

Hermann Cohen on the Role of History in Critical Philosophy¹

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ABSTRACT: Consider two features of Hermann Cohen’s critical philosophy. First, using what Cohen calls the transcendental method, critical philosophy aims to identify formal conditions of experience that are universally, and so *timelessly*, valid. Second, detailed, context-sensitive surveys of the *history* of science and philosophy are ubiquitous in his accounts of those formal conditions. This paper argues for two claims about how those two features of Cohen’s philosophy fit together. First, Cohen holds the striking view that, while philosophy aims to discover and investigate principles that are timelessly valid, it must nevertheless use historical investigation to do so. Second, Cohen has the resources to explain why, on his view, history must play this role in philosophy. This paper uses a genealogical strategy to locate that explanation in Cohen’s writings: it traces views of history held by various of Cohen’s teachers, and shows that Cohen combines and develops those ideas to produce just the explanation needed. Ultimately, the underlying reasoning of Cohen’s explanation is this. The history of science has a teleological structure, and as it unfolds knowledge becomes increasingly universal. But then, elements of scientific theories that remain stable across a succession of increasingly universal theories will be plausible candidates for or approximations of the strictly universal formal conditions of experience. The critical philosopher is thus required to attend to the history of science to identify plausible candidates for those formal conditions.

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§1. The role of history in Cohen's account of philosophical method

Boris Pasternak, in his charming account of the time he spent studying philosophy in Marburg, recounts his excitement about the prospect of studying specifically with Hermann Cohen:

At Marburg they gazed at history through both of Hegel's eyes, i.e., with brilliant universality, but at the same time with the exact boundaries of a judicious verisimilitude. So for instance, the school did not speak of the stages in the development of the "Weltgeist," but, say, of the postal correspondence of the Bernoulli family... (Pasternak 1958 [1931]: 42)

Pasternak is pointing, quite insightfully, to two of the most central features of Cohen's theory of knowledge and philosophy of science: his twin concerns with what is universal in knowledge and with knowledge's origins and development in history.

Commentators on Cohen have tended to emphasize one or the other of those concerns. There are thus interpretations of Cohen that foreground his view that knowledge is grounded and made objective by principles that are universally, and so timelessly, valid. These interpretations emphasize Cohen's insistence that those principles are "transcendental" in a sense that means their validity is independent of the contingent historical circumstances of their discovery or expression. In Cohen's mature writing on knowledge, he claims that these principles have a "purity" that means their origin cannot be in some contingent historical-developmental process that stands outside of thought.² In contrast, there are interpretations of Cohen that foreground the role that history plays in his own writings. These interpretations emphasize the close attention he

² See, for example, Holzhey's account of Cohen's concepts of "origin" and "purity" (Holzhey 1986, vol. 1: 175-8) and Poma's account of the concept of purity in Cohen's logic (Poma 1997: 80-83), as well as Beiser's discussion of the meaning of the "transcendental" for Cohen (Beiser 2018: 64-69).

pays to how the expression of concepts, principles, and laws develops through the history of science, morality, and culture more generally.³

The differences between these two camps in the Cohen literature are best understood as differences in emphasis: the first camp acknowledges Cohen's interest in history, and the second camp allows that Cohen aims to identify principles that are universally valid. But for the most part, these commentators do not explicitly raise the question of whether these two strains in Cohen's philosophy fit together perfectly comfortably, or whether on the contrary there is work to be done to explain how they do in fact fit together.⁴

I want to raise just those questions, and I want to answer them with two principal claims. First, Cohen holds that, while philosophy aims to discover and investigate objects of knowledge that are timelessly valid, it must nevertheless use historical investigation to do so. Second, Cohen has the resources to explain why, on his view, history must play that role in philosophy.

To be clear, I am not (merely) attributing to Cohen the anodyne claim that philosophical inquiry is historical because it is done by knowers who are themselves historically situated. Rather, on his view, philosophers must engage in detailed, context-sensitive historical investigation, in order to come to know the principles of knowledge they seek -- even though

³ For example, Wiedebach (1997: 126ff) and Deuber-Mankowsky (2000: 108ff) emphasize Cohen's concern with history at least in part as a consequence of their interest in his view of unending moral progress through history and into the future (a view I will consider in §7). In contrast, Renz (2002) and Luft (2015) are both concerned with locating in Cohen the resources for a philosophy of culture, and indeed, as Renz (2002: 89ff) emphasizes, a culture that changes through history. Of these commentators, Luft comes closest to denying the other strain in Cohen's thinking: at points he seems to deny that the principles Cohen thinks philosophy aims to identify are strictly universal (Luft 2015: 54).

⁴ Some commentators *have* attempted to keep equally in view both Cohen's concern with what is universal in knowledge and with knowledge's historical origins and development. Renz (2018: 10) and Baumann (2019: 651) touch on this topic but do not pursue it in detail. While Damböck (2017) explicitly aims to reconcile these two strains, his interpretation differs in certain respects from the one I defend here. See Edgar (2020a) for more on Damböck. Fiorato's (1993) account approaches the problem from a different starting point than I do here, namely, from Cohen's mature *Logic of Pure Knowledge*. But despite that difference, I believe (though cannot here argue) that my account largely confirms Fiorato's central contention that for Cohen the "[g]round of being must be laid beyond its present" (Fiorato, 1993: 2). See note 24 below.

those principles are objects of knowledge that are themselves timelessly, ahistorically valid. That is, Cohen maintains that history provides the evidence required for the critical philosopher to identify certain principles that are themselves nevertheless timelessly valid. In fact, Cohen maintains this in two, closely related ways. First, on his account, historical investigation is what first reveals the timelessly valid principles the critical philosopher aims to identify. Then, second, historical investigation is required to justify the critical philosopher's account of what is (or is not) one of those timelessly valid principles.

These are surely striking claims. Practitioners of other disciplines aiming to investigate objects of knowledge that are timelessly valid typically think history plays no essential role in their disciplines. Mathematicians and physicists might use history for pedagogical purposes, but they do not normally think it is a necessary part of their disciplines' methods.

Nor is this point limited to mathematics or physics. Kant -- Cohen's inspiration for what he calls the "transcendental method" -- seems to have a similar view in at least some central parts of the *Critique of Pure Reason*. Kant's arguments in the Transcendental Aesthetic and Transcendental Analytic proceed without much reference to history. Kant's own example thus seems to suggest that when the transcendental philosopher seeks to identify universally valid principles of knowledge, history is not directly relevant to that account and need not play a central or essential role in it. But, I will argue, Cohen disagrees.

My argument proceeds as follows. §§2 and 3 address the first of my two principal claims: that for Cohen historical investigation is required to investigate principles of knowledge that are nevertheless timelessly valid. §2 provides textual evidence to establish that, for Cohen, those principles really are timelessly valid, but also that, in at least some works, he thinks historical investigation is what first reveals them to the philosopher. §3 provides a systematic interpretative

argument that, on Cohen's view, history is also required to justify a philosophical account of what those principles are (or are not).

From there, I attempt to see what explanation Cohen has for these striking views. My strategy is genealogical. In §4 I examine the views of history held by four of Cohen's teachers -- Zacharias Frankel, Heinrich Graetz, Adolf Trendelenburg, and Heymann Steinthal -- in order to locate ideas about history that Cohen would take up and adapt. §5 examines how Cohen develops those ideas, specifically, in the interpretation of Kant's things in themselves that he develops over the late-1870s and 1880s. §6 establishes the second of my two principal claims: it argues that Cohen's account of things in themselves provides the explanation for why history plays the role in philosophical method that it does for him. The underlying reasoning of Cohen's explanation is the result of how he combines different ideas from Frankel, Graetz, Trendelenburg, and Steinthal. Finally, §7 provides a too-brief sketch of the trajectory of these ideas in Cohen's writing beyond the 1880s and beyond his theoretical philosophy. I argue that, throughout the remainder of Cohen's career, he had the resources to explain why historical investigation is required to reveal timelessly valid ideas, and why it is required to justify a philosophical account of those ideas.

However, before any of that, I must make an important qualification. My focus mostly emphasizes Cohen's writings from the late-1870s and 1880s. While some discussion of Cohen's earlier writings is necessary, those earlier writings are less telling for my purposes. Prior to the late-1870s, Cohen's commitment to the timeless validity of formal conditions of experience is arguably equivocal,⁵ and so the questions I am considering do not arise with perfect clarity.

⁵ See Schmidt 1976 and Edel 2010 for the suggestion that into the 1870s, Cohen maintained a concern with understanding the subjective, psychological sources of knowledge, in a manner that is not obviously consistent with his commitment to principles within knowledge that are timelessly valid.

