation; it is related to them by an ontological relation, such as constitution, or transcendence, or what Heidegger calls temporality. Objecthood is not the negation of objects, or identical to objects, or a property of objects. The totality of beings, Heidegger tells us, is not being, and the negation of all beings is not the nothing.²⁴ If thinking only follows logical forms, it loses sight of ontological relations.

Secondly, Heidegger employs a notion of truth, here, that is similar to Husserl's notion of self-evidence. For Husserl, "my book is yellow" is a self-evident judgment if I produce it "with insight," i.e. while I see the yellow book, and a nonself-evident judgment if I make it without such insight. The truth of nonself-evident judgments is founded upon the possibility of making the judgment "with insight". This is the case for perceptual judgments, and also for mathematical derivations and philosophical statements, where the insight rests on categorial, rather than perceptual intuition.²⁵ Heidegger claims that insight is part of "rigorous" thought, while the calculating exactness of manipulating propositions according to logical rules tends away from such insight. Much

more can be said about these passages, but at present two points should be clear. First, here too Heidegger claims that the ontological constitution of entities, their disclosedness, is not only a matter of spontaneity of the understanding; second, this does not commit the ontologist to making illogical statements.

What, then, are we to make of Carnap's accusations that Heidegger's ontological statements, like "the nothing itself nothings," do violate logical syntax? Carnap is right that in this sentence "nothing" is not used the way canonical logic dictates. Heidegger is fully aware of this, and while his own analysis is not as sophisticated as Carnap's explanation in terms of negative existential quantifiers, it is close enough: the nothing, Heidegger says, precisely doesn't mean negation of all entities. But this does not mean that "the nothing nothings" is illogical. Language is flexible and easily accommodates new terms and definitions. "*Das Nichts*," in fact, is a common noun in German, and even "*nichten*" is not far from common verbs such as "*vernichten*".²⁶ If Heidegger manages to give sense to these terms, then "the nothing nothings" might very well have a proper logical form. Here it is Carnap who anticipates the point: on the one hand a "correct language" replaces the colloquial noun *Nichts* with the proper quantification (1932/1959, p. 70). On the other hand, Heidegger's greatest violation of logic is that he switches from the negative existential form to the noun (p. 71). But Heidegger is aware of this, too. At the point where he switches, Heidegger begins to capitalize "*Nichts*," and so he uses the very contrast between negative existentials and nouns in order to give sense to the term. "*Nichts*" is not a quantification over entities, nor an entity that can be quantified over. It is not an ontic term at all. At this point, the proof of the ontology is in the tasting; whether "the nothing nothings" is nonsense depends on what Heidegger does with it.²⁷

This brings us to the final and deepest point of disagreement between Carnap and Heidegger. Heidegger's sentences are illogical precisely under a presumption that Heidegger rejects, namely that the nothing and being have to be understood ontically, as beings or logical relations between beings. Carnap implicitly makes this presumption in his characterization of a "correct language" that exhaustively prescribes *ahead of time* the possible forms of meaningful sentences: "Nothing" is either the name of a being, or the negative existential quantification over a range of beings. This presumption, says Heidegger, makes ontology impossible: "No matter where and how far all inquiry searches beings, it will never find being" (1943/1992, p. 45). Whether there is being to be found, whether ontology as transcendental phenomenology makes sense or not cannot be decided ahead of time, and certainly not by a facile stipulation on logical forms. If Heidegger's sentences have sense, then

they have sense because they turn out to be logically coherent. And they can turn out to be logically coherent, insofar as Heidegger's thinking is rigorous.²⁸

