



Fig. 5: Reproduction of page 3 (“Einleitung in die Vernunftlehre”) of Kant’s copy of G. F. Meier’s *Auszug aus der Vernunftlehre* (Halle, 1752), with Kant’s handwritten notes: Reflections 1616–17 (AA 16: 37 f.), 1635 (AA 16: 58), 1636 (AA 16: 60 f.), 1642–46 (AA 16: 63 f.). Reproduced with the kind permission of the University of Tartu Library, Estonia. Call number: manuscript 92. Kant’s personal copy of Meier’s *Auszug* is available at the University of Tartu Library website: <http://hdl.handle.net/10062/42108>. Accessed 22 April 2015.

Chapter 5

Constructing a Demonstration of Logical Rules, or How to Use Kant's Logic Corpus

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In this chapter, I discuss some problems of Kant's logic corpus while recognizing its richness and potential value. I propose and explain a methodic way to approach it. I then test the proposal by showing how we may use various materials from the corpus to construct a Kantian demonstration of the formal rules of thinking (or judging) that lie at the base of Kant's *Metaphysical Deduction*. The same proposal can be iterated with respect to other topics. The said demonstration will have cleared the path for such iterations.

1 Kant's logic corpus: Some problems and a proposal for its effective use

Kant's logic corpus comprises four sets of materials: (1) items Kant himself prepared for publication, including (though not limited to) the various sections in the *Critique of Pure Reason* that discuss logic, (2) his handwritten notes (*Reflexionen*) on logic, (3) transcripts of his logic lectures, and (4) the *Logic* edited by Gottlob Benjamin Jäsche (Conrad 1994: 43–5). None of these sets of materials can alone represent Kant's views on logic in a way that is at once reliable, precise, and complete.

We may begin with the *Logic*, which was published under the title "Immanuel Kant's Logic: A manual for lectures." According to Jäsche, he compiled it at Kant's request and from Kant's original manuscript.

Kant commissioned me to prepare his *Logic* for publication, as he expounded it to his listeners in public lectures, and to transmit it to the public in the form of a *compendious manual*. For this purpose I received from him his own manuscript, which he had used in his lectures, with the expression of special, honorable confidence in me ... that I would not distort or falsify his thoughts, but rather would present them with the required clarity and distinctness and at the same time in the appropriate order. (Log 9: 3; original emphasis)

By the "manuscript," Jäsche was referring to the notes that Kant wrote on the margins and interleaved pages of his copy of Georg Friedrich Meier's *Auszug aus*

der Vernunftlehre, which Kant supposedly used as the “guiding thread” for his logic lectures (Log 9: 3 f.). This description is correct. (The notes in question have been published in volume 16 of the *Akademie-Ausgabe* of Kant’s works.). So is Jäsche’s claim that he compiled the *Logic* at Kant’s request (Br 12: 372).

What is problematic, however, is Jäsche’s suggestion that he compiled the text *solely* from those handwritten notes. He in fact used a variety of other sources, including transcripts of Kant’s logic lectures, which we shall see have their own philological problems. Moreover, as Jäsche himself pointed out, Kant “expanded [the notes] from time to time through new ideas” and “again and again revised anew and improved [them] in regard to various individual materials” (Log 9: 4). As such, the notes are inevitably fragmentary and may not even be compatible with one another, given how Kant’s philosophical views changed over time. So, as Terry Boswell puts it, it is possible that

Jäsche, faced with the problem of putting together one text out of several sources, including fragmentary memoranda by Kant, may have taken the liberty of adding words and phrases of his own to produce a presentable text, and may even have added sentences or passages of his own meant to introduce, summarize, and create transitions between his sources. (Boswell 1988: 199; see also Conrad 1994: 63 f.)

It is certainly understandable that anyone who wishes to compile a presentable text out of fragmentary records has to make many editorial maneuvers. Jäsche made it clear that he was partly responsible for “the *exposition*, the clothing and the execution, the presentation and the ordering of [Kant’s] thoughts” (Log 9: 3). It is lamentable, however, that Jäsche failed to say what other sources he might have used to facilitate his editorial efforts or how he might have used them to supplement Kant’s notes, and thereby misled the readers into thinking that the *Logic* is, as to content, an accurate presentation of none other than Kant’s original views.