Also, while I consider Cohen's mature (post-1900) System of Philosophy in §7, I do so with only a very limited goal: to track the trajectory of certain ideas I identify in his writings from the late-1870s and 1880s. Insofar as my account of Cohen's mature philosophy is this unambitious, my account of his views of the role of history in philosophical method remains incomplete. I hope at least it points to where further investigation would be fruitful.

§2. *One role that history plays in the transcendental method.*

For Cohen, the aim of a critical theory of knowledge (or what in the 1880s he calls the "critique of knowledge" [Cohen 1883: §8]) is to identify principles and laws within mathematical natural scientific theories that ground experience and thereby make it objective. Starting in the first edition of *Kant's Theory of Experience* and continuing into the 1880s, he calls those principles "formal conditions" of experience (Cohen 1871: 93ff and 1885: 214). He also calls them "constituting conditions of experience," and on his view they are constitutive of experience's possibility (Cohen 1871: 94/1885: 217).⁶

Further, on Cohen's account the critique of knowledge identifies these formal conditions using a specific method, namely, the "transcendental method." For Cohen, that method takes as its starting point the theories of mathematical natural science, and then investigates them in order to identify the formal conditions contained in them (see Cohen 1877: iv and 1885: 66ff). By means of the transcendental method, it is thus possible to identify and exhibit these formal conditions in their systematic connections to one another, and thus (Cohen thinks) to explain the validity of the scientific theories that contain them.

⁶ See also Cohen 1885: 198 and 249ff. Translations from Cohen are my own, except where otherwise noted.

Crucially, for Cohen the formal conditions of experience are objects of knowledge that are “universally valid and strictly necessary” (Cohen 1871: 10/1885: 99). In that respect, they contrast with principles that have a merely “relative” validity or necessity. In other words, Cohen assigns to these principles a validity that is timeless: their validity does not vary over time, or from one historical period to another. Thus Cohen insists that the “transcendental validity” of the formal conditions of experience stands apart from the “historical-developmental genesis” of them (Cohen 1885: 198).

Nevertheless, for Cohen history is required for philosophy done according to the transcendental method. At the very least, the sheer number of pages that Cohen devotes to history suggests that he thinks it is required for that philosophy. For example, more than half of the *Principle of the Infinitesimal Method and its History* (1883)⁷ and almost all of the long introduction Cohen adds to the second edition of *Kant's Theory of Experience* are devoted to historical surveys of his topics, to say nothing of the fact that all three of his Kant books are ultimately works in the history of philosophy.

One passage that strongly suggests he thinks history is required for a critical account of knowledge comes in his early essay “On the Controversy between Trendelenburg and Kuno Fischer.” There, Cohen is prompted to reflect explicitly on the relation between history and philosophy because that relation was already an issue in the Trendelenburg-Fischer debate. Trendelenburg had criticized Fischer’s interpretation of Kant as historically inaccurate -- a criticism that Cohen accepts, despite also not accepting Trendelenburg's own objections to Kant.

⁷ Only one of the *Infinitesimal Method*'s three parts is called “History.” However, it is the longest section of the book. Further, more than half of the first, introductory part is also devoted to history (§§28-49), surveying the development of the infinitesimal concept from the ancient period to Barrow, just prior to Leibniz and Newton. Together with the second, explicitly historical part of the book, Cohen’s historical survey takes up well over half the book.

Cohen thus argues that, in the history of philosophy, the twin aims of systematic analysis and “documentary faithfulness” are mutually reinforcing. In the context of this view, Cohen insists that, while the object of philosophical analysis, a “thought,” is the product of a rational process, nevertheless “the collected mass of historical facts must be brought to bear” on its analysis Cohen (1928 [1871]: 272).⁸ Thus, here Cohen is perfectly explicit that history is required for the kind of systematic philosophical task he wants to undertake.

Still, Cohen’s remarks on history in this early dispute do not decisively establish that, for him, historical investigation is required to first reveal the formal conditions of experience. After all, while that essay was written at the same time as the first edition of *Kant’s Theory of Experience*, in which Cohen uses something like the transcendental method to identify the formal conditions of experience, it is less clear what method Cohen is using in that essay itself.

For our purposes, a more telling text is the *Infinitesimal Method*. Written six years after Cohen first articulated the transcendental method in *Kant’s Foundations of Ethics* (1877), it is clearly an application of that method with the aim of identifying a particular formal condition of experience, namely, what Cohen calls the principle of reality. Further, the *Infinitesimal Method* contains several important passages where Cohen reflects explicitly on the importance of history for his systematic philosophical aims in the book. He is explicit that historical investigation is required to reveal the formal conditions of experience.

The clearest passages for our purposes come in the forward to the *Infinitesimal Method*. Although short, it is given over almost entirely to explaining and justifying Cohen’s use of history in the pursuit of systematic philosophical aims. Cohen makes explicit his view that history is required for the critical project he is undertaking in the book. He says, “[n]owhere was

⁸ This translation is Lydia Patton’s.

there such a need for me [*Nirgend ist es mir so sehr Bedürfniss gewesen*], and nowhere did it seem so immediately useful, to pursue a systematically decisive idea at the same time with its historical development” (Cohen 1883: iii). There was, Cohen says, a “need” for him to pursue his systematic aims not just systematically, but with historical investigation as well. This is a point he returns to in the long introductory section of the *Infinitesimal Method*, perhaps because he is aware that some readers will think it is odd that he is taking such a historical approach to systematic philosophical questions (Cohen 1883: §15).

Further, in the forward to the *Infinitesimal Method*, Cohen offers a brief explanation for why he felt the need to pursue his systematic aims with so much historical investigation. That explanation is framed by Cohen’s response to the problem that philosophers who talk about mathematics (as he is about to do) can come off as dilettantes. He says, “Hegel made a fool of himself precisely with his trainwreck of a criticism of” the concept of the infinitesimal (Cohen 1883: iii). Cohen then explains how he proposes to avoid Hegel’s mistakes:

I have removed the danger of dilettantish talk about mathematical questions, which belong to the problem in another context, by means of the historical context in which the origin of the idea was considered, because for my purposes I kept principally to the sources. *What is taken to be a foundation, or as one says, a logical presupposition of science, can initially be revealed only by a historical perspective.* (Cohen 1883: iii-iv; emphasis added)

Again, Cohen makes explicit that his critical project in the *Infinitesimal Method* requires historical investigation. The transcendental method aims to identify the formal conditions of experience. Here, Cohen proposes to identify the particular formal condition that is the principle of reality and, closely related to it for him, the infinitesimal concept. But now he claims that he is

taking a historical approach to the investigation of that concept, keeping “principally” to its historical “sources.”

However, Cohen tells us more than just the bare fact *that* historical investigation is required for a critical account of knowledge done according to the transcendental method. He tells us *how* historical investigation is required. He informs us in this passage that the formal conditions of experience he aims to identify (the “logical presupposition[s] of science”) “can *initially be revealed only by a historical perspective.*” That is, Cohen insists, historical investigation is required to first reveal the formal conditions of experience to the critical philosopher.

§3. *A second role that history plays in the transcendental method.*

So Cohen himself insists that historical investigation is required to reveal the formal conditions of experience. However, if we pay systematic attention to how he argues for his own views in the *Infinitesimal Method*, we will see that history plays another, closely related, role for him. Cohen’s own arguments reveal that history is required for the critical philosopher’s justification of their accounts of what is (or is not) a formal condition of experience. That is, the critical philosopher cannot justify their views about what is (and is not) a formal condition of experience without appealing to the history of science, mathematics, and philosophy.

Very often in Cohen, we find that historical surveys take the place of systematic definitions and arguments for his views. Where we might expect to find a systematic argument, we more often find a detailed historical survey of the topic or concept at hand. Cohen’s historical surveys are thus unavoidable if we want to understand the meanings of Cohen’s key concepts or his reasons for holding the views that he holds.

Consider how Cohen typically introduces concepts in the course of his exposition. He often declines to define a concept in systematic detail. Instead, he rehearses a history of how the concept was introduced into philosophy (or mathematical natural science) and how its meaning was shaped over the course of the history of philosophy (or mathematical natural science). He does this even for the concepts that are most central to the views he means to defend.