Notes

1. If we were to tell the whole story, we might include a chapter on Heidegger's disdain for the stodginess of his old-school colleagues in the Marburg philosophy faculty, the "professors" as he sneeringly calls them in letters to his erstwhile friend and fellow philosophical radical Jaspers. Heidegger associates traditional logic with an entrenched penchant toward academic systematic philosophy that gets in the way of an analysis of everyday experience. He prefers the company of Black Forest peasants (Biemel 1992, p. 54).
2. Several scholars have recently begun to study the important roles of various neo-Kantians in shaping the philosophical positions of hermeneutic phenomenology and logical empiricism. See especially Friedman (2000), Richardson (1998), and essays by T. Kiesel and S. Crowell in Chaffin (1992).
3. In 1964 Heidegger writes in an appendix to the 1927 *Phänomenologie und Theologie* lecture that he and Carnap stand for the "most extreme counter-positions" of contemporary philosophy (1976, p. 70).
4. *Neuere Forschungen über Logik; Die Lehre von Urteil im Psychologismus; Die Kategorien- und Bedeutungslehre des Duns Scotus*. All in Heidegger (1978).
5. The books Heidegger discusses in most detail are Lotze's *Logik*, the works of his early mentor Rickert, as well as *Die Lehre vom Urteil* and *Die Logik der Philosophie und die Kategorienlehre* by Rickert's student Emil Lask. His interest in Husserl's *Logical Investigations* emerges after this stint with neo-Kantian authors.
6. Heidegger wrote this in a *curriculum vitae* in 1915, fully quoted in Hugo Ott, *Martin Heidegger: Unterwegs zu seiner Biographie*, Frankfurt: Campus, 1988, pp. 85–86.
7. Heidegger mentions Frege's work once and Russell's twice in these early writings. He shows no evidence of having considered Frege's work in detail. He calls Frege a "mathematician", mentions his *On Sense and Reference* and *On Concept and Object* and his opposition to psychologism (1978, p. 20). Heidegger does not mention the *Begriffsschrift*, the *Foundations of Arithmetic* or the *Basic Laws*. Indeed, he does not seem to be aware of the significance of Frege's formal work, either the invention of quantificational logic or the logicist project. Heidegger is aware of the formal work and logicist implications of Russell's *Principia*, but apparently not of any connection this work has to Frege (1978, pp. 42, 173). In any event, he only sketches the rough idea of the *Principia* in passing and then claims that this "logistic" does not "advance to the proper logical problems", because "the application of mathematical symbols hides the meanings and changes of meanings in judgments" so that "logistics does not even know the problems of the theory of judgment" (1978, p. 42).
8. Some of these forms are already found in Aristotle's *Prior Analytics*.
9. Rickert and Natorp argued about this question. At one point, Heidegger planned to write his dissertation on the dispute, and it finds its way into his Duns Scotus Habilitation (1978, p. 218).
10. The call "*Zurück zu Kant*" was made popular by Friedrich Lange, among others, whose chair in Marburg Cohen inherited in 1875, on the strength of his *Kants Theorie der Erfahrung*.