This assessment of the *Logic* does not mean that it should be discredited altogether. As Boswell suggests, this text is indispensable – albeit alone insufficient – for our understanding of Kant’s views on logic, notwithstanding Jäsche’s problematic editorial methods. After all,

at least in this case we know who prepared the text [which is not the case with most transcripts of Kant’s lectures], know that he was a professional philosopher and know that Kant himself thought enough of his competence to assign him the task of editing his logic. What is questionable from a philological point of view would be the exclusive use of this one document. (Boswell 1988: 201)

Hence we may still feel free to use the *Logic* as long as, to follow Michael Young’s recommendation, we interpret it with care and appraise it “in light of other avail-

able materials” from Kant’s logic corpus, namely (1)–(3) listed above (Young 1992: xviii).

It is no easier task, however, to decide exactly how those other materials should be consulted. The available transcripts of Kant’s lectures, as many scholars have pointed out, are likewise affected by philological problems (Boswell 1988: 196–200; Young 1992: xxiii–xxvi; Conrad 1994: 52–61). Meanwhile, the direct discussions of logic in the writings Kant himself prepared for publication are sparse and may very well be limited by the specific philosophical concerns attached to those publications. As for the handwritten notes, apart from the fact that they are fragmentary, there is no foolproof way to verify when Kant wrote any given notes or to determine which ones belong to which period of his philosophical developments.¹ Thus, it is impossible to draw from them alone an accurate and complete picture of his Critical views on logic or, for that matter, of how his views might have evolved over time. By Boswell’s analysis, it is therefore “unavoidable” to end up with this “circular procedure”: to divine the meaning of those notes, we are “generally pressed to take recourse to other materials such as the Jäsche logic itself and the extant students’ transcriptions,” while “the authenticity of the latter requires verification on the basis of Kant’s handwritten notes” (Boswell 1988: 201).

Such a circular procedure, so described, seems unilluminating if not simply problematic. It is unclear how one should move between Kant’s notes, on the one hand, and the transcripts of his lectures and Jäsche’s *Logic*, on the other, and elucidate individual items from the respective sources in light of each other without running in a vicious circle. In particular, if we want to draw from these sources an accurate and comprehensive account of Kant’s Critical views on logic (or of how his views might have changed over time), by what criteria should we decide which items to use from each source? According to Boswell, even if one sets aside the issue of authenticity, Jäsche’s *Logic* is still defective in lacking “comprehensiveness and completeness” – for it “present[s] only a limited view both of Kant’s logic lecture and of the reflections” (Boswell 1988: 201). How can one be sure, though, that everything in Kant’s logic lectures and reflections represents his final views on logic – given that those lectures were freely delivered, that the transcripts thereof might even include materials from other authors (Boswell

¹ The dates used in the *Akademie-Ausgabe* of Kant’s works came from Erich Adickes. For a well-argued challenge to Adickes’s method, see Conrad (1994: 46–51, 65–73), who also discusses the problem with the dating provided by Benno Erdmann before Adickes and concludes that it is in principle impossible to be absolutely certain about the dates of Kant’s handwritten notes.

1988: 198; Conrad 1994: 57 f.) and that there is no absolutely certain dating of the reflections?

One can try a different procedure than the one described by Boswell. To begin with, one can simply lump Kant's reflections on logic together with the transcripts of his logic lectures and Jäsche's *Logic*, without privileging one category over another. At this point, as Riccardo Pozzo suggests, in response to some of the aforesaid problems associated with those sources, one may "give up the idea of making recourse to any dating [of the reflections] at all" (Pozzo 1998: 304) and set aside concerns about the authenticity or accuracy of the *Logic* or the transcripts. One can focus instead on identifying a worthwhile *perspective* from which to approach the aggregated materials. To avoid vicious circularity, such a perspective must be formed on independently reliable sources. One obvious source is the few segments in the *Critique* where Kant explicitly discusses logic. One may need more than those segments, though. Jäsche has some insights to offer in this regard. According to him, one must bear at least two things in mind when attempting to figure out precisely what belong to true logic in Kant's view. First, Kant's "explicit pointer" about what should be included in the proper treatment of logic; second, an educated guess as to how Kant – as "the great reformer of philosophy and ... of this part of theoretical philosophy in particular [i. e. logic]" – "would have worked on logic according to *his* architectonic plan" (Log 9: 4 f.). To pinpoint and clarify the relevant "pointer" and "plan," as we shall see, one may have to consult a wide range of Kant's Critical remarks, many of which are not directly about logic. Furthermore, if Kant indeed somehow reformed logic (and it will become clear that he did), his reformative approach to logic was more or less shaped by certain developments in modern logic, which presented him at least with the relevant philosophical problems to consider. Hence, as Pozzo puts it, it may also be instructive to consider "the point of view of the history of the problems" while tackling the interpretative difficulties associated with Kant's logic corpus (Pozzo 1998: 305).