For example, consider the concept of *idealism* as Cohen articulates it in the long historical introduction he adds to the second edition of *Kant's Theory of Experience*. One aim of that introduction is precisely to articulate and defend Cohen's conception of that concept. But he does not define it in detailed, systematic terms. Instead, he surveys the history of the view that *mathematical ideas* give knowledge its validity, and how that view was developed in the hands of Plato, Descartes, Leibniz, and Kant (Cohen 1885: 8-17, 22-43, 55-66). Cohen's treatment of the central concepts of the *Infinitesimal Method* (for example, the concepts *limit*, *differential*, *continuity*, *intensive magnitude*, and *reality*) is similar: for each concept, Cohen declines to give a systematic definition, and instead gives the concept meaning by rehearsing its origins and development in the history of mathematics, physics, and philosophy.

Even more telling, consider the role that history plays in how Cohen argues for his views, and against the views' he means to reject. He only rarely defends his views with straightforward arguments in the form of premises entailing a conclusion, even for the central views he aims to establish in a given text. He likewise often does not offer objections to or arguments against his opponents' views. In the place of those arguments, he rehearses arguments in various episodes in the history of philosophy, with certain historical positions standing in for his own views, and other historical positions standing in for the views he wants to reject.

Consider Cohen's concept of the infinitesimal -- a concept that is closely connected to the principle of reality, the formal condition of experience he is most concerned with in the *Infinitesimal Method*. Throughout that book, Cohen aims to establish that a certain conception of infinitesimals is right: roughly, a magnitude is infinitesimal just in case it is greater than 0 but no finite magnitude is small enough to equal its value.⁹ He likewise aims to show that certain conceptions of infinitesimals are wrong, and should be rejected. These views include any attempt to conceive of infinitesimals as "negligible" finite magnitudes (Cohen 1883: §35), or to define infinitesimals by appeal to some given, very small finite value (e.g., Cohen 1883: §§54, 55, 67). But nowhere in the *Infinitesimal Method* does Cohen offer a systematic argument in favour of the former conception of infinitesimals or against the latter conceptions. Instead, he works through various episodes in early modern mathematics, physics, and philosophy, highlighting figures who developed conceptions of infinitesimals (or continuity, limits, or differentials) that express some key aspect of the former view. He contrasts those figures' views with the views of other figures who endorse the latter (for Cohen, wrong) views.¹⁰

For example, consider Cohen's discussions of Varignon's claim that the infinitesimal is "inexhaustible" (Cohen 1883: §55) and Leibniz's suggestion that the infinitesimal is "the untermiated" (Cohen 1883: §55), and so it cannot be measured by a finite value. He praises

⁹ For a detailed account of Cohen's concept of infinitesimal, see Edgar (2020c).

¹⁰ I have defended this interpretation of Cohen's argument for his conception of the infinitesimal concept at length elsewhere (see Edgar [2020c]). Still, some readers might object to my claim that Cohen's survey of the history of mathematics (and physics and philosophy) is *essential* for understanding his reasons for his conception of the infinitesimal. It is tempting to think that Cohen's conception of infinitesimals depends primarily on his interpretation of Kant's Anticipations of Perception. I do not wish to deny the importance of the Anticipations for Cohen's argument in the *Infinitesimal Method*. But that does not undermine my present claim that Cohen's *historical surveys* of mathematics (and physics and philosophy) play an essential role in his arguments. Cohen's explicit discussion of Kant's Anticipations appears as only three sections in the midst of a historical survey that takes up more than half of the book. Cohen interprets the Anticipations by placing them in a *detailed, context-sensitive, and comprehensive history* of the concept of the infinitesimal. My claim here is that *that* larger historical context is essential for understanding Cohen's particular interpretation of Kant's Anticipations, and thus his concept of the infinitesimal.

these views. In contrast, he rejects Leibniz's claim that the infinitesimal might be understood by analogy to a grain of sand in comparison to the whole earth (Cohen 1883: §§55, 67), which is an imagistic metaphor that smacks of treating the infinitesimal as negligible. Understanding Cohen's reasons for his concept of the infinitesimal requires us to understand why he praises one of Leibniz's characterizations of the infinitesimal (along with Varignon's), but rejects another.

Thus for Cohen, the justification for his views of the infinitesimal concept emerges from his total narrative account of the infinitesimal in early modern mathematics, physics, and philosophy. In that sense, Cohen offers no argument for his own conception of infinitesimals that can stand independently of his historical narrative. Rather, this is a case where, as Cohen puts it in the forward to the *Infinitesimal Method*, “[n]owhere was there such a need for me, and nowhere did it seem so immediately useful, to pursue a systematically decisive idea at the same time with its historical development” (Cohen 1883: iii).

Finally, it is worth emphasizing an important feature of the historical surveys that Cohen offers in the place of systematic definitions and arguments: they are detailed and context-sensitive. Indeed, Cohen seems committed to what we might call historical contextualism. By *historical contextualism*, I mean the conjunction of two commitments. First, Cohen aims to understand historical figures, at least in the first instance, on their own terms and representing their views accurately.¹¹ Thus, for example, Cohen often uses historical figures' own terminology to express their views, avoiding anachronistic vocabulary in his accounts of those

¹¹ Contextualism, as I mean it here, thus involves what Christia Mercer has recently called the aim of *getting things right* (Mercer 2019). In attributing this aim to Cohen, I follow Beiser (2014: 467, 483) and Beiser (2018: 61ff). Others, such as Kühn (2009), argue that Cohen's interpretation of historical figures is guided, first and foremost, by his own systematic philosophical considerations. I cannot here mediate this disagreement. I will only note that there might be less disagreement here than it seems: by the standards of Cohen's time, his approach to the history of philosophy and science stood out for (what I call) its contextualism; but also, by *our* standards of scholarship in the history of modern philosophy and science, we can certainly see the ways that Cohen's interpretations of historical figures tilt in the direction of his own views.

views. Second, Cohen aims to understand historical figures' views by placing those views in the broader intellectual context of their historical period. In so doing, he sometimes reveals his awareness of what we now call the distinction between actors' and analysts' categories.

Cohen's historical contextualism is clear in the *Infinitesimal Method*, in his discussions of theorizing about infinitesimals and limits before Leibniz. Consider how, in his discussions of early modern analytic geometry, he describes Kepler's (Cohen 1883: §38) and Fermat's (Cohen 1883: §39) views in their own, idiosyncratic terminology. Likewise, his discussion of Newton's calculus is expressed in Newton's vocabulary of fluxions and fluents (Cohen 1883: §§62-66), despite the fact that Cohen's own concern is with *infinitesimals*. Cohen draws out the point he wants to take from Newton about *differentials* (and the relation between the finite and the infinite) only after he has presented Newton's views in Newton's own vocabulary (Cohen 1883: §67).

Moreover, Cohen is often at pains to capture the broader intellectual motivations for a figure's concern with a philosophical problem, and how those motivations differ between figures and between historical periods. Over the course of Cohen's history of the concept of the infinitesimal in the early modern period, he notes the following as (some of) the motivations driving a concern with infinitesimals: Leibniz's psychology of perception (Cohen 1883: §51); his theory of monads (Cohen 1883: §51); his concern to give a definition of number (Cohen 1883: §53); problems in his physics (Cohen 1883: §§49, 53, 56); Newton's metaphysical concern with the nature of space and time (Cohen 1883: §64) as well as his physics (Cohen 1883: §§62, 64).

Pulling back from the details of Cohen's history of calculus, the important point for our purposes is this. In the *Infinitesimal Method*, Cohen is concerned to defend a particular concept of the infinitesimal and its connection to the formal condition of experience he calls the principle

of reality. But Cohen's arguments in defense of those views do not stand independently of his detailed, context-sensitive historical surveys. That is, as Cohen presents his views, those historical surveys are required for their justification.

We have thus identified the two roles that history plays in critical philosophy for Cohen: as he says, history first reveals the formal conditions of experience; but then, as Cohen's own arguments show, history is also required for the critical philosopher's *justification* of the views about what those formal conditions are (and aren't).

§4. The origins of Cohen's teleological conception of history

I now turn to my second principal claim, namely, that Cohen has the resources to explain why history plays the role that it does in critical philosophy as he conceives it. That is, we need to see *why* Cohen thinks that the formal conditions of experience are first revealed by investigation into the history of science. Likewise, we need to see *why* the critical philosopher has to appeal to history to justify their views about what the formal conditions of experience are.

It is helpful to take a genealogical approach to finding these explanations. For the resources Cohen has to answer these questions are ones he develops out of background views of history that he inherits from some of his most important teachers and mentors, including Zacharias Frankel, Heinrich Graetz, Adolf Trendelenburg, and Heymann Steinthal.¹²

This is hardly an exhaustive list of his important influences. But while incomplete, it at least serves to illustrate that, at every major stage of Cohen's education -- as a rabbinical student in Breslau, as a philosophy student in Berlin, and as a young researcher in Berlin in the years

¹² I draw the biographical facts about Cohen's education from Zank (2000), Wiedebach (2011), and Damböck (2017).

immediately after he earned his doctorate in 1865 -- Cohen was influenced by teachers who had robustly teleological conceptions of history.