11. For an analysis of the epistemological motivation of Marburger logical idealism, see Friedman (2000, pp. 25–32).
12. Kant’s distinction between transcendental and general logic is eclipsed in Cohen’s system. Transcendental logic “has to do merely with the laws of the understanding and reason, but solely insofar as they are related to objects a priori and not, as in the case of general logic, to empirical as well as pure cognitions of reason without distinction” (Kant 1781/1997, p. A57). A priori applicability of concepts is a non-issue insofar as Cohen and his followers aver the complete thought-immanence of the object.
13. Logic cannot explain the origin of experience, insofar as it has its own origin in temporality. This, Heidegger claims, is apparent in Kant’s schematism: “The categories first form themselves as categories in the transcendental schematism. But if these are the real ‘ur-concepts,’ then the transcendental schematism is the most originary and authentic concept-formation of all” (1929/1991, p. 110).
14. See Heidegger (1929/1991, p. 145) and (1927/1995, pp. 8, 67, 78f, 156, 185, 330) for passages in which Heidegger explicitly contrasts his own interpretation of Kant to the neo-Kantian one in general or Cohen’s specifically.
15. It was the yellow cover of Natorp’s *Grundlagen* that prompted Heidegger’s earlier ruminations on *Nichtgelbsein* (Heidegger, 1913, p. 109). As we will see, Heidegger knew the inside of the book as well.
16. Cf. also Cohen’s equivalent argument in (1915, pp. 55–57).
17. Heidegger uses the term “Dasein” for the first time in this 1920 lecture course. Cf. Kisiel (1993, p. 493).
18. That is to say, Heidegger’s rejection of logic is of a piece with his analysis of Dasein’s everydayness. To ignore the former is to miss part of the latter.
19. Carnap makes all three charges, plus the amusing suggestion that the “metaphysician” turns to words because he lacks Beethoven’s abilities with music (1932, pp. 78–80).
20. The phrase “logically naked,” my personal favorite, is contributed by Emil Lask. See Lask, *Gesammelte Schriften*, Tübingen: J.C.B. Mohr, 1923, Vol. 2, pp. 73–80.
21. Heidegger treats these questions as roughly equivalent. “Das Nichts . . . enthüllt sich als zugehörig zum Sein des Seienden” (pp. 39–40). “Aber dieses Nichts west als das Sein” (1943/1992, p. 46).
22. Heidegger uses this distinction quite often. Cf. e.g. (1927/1993, p. 159), (1928/1990, p. 22). Philosophical thinking is rigorous or “strenuous,” in part, because it requires an existential commitment by the thinker.
23. For present purposes, we can treat this distinction as roughly equivalent to Kant’s empirical-transcendental distinction.
24. Of course many philosophers are happy to define being as the totality of beings. Heidegger suspects the unwarranted dominion of logic in ontology behind such a definition.
25. See Husserl (1973, pp. 22–24) on the foundedness of “mere judging” on judging with insight. For self-evidence and categorial intuition see the sixth Logical Investigation, (1992, pp. 645–693), and Heidegger (1925/1994, pp. 63–98).
26. I take this point from Friedman (2000, 11n). *What is Metaphysics?* is indeed full of contextual definitions of “the nothing”: “abweisende Verweisung auf das entgleitende Seiende im Ganzen” (p. 34); “Ermöglichung der Offenbarkeit des Seienden als eines solchen für das menschliche Dasein” (p. 35) etc.
27. The very fact that this Heidegger-Carnap dialectic can be continued to this point and beyond could be taken as evidence that Heidegger’s sentences are not illogical, though they are unfamiliar.