Here, then, is a basic procedure for an effective use of Kant's logic corpus. One begins by describing a philosophical perspective that incorporates two elements: (a) a *philosophical problem* concerning logic that is significant for Kant and probably also for other modern philosophers, and (b) some *general constraints* as to how – given Kant's published views on the related issues – he might address the problem. In the process, one may occasionally cite Kant's notes on logic, transcripts of his lectures, and Jäsche's *Logic*, if the goal is just to articulate fully certain points that are already contained in the writings Kant himself prepared for publication. Having sufficiently explained the perspective, one can then use it to select further materials from those three categories of Kant's logic corpus to construct a full Kantian answer to the identified philosophical problem.

Such a procedure may be iterated. Considering that the corpus contains rich and complex materials on many topics, there is probably no single angle from which to illuminate them all at once. Rather, one might find it more productive to approach the corpus from one perspective at a time, following the basic procedure outlined above. In next section, I try out the procedure with respect to one issue, concerning the source of logical rules, which is pivotal to Kant's *Metaphysical Deduction* but is not explicitly addressed in the *Critique*.

2 A Kantian demonstration of logical rules

Kant describes *Metaphysical Deduction* as that by which “the origin a priori of the categories in general was established through their complete coincidence with the universal logical functions of thinking” (B159). The universal logical functions of thinking in turn boil down to the twelve logical forms of judging presented in the Table of Judgments (A70/B95). If the project of *Metaphysical Deduction* is to succeed, Kant must have a way of explaining how those functions of thinking or forms of judging may themselves be derived independently of the categories (to avoid circularity) (Lu-Adler 2014). They must also be derived in such a way as to prove that “the understanding is completely exhausted and its capacity [*Vermögen*] entirely measured by these functions” (A79/B105). Kant could not simply claim that Aristotle, as “the father of logic,” had already sorted them out. For that would amount to committing the fallacy of appealing to authority. Moreover, Aristotle identified more forms than are included in the Table of Judgments, so that Kant would still have to explain why precisely those twelve forms must be included in the table. How else could those forms be derived, then? Kant does not directly address the question in the *Critique*. We will have to use materials from his reflections on logic, together with transcripts of his logic lectures and the *Logic*, to construct a derivation on his behalf. Nonetheless, the *Critique* contains important clues as to which materials from those sources may be used toward the derivation.

In the following, I tease out the relevant clues by examining three propositions in the *Critique*. First, only a general and pure logic is “properly science,” which studies the necessary rules for the use of the understanding in general (A54/B79). Second, the presentation of a set of rules is complete just in case they have been systematically demonstrated from a common principle (*Princip*) (A80 f./B106). Third, categories are generated through a sort of “*epigenesis* of pure reason,” as what “contain the grounds of the possibility of all experience in general from the side of the understanding” (B167). These propositions are not obviously connected. By my analysis, however, they together point to how Kant

would derive the logical forms of judgment or, which amount to the same, the necessary and universal rules governing the act of thinking: find a “principle” of pure reason from which they can be demonstrated a priori, as what constitute the grounds of the possibility of thinking in general. In the following, I spell out the requisite principle, flesh out the demonstration with materials from Kant’s logic notes, lecture transcripts, and the *Logic*, and explain what the demonstration reveals about Kant as a reformer of modern logic.