Further, these teachers had views that Cohen would later develop and adapt in the context of his critique of knowledge and later writings. Specifically, Frankel, Graetz, and Trendelenburg all held (i) that there are timelessly valid ideas; (ii) that history develops progressively towards the complete articulation of those ideas; and crucially (iii) that historical investigation is required to reveal the content of those timelessly valid ideas. Steinthal, for his part, held that history has a teleological structure, and that progress through history consists in concepts coming to have increasingly universal meanings. We will see in §6 that Cohen combines these different views, and in so doing develops the resources to explain why, on his account, historical investigation is required to reveal the formal conditions of experience and to justify a philosophical account of them.

Our ultimate aim is to understand Cohen's view of the role of history of science in his critique of knowledge and his transcendental method. But for our purposes in this section, we are interested in the views that Cohen, as a student, might have learned about history *per se*. Consequently, we need to take account of what, say, Trendelenberg taught Cohen about the structure of the history of *science*. But we should also take into account the views of the history of culture that Steinthal taught, and the views of the history of Judaism that Frankel and Graetz taught. Despite not being histories of philosophy or science (narrowly construed), they can shed light on how Cohen, in the 1870s and 1880s, came to think about the structure of the history *per se*, and thus the history of philosophy and science.

4.1 Zacharias Frankel and Heinrich Graetz

Before Cohen began any formal study of philosophy, he spent four years studying to be a rabbi at the Jewish Theological Seminary in Breslau. There, the seminary's first Director, Zacharias Frankel, was an important mentor for Cohen, and his history professor was Heinrich Graetz.¹³ They belonged to a movement in Jewish scholarship called *Wissenschaft des Judentums*. Influenced by critical philological and historical methods in German universities, the movement consisted above all in the project of studying Jewish history "critically." Although Frankel and Graetz had somewhat differing views of the application of critical scholarly methods to ancient Jewish texts, they both held that, for example, ancient accounts of the authorship of sacred texts should be scrutinized (and even rejected) using philological and historical methods. Cohen was an important disciple of this movement, and taught in the years before his death at the *Hochschule für die Wissenschaft des Judentums* in Berlin.

Both Frankel and Graetz were historical contextualists in the sense I defined above. They aimed to identify the essence or idea of Judaism, but thought detailed historical investigation was required for that task. Frankel argues that the idea of a people "constitutes the truest content of its history," but the content of that idea is revealed by the people's laws, which evolve and develop through its history (Frankel 1852: 243).¹⁴ Consequently, he maintains "[h]istory. . . must not be construed and arranged a priori, according to preconceived concepts" (Frankel 1860: 125).

¹³ Cohen had a warm relationship with Frankel but a prickly one with Graetz, and Cohen ultimately rejected Graetz's maximally particularist view of the nature of Judaism. Nevertheless, while Cohen does not end up with a conception of history and how to do it that is in every respect exactly like Graetz's, his own remembrance of Graetz makes it clear how much he admired him as a historian (Cohen 1924). Manuel Joël also deserves mention in this list as Cohen's history of philosophy teacher at the Breslau Seminary. I omit discussion of him here for considerations of space, but see Adelman (2010: 110ff) for discussion of his influence on Cohen's conception of *science*.

¹⁴ Translations from Frankel are my own.

Graetz, for his part, opens his 1846 essay, “The Structure of Jewish History,” by mocking precisely the idea that the essence of Judaism could be known prior to detailed historical investigation (Graetz 1975 [1846]: 63-4). He insists instead that the content of the idea of Judaism is revealed only in Jewish history. There is thus no way to know the content of that idea in advance of historical investigation, and no way to use the idea as a criterion for distinguishing significant from insignificant periods in Jewish history. Consequently, Jewish historians, indeed the movement of *Wissenschaft des Judentums*, must be concerned with the *totality* of Jewish history, not just select periods of it (Graetz 1975 [1846]: 65). Hence the sheer size of Graetz’s own attempt to survey Jewish history: his *History of the Jews*, published over the period 1853-1876 (including the years when Cohen was his student), runs to eleven volumes.

At the same time, both Frankel and Graetz insist that the idea of Judaism has a timeless validity. As Graetz puts it, the idea of Judaism is “the soul which animates and guides the organism of Judaism” (Graetz 1975 [1846]: 65). Indeed, both Frankel and Graetz embed their views of a timelessly valid idea in a larger, teleological conception of history. On this conception, the idea of Judaism is the telos of Jewish history. For Frankel, Jewish history is not really *history* so long as it is conceived as “an unbroken series of sufferings. . .” But as soon as it reaches its end, “the electric spark breaks out, which illuminates the whole great series and reveals its side of light; one recognizes that it [that is, Jewish history] was sustained by a living spirit - and this is the very object of history. . .” (Frankel 1852: 523)

For Graetz, “Jewish history, in all its phases, . . . exhibits a single idea” and “in fact, it constitutes a concrete explication of a fundamental concept” (Graetz 1975 [1846]: 65-66). That is, for both Frankel and Graetz, as Jewish history unfolds, it explicates and makes concrete

aspects of the idea of Judaism that had previously been only latent. Thus the complete explication of the idea of Judaism is the end towards which Jewish history unfolds.

4.2 *Adolf Trendelenburg*

No less than Frankel or Graetz, Trendelenburg has a teleological conception of history. He held the chair in philosophy in Berlin, and was both a historian of ancient philosophy and a systematic metaphysician. His best-known work is his *Logical Investigations*, which first appeared in 1840, but he also wrote several important books of Aristotle scholarship. Trendelenburg taught Cohen when Cohen came to Berlin as an undergraduate, and later served with Steinthal on Cohen's doctoral dissertation committee.

In some works, such as his books on Aristotle, Trendelenburg is concerned principally to get Aristotle and other figures right on their own terms and to understand their philosophical views by placing those views in their historical contexts. For example, in Trendelenburg's critical notes on Aristotle's logic, he provides paragraph by paragraph exegesis of Aristotle's text, giving careful reconstructions of Aristotle's arguments. Trendelenburg is careful to distinguish actors' categories from analysts' categories (Trendelenburg 1898 [1836]: 28, 29), and he explicates Aristotle's doctrines by appeal to Aristotle's intellectual context, for example, to ancient Greek practices in astronomy (Trendelenburg 1898 [1836]: 29).

In his *Logical Investigations*, Trendelenburg has his own systematic aims. While he pays less attention to fine-grained historical detail than he does in his Aristotle interpretation, the views he defends are even more instructive for our purposes. Trendelenburg aims to defend what he calls the "organic worldview." On his view, the world is an organic whole, and each individual part or aspect of the world constitutes a member of that whole. The sciences, when

sufficiently mature, reflect that organic structure: the individual sciences are unified into an interconnected, organic whole that has the same organic unity that the world has. For Trendelenburg, it is the task of philosophy (or, in his terms, logic) to articulate the interconnections between the individual sciences that constitute their organic unity. Thus for Trendelenburg, the organic worldview is the “principle” of the sciences and philosophy (Trendelenburg 1862: viii).¹⁵

Two points about Trendelenburg’s conception of the organic worldview are important for us. First, that worldview is universally, and so eternally, true (Trendelenburg 1862: 6). But second, philosophy develops an increasingly articulated conception of that worldview through history. Trendelenburg thinks the individual sciences develop in a scattered manner at different points in history. At first, they appear unconnected, not part of a larger whole. But as those sciences develop, it becomes possible to begin recognizing how they in fact comprise a unified, interconnected whole (Trendelenburg 1862: 5). It falls to philosophy to articulate the organic worldview to the extent possible, given the particular stage of development that the individual sciences are at. As Trendelenburg puts it, it is philosophy’s task to “seek out and present the idea of the universal in the particular” (Trendelenburg 1862: 6). Were it possible to consider all the individual sciences when they were complete -- as he puts it, when “the universe [is] recreated by the knowing spirit” (Trendelenburg 1862: 6) -- philosophy could represent the individual sciences as a “whole organism,” where each individual science is represented as a member of the whole. But Trendelenburg maintains that a complete articulation of the organic worldview lies in an infinitely distant future (Trendelenburg 1862: 6). As the sciences develop, philosophy can approach the complete articulation of the organic worldview, but it can never

¹⁵ See Beiser (2013): 32ff for a more thorough account of Trendelenburg's organic worldview. Translations from Trendelenburg are my own.

reach it. Thus Trendelenburg's conception of the organic worldview is explicitly teleological: for him, the realization of it -- that is, the complete unification of the individual sciences into an organic whole -- is the end towards which the history of science and philosophy progresses.