28. I am grateful to an anonymous referee at *Continental Philosophy Review* for helpful comments on an earlier draft.

References

- Biemel, Walter and Hans Saner eds. 1992. *Martin Heidegger/Karl Jaspers Briefwechsel 1920–1963*. Munich: Piper.
- Carnap, Rudolf. 1930/1959. “The Old and the New Logic.” Trans. Isaac Levi. *Logical Positivism*. Ed. Alfred J. Ayer. New York: The Free Press.
- Carnap, Rudolf. 1932/1959. “The Elimination of Metaphysics Through Logical Analysis of Language.” Trans. Arthur Pap. *Logical Positivism*. Ed. Alfred J. Ayer. New York: The Free Press.
- Chaffin, Deborah, ed. 1992. *Emil Lask and the Search for Concreteness*. Evanston: Northwestern University Press.
- Cohen, Hermann. 1914. *Logik der Reinen Erkenntnis*. 2nd ed. Berlin: Bruno Cassirer.
- Fay, Thomas. 1977. *Heidegger: The Critique of Logic*. The Hague: Martinus Nijhoff.
- Friedman, Michael. 2000. *A Parting of the Ways*. Chicago: Open Court.
- Heidegger, Martin. 1978. *Frühe Schriften*. Ed. Friedrich Wilhelm von Herrmann. Frankfurt: Klostermann.
- Heidegger, Martin. 1919/1999. *Zur Bestimmung der Philosophie*. Ed. Bernd Heimbüchel. 2nd ed. Frankfurt: Klostermann.
- Heidegger, Martin. 1920/1993. *Phänomenologie der Anschauung und des Ausdrucks. Theorie der Philosophischen Begriffsbildung*. Ed. Claudius Strube. Frankfurt: Klostermann.
- Heidegger, Martin. 1925/1994. *Prolegomena zur Geschichte des Zeitbegriffs*. Ed. Petra Jäger. 3rd ed. Frankfurt: Klostermann.
- Heidegger, Martin. 1927/1993. *Sein und Zeit*. 17th ed. Tübingen: Max Niemeyer.
- Heidegger, Martin. 1927/1962. *Being and Time*. Trans. John Macquarrie and Edward Robinson. San Francisco: Harper and Row.
- Heidegger, Martin. 1927/1995. *Phänomenologische Interpretation von Kants Kritik der Reinen Vernunft*. Ed. Ingrid Görland. 3rd ed. Frankfurt: Klostermann.
- Heidegger, Martin. 1928/1990. *Metaphysische Anfangsgründe der Logik*. Ed. Klaus Held. Frankfurt: Klostermann.
- Heidegger, Martin. 1928/1996. *Einleitung in die Philosophie*. Ed. Otto Saame and Ina Saame-Speidel. Frankfurt: Klostermann.
- Heidegger, Martin. 1929/1991. *Kant und das Problem der Metaphysik*. Ed. Friedrich-Wilhelm von Herrmann. 5th ed. Frankfurt: Klostermann.
- Heidegger, Martin. 1929/1992. *Was Ist Metaphysik?* 14th ed. Frankfurt: Klostermann.
- Heidegger, Martin. 1934/1998. *Logik als die Frage nach dem Wesen der Sprache*. Ed. Günter Seibold. Frankfurt: Klostermann.
- Heidegger, Martin. 1943/1992. *Nachwort*. In 1929/1992, pp. 43–52.
- Heidegger, Martin. 1976. *Wegmarken*. Ed. Friedrich-Wilhelm von Herrmann. Frankfurt: Klostermann.
- Husserl, Edmund. 1992. *Logische Untersuchungen. Zweiter Band. II. Teil*. Ed. Elisabeth Ströker. Hamburg: Meiner.
- Husserl, Edmund. 1973. *Experience and Judgment*. Trans. James S. Churchill and Karl Ameriks. Evanston: Northwestern University Press.

- Kant, Immanuel. 1781/1997. *Critique of Pure Reason*. Trans. Paul Guyer and Allen Wood. Cambridge: Cambridge University Press.
- Kant, Immanuel. 1800/1996. "Logik." Ed. Jäsche. *Immanuel Kant: Schriften zur Metaphysik und Logik. Vol. 2*. Ed. Wilhelm Weischedel. Frankfurt: Suhrkamp, pp. 421–582.
- Kisiel, Theodore. 1993. *The Genesis of Heidegger's Being & Time*. Berkeley: University of California Press.
- Lotze, Hermann. 1874/1989a. *Logik: Erstes Buch. Vom Denken*. Ed. Gottfried Gabriel. Hamburg: Meiner.
- Lotze, Hermann. 1874/1989b. *Logik: Drittes Buch. Vom Erkennen (Methodologie)*. Ed. Gottfried Gabriel. Hamburg: Meiner.
- Natorp, Paul. 1910. *Die Logischen Grundlagen der Exakten Wissenschaften*. Leipzig: B.G. Teubner.
- Natorp, Paul. 1912. *Allgemeine Psychologie nach Kritischer Methode*. Tübingen.
- Natorp, Paul. 1918. *Bruno Bauch's 'Immanuel Kant' und die Fortbildung des Systems des Kritischen Idealismus*. Kantstudien XXII.
- Philipse, Herman. 1998. *Heidegger's Philosophy of Being*. Princeton: Princeton University Press.
- Richardson, Alan. 1992. *Carnap's Construction of the World: The Aufbau and the Emergence of Logical Empiricism*. Cambridge: Cambridge University Press.