2.1 On logic as a proper science

Kant discusses the nature of logic in two places in the *Critique* – first in “Preface to the second edition” and then in “The idea of a transcendental logic.” In the former, he makes three related points about logic. First, logic “exhaustively presents and strictly proves [*beweist*] nothing but the formal rules of thinking” (Bviii–ix). Second, the understanding in logic therefore “has to do with nothing further than itself and its own form” (Bix; see GMS 4: 387). Third, it is precisely thanks to such limitation that logic, as a “treatment of the cognitions belonging to the concern of reason,” is able to travel “the secure course of a science” (Bvii; cf. Bix). Later in the *Critique*, Kant specifies the logic in question as a science of thinking that is both “pure” and “general.” As general logic, it “has to do with nothing but the mere form of thinking” and treats its rules “without regard to the difference of the objects to which it may be directed” (A52/B76; A54/B78). As pure logic, it is “a proven doctrine [*eine demonstrierte Doktrin*]” which “has to do with strictly a priori principles [*Principien*],” “abstract[s] from all empirical conditions under which our understanding is exercised,” and therefore “draws nothing from psychology” (A53 f./B77 f.). In these terms, if logic is a “doctrine of the elements of the understanding,” (A54/B78) it is properly scientific only insofar as it demonstrates those elements from a priori principles.

Now, a proper science has three key features on Kant’s account: it is systematic, namely “a whole of cognition ordered according to principles [*Principien*]”; it “treats its object wholly according to a priori principles”; it has apodictic certainty (MAN 4: 467 f.). A system of cognitions is a “rational science” if the cognitions are interconnected as “grounds and consequences.” It is not strictly science, however, if “the grounds [*Gründe*] or principles [*Principien*] themselves are still in the end merely empirical,” in which case it will not be apodictically certain (MAN 4: 468). A “doctrine of nature,” for instance, is properly scientific only in virtue of having a “pure part – namely, that which contains the a priori principles of all other natural explanations” (MAN 4: 469). Scientific logic, as a “doctrine of reason,” indeed cannot have any impure (empirical) part at all, but is a “pure

philosophy” that “sets forth its teachings simply from a priori principles [*Principien*]” (A53 f./B78; GMS 4: 387 f.).

All these remarks about logic *qua* proper science are reflected in Jäsche's summary of Kant's notion of logic.

[1] Logic is a science of reason [*Vernunftwissenschaft*], not as to mere form but also as to matter; [2] a science a priori of the necessary laws of thought, not in regard to particular objects, however, but to all objects in general; – hence a science of the correct use of the understanding and of reason in general, [3] not subjectively, however, i. e., not according to empirical (psychological) principles for how the understanding does think, but objectively, i. e., according to principles [*Principien*] a priori for how it ought to think. (Log 9: 16)

Clause [1] captures two senses in which logic is a rational science: as to form, it is a system of cognition ordered by rational principles; respecting matter, it has reason or the understanding per se as the object (V-Lo/Blomberg 24: 24 f.; V-Philippi 24: 315; V-Lo/Dohna 24: 695; V-Lo/Wiener 24: 792; V-Lo/Bauch, LV 1: 10, 13 f.; V-Lo/Hechsel, LV 2: 278, 280).² In the latter sense, logic is “a self-cognition [*Selbsterkenntniß*] of the understanding and of reason” (Log 9: 14). Clause [2] presents logic as “general” in the same terms as Kant did in the *Critique*. Clause [3] echoes the claim that logic, as a strict science, investigates the necessary rules of thinking in general according to non-empirical principles. In other words, scientific logic is a “demonstrated theory” that “rests on principles [*Principien*] a priori, from which all its rules can be derived [*abgeleitet*] and proved [*bewiesen*]” (Log 9: 14 f.; see V-Lo/Blomberg 24: 24; V-Philippi 24: 317; V-Lo/Dohna 24: 694; V-Lo/Wiener 24: 793; V-Lo/Hechsel, LV 2: 280 f.)