A last point about Trendelenburg is important. He argues that the idea of the organic worldview is revealed to philosophy in its own history, especially in the works of Aristotle and Plato. More generally, he argues that the history of philosophy is necessary and relevant to systematic philosophy, providing warnings to the systematic philosopher about mistakes to avoid, and hints about the views the philosopher ought to adopt (Trendelenburg 1846: i-ii). However, even when Trendelenburg conceives of history of philosophy as serving the needs of systematic philosophy, he maintains that history can serve those needs only when the philosopher initially takes pains to get the history of philosophy right on its own terms. As he puts it, “[t]he first duty of the researcher is to know history in its distinctiveness...” (Trendelenburg 1846: viii). Thus even when philosophers aim to discover timelessly valid truths, Trendelenburg thinks those truths are first revealed by philosophy's history.

4.3 Heymann Steinthal

Like Trendelenburg, Steinthal served on Cohen's dissertation committee in Berlin, but he was also a close mentor to Cohen during the years immediately after Cohen earned his doctorate.¹⁶ Steinthal was a philosopher and philologist, and was, along with Moritz Lazarus, a founder of the discipline of *Völkerpsychologie*, which they conceived as the investigation of the spirit of different cultures at different stages in history.

¹⁶ See Wiedebach (2011) for an especially detailed account of this period.

No less than Trendelenburg, Steinthal was a historical contextualist. In a series of books he wrote on the history of language throughout the 1850s and 1860s, he supports his historical claims with exhaustive etymological arguments, as well as detailed surveys of the vocabulary, grammar, and style of the language in various ancient texts. Steinthal likewise maintains that historical figures and texts must be understood in relation to their broader historical contexts. On his view, *Völkerpsychologie* stands in various relations of mutual interdependence with other historical disciplines, such as history of philosophy and history of culture. For example, the history of language illuminates the history of culture and is a complement to the history of philosophy (Steinthal 1863: 3).¹⁷ Thus historical texts in philosophy must be interpreted in light of an intellectual context that includes the relevant period's language, science, and culture.

Steinthal also has a teleological conception of history, though his commitment to that conception is more complicated than it is in Frankel, Graetz, or Trendelenburg. For Steinthal's teleological conception of history is one strain in his writing that sits in an uneasy tension with another strain that aims to explain historical, *Völkerpsychological* processes in terms of purely mechanistic laws of association.¹⁸

However, we in no way minimize that ambivalence in Steinthal's views if we recognize the strain in his writing on history that is unabashedly teleological. That strain is impossible to ignore in his *Philosophy, History, and Psychology* (1864). For example, one of the organizing ideas of that book is a distinction between two different kinds of movement of spirit. One kind of movement is cyclical (Steinthal 1864: 32). Steinthal repeatedly likens this movement to natural, causal-mechanical processes like earthquakes or rivers filling with silt (Steinthal 1864: 32, 46).

¹⁷ See also Steinthal (1864).

¹⁸ See for example Lazarus and Steinthal (1860: 10-11) See Kusch (2019) for a more detailed account of the opposing strains in Steinthal's (and Lazarus') views.

He claims this kind of movement does not increase the “value” of spirit (Steinthal 1864: 32). In contrast, there is also movement of spirit that is progressive. Steinthal is explicit that this movement is teleological (Steinthal 1864: 32n). It does increase the “value” of spirit (Steinthal 1864: 40, 46). In this kind of movement, Steinthal allows that spiritual decay is still a possibility, but when it happens, it sews the seeds of still further spiritual progress (Steinthal 1864: 32).¹⁹

For our purposes, this distinction is important because Steinthal uses it to define the difference between peoples he calls “unhistorical” and “historical” (Steinthal 1864: 30-32, 39-40, 46). On his account, some peoples never develop in ways that increase the value of spirit, while others do develop that way. Strictly speaking for Steinthal, only the latter are “historical.” Thus on his view of what counts as history, it is progressive and thus teleological.

While Steinthal is clear that history has this progressive structure, he is less clear about what exactly it progresses towards. He says that he “emphasize[s] that history has a teleological character; but it does not follow from this that we must now also posit an ultimate end to history” (Steinthal 1864: 32n).²⁰ The context leaves it unclear what exactly he means by this: perhaps that historical progress will never end, or that the history of spirit is not progressing towards a single, individual ideal.

That said, Steinthal is perfectly clear about at least one ideal that the history of spirit progresses towards. On his view, progress through history involves the development of concepts from representing the particular meanings of individuals towards representing more and more universal meanings shared by entire peoples. Steinthal repeatedly uses the image of a ladder to describe that development (Steinthal 1864: 3, 14). Thus for him, universality of concepts is an

¹⁹ This is a point Steinthal makes repeatedly. See also Lazarus and Steinthal (1860: 63) and Steinthal (1863: 267, 380).

²⁰ My translation.

end that history progresses towards, and as a people's concepts become more universal, the "value" of their spirit is thereby increased.

Steinthal's conception of progress through history had a direct influence on Cohen: during the period that Cohen was studying with Steinthal in the 1860s and writing *Völkperpsychologie*, he echoed Steinthal's view that progress in knowledge consists in moving away from concepts representing the particular sensory experiences of individuals and towards representing more universal meanings shared by entire peoples (see especially Cohen 1868: 401, 420-1).²¹

To be sure, there are important differences between the philosophical projects and views of Frankel, Graetz, Trendelenburg, and Steinthal. However, despite the differences, there are also similarities that are important for us to recognize. First, there is no difficulty seeing when in Cohen's education he was exposed to historically contextualist approaches to the history of philosophy. Frankel, Graetz, Trendelenburg, and Steinthal are all committed to understanding historical figures and texts on their own terms and in the contexts of their historical periods. Just as importantly for our purposes, all four maintain robustly teleological conceptions of history.

Further, there are important similarities between Frankel's, Graetz's, and Trendelenburg's teleological conceptions of history. Like Cohen later would, each maintains that (i) there are timelessly valid ideas, (ii) history develops progressively towards the complete articulation of those timelessly valid ideas, and (iii) historical investigation is required to reveal the content of those timelessly valid ideas. For Frankel and Graetz, the idea of Judaism is timelessly valid. But while they insist that it is impossible to have a fully articulated account of

²¹ See my (2020b) for a more detailed discussion of Steinthal's influence on Cohen on this point and Wiedebach (2011: 301) for discussion of the role that language plays in this process for Steinthal.

the essence of Judaism in advance of that history's end, detailed investigation into that history is nevertheless how we come to have any knowledge of that essence at all. For Trendelenburg, the organic worldview is timelessly valid. We could have a complete articulation of it only when "the universe [is] recreated by the knowing spirit" (Trendelenburg 1862: 6) -- that is, when the history of science reaches its (infinitely distant) end. But in the meantime, it is the history of philosophy (especially Plato and Aristotle) that provides our first hints about what the organic worldview is.

Steinthal's case is different, since it is unclear that he thinks history unfolds towards a single, univocal end. But for our purposes, what is most important in Steinthal's view is this: on his teleological conception of history, a people's spirit increases in "value" as its concepts progressively come to have more universal meanings. That is, for Steinthal the history of knowledge is characterized by progressive development towards ever-increasing universality.

These teleological views of history are ones that Cohen takes up and adapts for his own purposes in his critique of knowledge and beyond. Importantly for our purposes, he combines and develops these views in a way that gives him the resources to explain why, on his view, historical investigation is what reveals the content of the timelessly valid ideas he is concerned with.

§5. Cohen's doctrine of the thing in itself

Nevertheless, Cohen never takes it as his explicit aim to explain why historical investigation is required to reveal the formal conditions of experience and to justify a philosophical account of them. Likewise, at least in the context of his critique of knowledge, it is never his explicit aim to articulate a teleological conception of history. Rather, these views

emerge from a different context, as a consequence of his efforts to overcome a problem he faces in his moral philosophy, as he presents it in *Kant's Foundations of Ethics*. This problem in Cohen's moral philosophy is thus where we need to start, if we are to see his explanation for why historical investigation is required to reveal the formal conditions of experience and to justify a philosophical account of them.

Cohen begins his *Kant's Foundations of Ethics* with a methodological problem. He articulates the transcendental method, and argues that it is the proper philosophical method for critical philosophy (Cohen 1877: 24ff). The problem arises from the fact that the transcendental method cannot be applied in a critical ethics in the same straightforward way that it applies in a critical account of knowledge. In a critical account of knowledge, as we have seen, the transcendental method aims to identify the formal conditions of experience, to exhibit them in their systematic relations to one another, and thereby to explain the objectivity of experience. However, a critical ethics aims to provide the foundation for ethical concepts. But the foundation for those ethical concepts cannot be furnished just by formal conditions of experience, because the validity of "oughts" does not depend on anything in experience ever actually confirming them. That is, a moral concept might be valid even if no actual moral agents ever conform to its prescriptions. Thus, Cohen concludes, identifying the formal conditions of experience cannot explain the validity of moral concepts. How, then, does the transcendental method apply in the context of a critical ethics?

Cohen's strategy for responding to this problem is to argue that ethical concepts are required by a critical doctrine of experience. He calls this strategy his "epistemological justification" of ethical concepts (Cohen 1877: 15-6). He thus characterizes his aims in *Kant's*

Foundations of Ethics as demonstrating the connection between the doctrine of experience and ethics (Cohen 1877: 2, 4).

Cohen's account of how the doctrine of experience requires ethical concepts is developed out of his interpretation of Kant's Transcendental Dialectic and (at least implicitly) the Analogies of Experience. Appealing to events that are beyond the limits of possible experience, and thus non-temporal, would violate the principles of the Analogies of Experience. Further, the idea that explanations conforming to those principles should be complete -- that is, the goal of giving such complete explanations -- is a methodological guard against any temptation to explain individual events in experience by appeal to events beyond the limits of possible experience. For Cohen, that idea is "a means of protection for the physical explanations of the world series according to their conditions, against the derivation of its members from heterogenous principles" (Cohen 1877: 88-9).

However, that demand for complete explanations produces the Antinomies of Pure Reason. For example, the argument for the third Antinomy's thesis claims that a complete explanation of an event within nature must ultimately appeal to a kind of cause that stands outside of nature. But the argument for the third Antinomy's antithesis claims that any cause standing outside of nature would violate the principle that each event must be preceded by some other event in accordance with a law of nature. Thus, Cohen seems to argue, the resolution to the Antinomies is required to complete the critical doctrine that Kant's principles of the Analogies are the only permissible way to explain individual events within experience. Following Kant, Cohen takes that resolution to be the cosmological idea of the world, and to include the concept of freedom. The idea of transcendental freedom thus functions, according to Cohen, to describe

the limits of explanations of appearances, and also requires that, within the limits of possible experience, those explanations are never complete (Cohen 1877: 88).

Crucially for Cohen's aims in *Kant's Foundations of Ethics*, the concept of freedom is the highest ideal of ethics, an ideal that organizes and systematizes all other concepts of the critical doctrine of ethics. On his view, then, those ethical concepts are ultimately justified by the concept of freedom, which is in turn required by the critical doctrine of experience.

A striking feature of this account in Cohen is that much of the relevant Kant interpretation comes by way of an account of things in themselves and their distinction from appearances.²² The account of things in themselves that Cohen develops thus prepares the ground for his account of the Antinomies and the role of the concept of freedom for the critical doctrine of experience. But his discussion of things in themselves is most relevant for our purposes, since it is where we can most clearly see him develop a teleological view of the history of science and philosophy.

In giving an account of things in themselves, Cohen aims to answer at least two questions: what are things in themselves, and given that by definition they are unknown, what possible function can they have in a doctrine of experience? Indeed, his answer to the latter question is precisely that they remain unknown (Cohen 1877: 18, 28). His thinking is this. Any individual event within experience is explained or grounded by a law. As Cohen puts it, "laws are the realities that make the actual objective" (Cohen 1877: 20), or more simply, law *means* objective reality (Cohen 1877: 28). Larger patterns of phenomena within experience are explained, analogously, by still more general and comprehensive laws.

²² For a useful discussion of Cohen's interpretation of the thing in itself, see Deuber-Mankowksy (1999: 61ff).

However, this explanatory strategy breaks down when we come to *all* experience considered as a whole. For there is no way for a law both to remain limited to the sphere of experience and to subsume all of experience under a pattern that is more general and more comprehensive than all of experience. Thus there is a question about what could ground or explain the whole of experience. This question points us to, in Cohen's words, the "intelligible contingency" of experience (Cohen 1877: 30). We thus come to the idea of a limit to what can be known or explained within experience. Following Kant, Cohen calls the concept that defines this limit the thing in itself (Cohen 1877: 16). For Cohen, "the laws lead to the idea of an intelligible something, to a thing in itself" (Cohen 1877: 30-31).

However, the idea of a thing in itself is not just the idea of the limit of experience. It is the idea of the ground of experience: after all, we arrive at that concept by considering what would explain the whole of experience. However, the thing in itself is a ground that always remains unknown (Cohen 1877: 18). Thus for Cohen, the thing in itself is a methodological instrument of knowledge (Cohen 1877: 36). It is a concept that sets a methodological goal (albeit an unattainable one) of a complete explanation of all of experience. One of Cohen's characteristic ways of putting this point draws on Kant's Transcendental Dialectic:

if the conditioned is given, then the complete series of conditions, the unconditioned, which is represented as an object, is thought as a task. . . . It [that is, the unconditioned] is the idea of the thing in itself for the concepts of appearances. (Cohen 1877: 67)

For Cohen, the thing in itself is thus an idea in Kant's sense of an idea of something unconditioned. The concept of things in themselves is not constitutive of possible experience (Cohen 1877: 77). It can never result in knowledge. Rather, it is a regulative concept, and has the

indispensable methodological function of turning systematic unity into a “norm,” a norm of bringing concepts into agreement with one another (Cohen 1877: 78).²³

Cohen’s account of things in themselves is important for his attempt to establish the foundations of ethical concepts and to determine the systematic relation between the doctrine of experience and the critical ethics. At the same time, Cohen also indicates the importance of the concept of things in themselves for the critical doctrine of experience considered independently of ethics. He repeats and develops that account in subsequent writing in the 1880s.

In Cohen’s *Kant’s Foundations of Aesthetics* (1889), he repeats the claim that all experience has an “intelligible contingency,” which points to the thing in itself. He is led to this point by his concern with establishing the validity of the concept of *purposiveness*, even though (like ethical concepts) its validity is not established by appeal to (mechanical) laws within experience (Cohen 1889: 117-120). In the second edition of *Kant’s Theory of Experience* (1885), Cohen again argues that the right way to conceive of the thing in itself is as the ground of the totality of possible experience, but also that the thing in itself so conceived always remains unknown. That is, for Cohen, it is not possible for us ever to know the complete totality of formal conditions of possible experience. But once again that concept is a methodological tool for scientific investigation. It sets a task, and to be sure an infinite task (Cohen 1885: 665). For Cohen, the thing itself is a regulative ideal, the end or telos of scientific inquiry (Cohen 1885: 707).

²³ The year after Cohen published *Kant’s Foundations of Ethics*, he gave his inaugural lecture in Marburg, “Plato’s Doctrine of Ideas and Mathematics.” In it, he develops an interpretation of Plato that bears important similarities to his account of things in themselves. For reasons of space, I cannot here do justice to Cohen’s Plato interpretation. But I must add that, on his interpretation, ideas cannot be hypostatized, and must be understood as hypotheses (Cohen 1878: 15). Each hypothesis explains something about experience, but then, in turn, is in need of further explanation itself. Just as the thing in itself remains unknown, we never reach a final idea that explains all of experience.

§6. Cohen's teleological conception of history

With Cohen's account of the thing in itself clearly in view, we can finally return to his conception of history and the question of why, for him, historical investigation is required to discover the formal conditions of experience and to justify a philosophical account of them. Cohen's account of the thing in itself entails a robustly teleological conception of history -- one that echoes elements of the views held by Frankel, Graetz, Trendelenburg, and Steinthal. But Cohen does not simply reproduce his teachers' teleological conception of history dressed up in Kantian vocabulary. Rather, he combines views we saw in Frankel, Graetz, and Trendelenburg with a view we saw in Steinthal. The result is a view that provides the resources to explain why, for Cohen, historical investigation has the role it does for him in a critical account of knowledge.

First we need to see how Cohen's interpretation of the thing in itself entails a teleological conception of the history of science, mathematics, and philosophy. For Cohen, of course, the formal conditions of experience are universally, timelessly valid. But on his view, as we have just seen, the thing in itself is the complete articulation of the formal conditions of experience. As the complete articulation of the formal conditions of experience, the thing in itself is thus the goal that all scientific and critical philosophical progress aims to achieve. It is the goal that all scientific and critical philosophical inquiry progresses towards as it evolves through history.

Note here the echoes of Frankel, Graetz, and Trendelenburg: like them, Cohen maintains that history unfolds progressively towards the complete articulation of timelessly valid ideas. Further echoing Trendelenburg, Cohen maintains that the complete articulation of those timelessly valid ideas is a goal that will never be reached in the course of the actual history of science. For Cohen, the thing in itself always remains unknown and the complete articulation of the formal conditions of experience is an infinite task. Consequently, at any given stage of the

actual history of science, any critical philosophical account of those formal conditions will always remain partial, limited, or incomplete. Finally, we saw in §2 that Cohen thinks historical investigation is required to reveal the content of the timelessly valid ideas he aims to identify, that is, the formal conditions of experience. This commitment likewise echoes the views of Frankel, Graetz, and Trendelenburg.

However, in one very important respect, Cohen's interpretation of Kant's thing in itself also echoes Steinthal's view of the progress of concepts through history -- a view that Cohen himself had held in the 1860s. For Steinthal and the younger Cohen, as a people develops through history, their concepts will become more and more universal. Now, in *Kant's Foundations of Ethics*, Cohen's account of things in themselves entails the view that in the history of science, knowledge progressively becomes more and more general as it aims to explain wider domains of experience with more and more general laws.

We can thus see the influence on Frankel's, Graetz's, Trendelenburg's, and Steinthal's teleological conceptions of history on Cohen's interpretation of the thing in itself. But the details of Cohen's interpretation also allow him to go beyond his teachers' views. In particular, those details provide him with the resources to explain why historical investigation is required to reveal the formal conditions of experience, and why it is required for the critical philosopher to justify their account of what those formal conditions of experience are.

Remember Cohen's account of how we come to have the idea of the thing in itself as a regulative ideal. On his view, an event within experience is grounded by a law -- that is, a stable regularity that obtains within an otherwise changing domain of experience. Indeed, he thinks an individual thing or event is made objective when it can be shown to follow from a law (Cohen 1877: 20, 28). But that law itself needs to be grounded. It is made objective when it is shown to

follow from laws that are more general and more comprehensive than it -- that is, laws that remain stable over wider domains of experience. Thus, Cohen thinks, progress in science consists (at least in part) in showing that lower-level laws follow from more general and more comprehensive laws, and thus as science evolves through history it will tend to aim at establishing laws of ever-increasing generality and comprehensiveness. Further, remember that for Cohen this methodological drive continually to ground laws with further laws that are stable across ever-increasing domains of experience gives rise to the ideal of laws that would ground *all* of experience without exception. But for Cohen, that ideal just is the idea of the thing in itself, that is, the complete articulation of the system of formal conditions of experience (Cohen 1877: 30-31; 1855: 641).²⁴

Of course, the thing in itself always remains unknown. Thus at any stage in the actual history of science, mathematics, and philosophy, it is not possible to identify the complete system of formal conditions of experience. The critical philosopher has epistemic access only to the laws and principles of the scientific theories that are extant at their particular stage in history.

Nevertheless, the critical philosopher can still identify plausible candidates for laws and principles that have the status of formal conditions of experience. But doing so requires surveying the history of science up to that point. Attending to the history of science, the critical philosopher can identify elements of a theory that have remained stable across one theory's replacement with a newer theory that is successful across a wider domain of experience. That element might survive multiple changes in theory, where each new successor theory succeeds across ever-increasing domains of experience. Surveying this historical trajectory, the critical

²⁴ I note here without pursuing it, for Cohen, the objectivity of every object or law depends on its being grounded by more general, more universal laws. At some point in this hierarchy of laws, we will come to laws that can be grounded only by more universal laws that have yet to be established by science. Thus, to borrow Fiorato's evocative phrase, the "[g]round of being must be laid beyond its present" (Fiorato 1993: 2).

philosopher can identify elements in the theories of their own stage of history that have survived across a succession of theory changes. The identification of those elements is not certain. It will never amount to an identification of the complete system of formal conditions of experience. On the contrary, as an attempt to identify those formal conditions, it will always be limited, partial, and incomplete. However, the identification of elements in scientific theories that have remained stable across a succession of theory changes is the way the critical philosopher can at least identify plausible candidates for what might be the formal conditions of experience. But then, for the critical philosopher to identify those plausible candidates for what might be formal conditions of experience, they need a historical view of the progress of science.

We thus finally have Cohen's explanation for why history is required to reveal the formal conditions of experience and why it is required to justify the philosopher's account of what those formal conditions are. Surveying the trajectory that a succession of theories takes through the history of science is how the critical philosopher first identifies those laws and principles that have remained stable across ever-increasing domains of experience. That historical survey is thus required to identify laws and principles that are at least plausible candidates for formal conditions of experience. Thus Cohen insists that "[w]hat is taken to be a foundation, or as one says, a logical presupposition of science, can initially be revealed only by a historical perspective. (Cohen 1883: iii-iv).

Likewise, the critical philosopher must show the trajectory that a succession of theories takes through the history of science, in order to demonstrate which laws and principles remain stable through the trajectory. The historical survey of that succession of theories is thus required for the critical philosopher to justify their claims about what is (or is not) a plausible candidate for a formal condition of experience. Thus Cohen concludes in the *Infinitesimal Method* that

“[n]owhere was there such a need for me, and nowhere did it seem so immediately useful, to pursue a systematically decisive idea at the same time with its historical development” (Cohen 1883: iii).

With this explanation, we finally have a tolerably clear picture of the role that history plays in a critical account of knowledge and in the transcendental method, as Cohen conceives of that method. As Cohen insists, historical investigation is required to reveal the formal conditions of experience to the critical philosopher. Further, as his own argumentative methods show, he is also committed to the view that historical surveys are required for the critical philosopher to justify their accounts of what are (or are not) formal conditions of experience. Finally, for Cohen, this view of history’s role in the transcendental method is ultimately explained by the teleological conception of the history of science that is implicit in his interpretation of Kant’s thing in itself.

§7. Cohen’s teleological conception of history in his mature writings.

Before we can finish, we must see how Cohen develops these ideas in his mature, post-1900 writings. My aim in this section is very limited. A complete account of Cohen’s view of the role of history in a philosophy that aims to investigate timelessly valid ideas would have to consider, for example, his treatment of the concept of temporality in his *Logic of Pure Knowledge* (1902).²⁵ Here, I aim only to hint at how, in Cohen’s mature writings, he retains and develops the underlying reasoning I identified in the previous section: that is, his explanation for why historical investigation is required to first reveal timelessly valid principles, and then to justify a philosophical account of them. If anything, in his mature logic, ethics, and philosophy

²⁵ For just this account, see Fiorato (1993: Ch 3).

of religion, Cohen expresses that view of history's role in a critical philosophy even more emphatically than he had in earlier his writings. Further, he develops the underlying reasoning to explain that view in two different ways: once in his logic, and again, in a different way, in his ethics and philosophy of religion.

Cohen's *Logic of Pure Knowledge* is concerned centrally with what he calls "pure knowledge", that is, knowledge that is generated by pure thinking, which in turn is thinking that "may have no origin outside of itself" (Cohen 1914 [1902]: 13).²⁶ At the very least, for Cohen pure thinking and pure knowledge are not ultimately justified by appeal to sensible intuition, which has its origin outside of pure thinking. Rather, in the context of natural science, Cohen says the "specific expression" of pure knowledge is law (Cohen 1914 [1902]: 259). These laws constitute experience for Cohen, experience that pure knowledge must retain a connection to.²⁷ But most importantly for our purposes, experience in Cohen's sense is *historical*. He says, "[e]xperience indicates in the history of science, philosophy, and culture in general the problem which is directed at the sovereignty of theory" (Cohen 1914 [1902]: 401). That is, the critical philosopher's account of pure knowledge must be constructed from an investigation of the history of science, philosophy, and culture, because it is in that history that the philosopher finds the laws that are the "specific expression" of pure knowledge.

No less than in his earlier writings, Cohen embeds this view of the role of history in a critical account of knowledge in a larger, teleological view of history. In the last section, we saw two commitments at the center of that view of history: first, for Cohen law is what grounds

²⁶ I do not mean to suggest that Cohen's definition of "purity" is perfectly transparent. See Holzhey (1986: 175-8), Poma (1997: 80-3), Edel (2010: 392-401), and Beiser (2018: 196-8) for discussion.

²⁷ Cohen: "[i]t would be a false purity if it [i.e., purity] believed it could withdraw" from experience (Cohen 1914 [1902]: 401).

knowledge of nature and makes it objective; and second, a complete system of those laws -- thus a complete account of all experience -- is an infinite task. Cohen affirms both of these commitments in his *Logic*, but does so in a way that reflects broader developments in his views. In the *Logic*, in contrast with his earlier Kant books, Cohen no longer defends his own views as interpretations of Kant.²⁸ Consequently, when Cohen offers his teleological view of history in his *Logic*, he strips the view of any essential connection to Kant's thing in itself.

We have already seen that Cohen calls law, in the sense of the laws that constitute the foundation of mathematical natural science, the "specific expression" of pure knowledge. Echoing his views from *Kant's Theory of Experience* and *Kant's Foundations of Ethics*, he says that the object is an "abbreviation" for law (Cohen 1914 [1902]: 339). That is, law is what grounds the objectivity of knowledge. But further, for Cohen the complete system of these laws is a regulative ideal, an infinite task. Thus for example, in the context of considering how thinking both contains a multiplicity and is unified (and, to be sure, is unified by law), Cohen insists that the unification of multiplicity and unity is not some result that can be achieved conclusively. It is a task that never comes to an end (Cohen 1914 [1902]: 62-4). Likewise, the complete system of laws -- that is, the complete system of pure knowledge, or what Cohen calls the system of truth -- is the *end* of all knowledge: "we know the highest end of cognitions [*Erkenntnisse*] in the system of truth" (Cohen 1914 [1902]: 397).

As in Cohen's earlier writing, he is committed to all of the resources needed to explain why historical investigation is required for the philosopher to identify the laws that ground knowledge's objectivity. Only by tracing the development of those laws over the history of

²⁸ For detailed discussions of the evolution of Cohen's account of knowledge in this period, see Poma (1997: Ch. 5).

science can we identify laws that remain stable across multiple changes in theory, where each new theory succeeds across ever-increasing domains of experience.

Finally, we need to see how Cohen adapts the underlying reasoning of this view to fit the needs of his mature ethics and philosophy of religion.

In his *Ethics of Pure Will* (1904), Cohen argues that the highest ethical ideal is the idea of God. On his view, the idea of God is the idea of truth (Cohen 1904: 421). But more specifically, the content of the idea of God is the unification of nature and morality, of the domains of laws of nature and laws of ethics. On Cohen's view, ethical ideas set an infinite task: that is, those ideals can be achieved only in an infinitely distant future. But that ideal requires nature to be "eternal," that is, to exist for the infinite duration of time over which moral progress must take place (Cohen 1904: 428). Thus for Cohen, the history of humanity's moral progress, no less than the history of science, has a teleological structure insofar as it ought to unfold towards an ideal it will never reach.

To be sure, for Cohen the idea of God and the complete system of ethical laws that humanity strives to realize are timelessly, universally valid ideas. For Cohen, they are expressions of reason. Nevertheless, he thinks moral and political history is what provides the evidence that humanity is in fact making progress towards those timelessly valid ideals.²⁹ Further, as Cohen makes especially clear in his *Religion of Reason Out of the Sources of Judaism* (1919), the content of those timelessly valid ideas is first revealed to the philosopher by investigating the history of religion. The opening sections of Cohen's *Religion* are devoted in part to establishing just this methodological point: religion is the source of the ethical ideas of God and a complete system of ethical laws; but "[o]ne denies the possibility of knowing what

²⁹ See Wiedebach (1997: 126ff).

religion is if its substantive content is not uncovered out of its historical development” (Cohen 1972 [1919]: 1).³⁰ That is, the content of religious ideas, and so too the ethical ideas of God and a complete system of ethical laws, must first be “uncovered” from their “historical development.” Thus Cohen insists that history is required to play a role in philosophy, and that its role is to first reveal the content of timelessly valid ideas.

Cohen goes further in his *Religion*: he gives an explanation for why historical investigation is required to reveal the content of timelessly valid ethical ideas, and why it is required to justify a philosophical account of those ideas. The explanation starts with the observation that different peoples’ ideas of religion, at different points in history, are incomplete. The expressions of ethical concepts contained in those ideas of religion fall short of universality. Nevertheless, he insists, all ideas of religion contribute something to the idea of a religion of reason (Cohen 1972 [1919]: 7). Further, as particular peoples make ethical progress, they will tend to leave behind their ethical concepts that most fall short of universality, and will affirm the ethical concepts that better approximate universality. But then, by tracing the development of a people’s ethical concepts through history, the philosopher can attend to which of that people’s ethical concepts survives through that development, and thus which of their ethical concepts is most likely to be a part of a complete system of universal ethical laws. That is, for Cohen, by tracing the development of the idea of religion and the ethical concepts derived from religion, the philosopher makes visible “the universality, which, in spite of all social obstructions and despite all shortcomings, is able to wrestle its way into the history of a particular people” (Cohen 1972 [1919]: 8).

³⁰ I quote from Simon Kaplan’s translation of Cohen’s *Religion*. Also note Cohen’s insistence, echoing Frankel and Graetz, that the concept of *Judaism* can be determined only by recovering it from Judaism’s history (Cohen 1972 [1919]: 24; cf. 27ff).

To be sure, this account of why historical investigation is required to identify timelessly valid laws is different than the one we saw in Cohen's logic and, before that, his account of things in themselves. The account in Cohen's ethics and religion appeals to laws whose validity does not ultimately depend on their explaining or grounding experience. As we saw in §5 that is the sense in which ethics outstrips experience for Cohen. In contrast, Cohen's explanation for why historical investigation is required to identify the timelessly valid formal conditions of experience appeals precisely to laws that ground experience and thereby make it objective.

Nevertheless, the close analogy between the two accounts is unmistakable. Both explanations, in Cohen's theoretical philosophy and in his ethics and religion, depend on a teleological conception of history. Both depend on seeing in history a progressive unfolding in the direction of laws of ever-increasing universality. Both claim that attending to that history is required for the philosopher to identify plausible candidates for laws that could be part of a complete system of laws that were fully universal.

Thus in Cohen's mature writings, as in his earlier *Kant's Foundations of Ethics* and *Kant's Theory of Experience*, he has the resources to provide an explanation for why historical investigation is required to reveal the formal conditions of experience, and to justify a philosophical account of them.

§8. Conclusion

Time to sum up. I have argued for two claims about Cohen's conception of philosophical method during the late-1870s and 1880s.

First, Cohen maintains that historical investigation is required to reveal the formal conditions of experience and to justify a philosophical account of what those formal conditions

are. He maintains this, even though he conceives of those formal conditions as timelessly valid. As we noted at the outset, this is not obviously how Kant himself thought of his philosophical method in the first *Critique*.

Second, I have argued that, starting at least in the late-1870s, Cohen has the resources to explain why history plays this role in his critical philosophy. The underlying reasoning of Cohen's explanation is the result of how he combines views he was exposed to in the thought of various of his teachers.

The first of those views is the teleological conception of history that Frankel, Graetz, Trendelenburg, and Steinthal all affirm, and that Cohen echoes. But also, in Cohen's interpretation of the thing in itself (and, later in his *Logic*, in his account of the laws that constitute pure knowledge) he further echoes Frankel, Graetz, and Trendelenburg in maintaining that history unfolds progressively towards the complete articulation of timelessly valid ideas, which in Cohen's case are the formal conditions of experience.

Cohen combines that view with one we saw in Steinthal (and the younger Cohen): namely, the view that knowledge's progress through history is characterized by concepts developing in the direction of ever-increasing universality.

In Cohen's hands, the resulting view explains why historical investigation is required to first reveal the formal conditions of experience, and why it is required to justify a philosophical account of them. The view's underlying reasoning is this. Mathematical natural science aims to establish laws and principles that ground ever-increasing domains of experience. It thus aims to establish laws of ever-increasing universality. But then, by tracing the development of a succession of theories through the history of science, the critical philosopher can identify laws and principles that are plausible candidates for, or approximations of, the strictly universal

formal conditions of experience. History thus provides the evidence the critical philosopher needs to identify the formal conditions of experience.

The underlying reasoning of Cohen's view remains intact in his later writings, even while he strips it of any important connection to Kant's doctrine of things in themselves. In fact, if we traced the development of Cohen's views beyond his own writing and into the writing of his students and disciples, we would find the underlying reasoning of his view doing important work for the likes of Paul Natorp and Ernst Cassirer. However, a more detailed consideration of these ideas in Cohen's mature writings, and any consideration at all of how Natorp and Cassirer were influenced by Cohen's ideas, will have to wait for another occasion.

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