This analysis of Kant's account of logic as a proper science contains, to borrow his expression at A67/B92, some “guiding threads [*Leitfaden*] to the discovery” of all logical forms of judgment or, more generally, all necessary rules of thinking as to form. It suggests that the first step toward a scientific logic is to pinpoint the a priori principles from which those rules of thinking are to be demonstrated. In addition, the notion of logic as “pure philosophy” implies that it is “cognition from pure reason” (A840/B868) and that, accordingly, the requisite principles may be sought in pure reason itself. We need more information in order to figure out what exactly they are, however. For that purpose, we turn to some

² ‘LV’ stands for Kant 1998c (*Logik Vorlesung: Unveröffentlichte Nachschriften*, ed. Tillmann Pinder). I refer to any lecture transcript from this edition by the name of the transcript, the volume and pagination of LV. The value of Pinder's edition partly lies in the different editorial method that it uses than the *Akademie-Ausgabe*. See Pinder in Kant 1998c, ix–xxxvii; Robinson 2000.

of Kant's Critical remarks about the source of categories or pure concepts of the understanding.

2.2 On the origin of categories in pure reason

Let us first consider Kant's following comment about the completeness of his Table of Categories, with a view to uncovering its connection with the question about the origin of those concepts.

This classification is systematically generated [*erzeugt*] from a common principle [*Princip*], namely the faculty [*Vermögen*] for judging (which is the same as the faculty for thinking), and has not arisen rhapsodically from a haphazard search for pure concepts, of the completeness [*Vollzähligkeit*] of which one could never be certain[.] (A80–1/B106–7)

By 'haphazard search', Kant is referring to "Aristotle's search for these fundamental concepts": "since he had no principle [*Principium*], he rounded them up as he stumbled on them" (A81/B107). We already encountered Kant's view that a body of cognitions is systematic just in case the cognitions are organized in accordance with certain principles. Now he reduces its completeness – if we are to be "certain" about this – to the systematic generation of those cognitions from a common principle (A67/B92; A13/B27; GMS 4: 387). In the case of categories, notably, Kant equates the relevant *Principium* (source or ground) with the capacity (*Vermögen*) of the understanding to judge or think, which is essentially its "spontaneity" or "capacity for bringing forth representations itself [*das Vermögen Vorstellungen selbst hervorzubringen*]" (A51/B75; cf. A68–9/B93).

This appeal to the self-generating capacity of the understanding resonates with Kant's remarks about the origin of categories in §27 of Transcendental Deduction. Here he argues that categories can only arise through "as it were a system of the *epigenesis* of pure reason" (B167). By 'epigenesis', Kant is comparing an epistemic theory of origin to a biological one. To continue with the biological analogy, he likens the empiricist alternative to the biological theory of "spontaneous generation" (*generatio aequivoca*), and the innatist one to the biological theory of "preformationism." He rules out the former for its absurd assumption that one species (a priori concepts) can be generated from an entirely different one (sensible experience),³ and rejects the latter mainly because it leaves cat-

³ The biological *generatio aequivoca* is the view that an organized being is generated "through the mechanism of crude, unorganized matter" (KU 5: 419n) On Kant's objection to the episte-

egories with merely subjective necessity by treating them as predispositions “arbitrarily implanted in us” (B167 f.). On the epigenetic model, by contrast, categories are “self-thought [*selbstgedacht*]” on the part of pure reason (B167).⁴ Thus, as Kant later puts it, the origin of categories is traced to the capacity of pure reason for “original acquisition [*ursprüngliche Erwerbung*],” namely acquisition – “a priori, out of itself” – of representations that “did not yet exist at all, and so did not belong to anything prior to this act” (ÜE 8: 221, 223).⁵ The “ground” for such acquisition consists solely in “the subjective conditions of the spontaneity of thought” (ÜE 8: 223) – to wit, in the capacity of the understanding to “understand something in the manifold of intuition, i. e., think an object for it” (A80/B106). In that connection, categories are just “different *modi*” by which a given manifold of intuition must be combined to have a determinate relation to some object (A247/B304; cf. B137). As such, they “contain the grounds of the possibility of all experience in general [i. e. all determinate cognition of empirical objects] from the side of the understanding” (B167). The understanding, as “the faculty of *combining* the manifold in general,” in fact “prescribes [*vorschreibt*]” these concepts as the necessary rules for the possibility of experience in general (B164). That is why they are “self-thought a priori first principles of our cognition” (B167).

This sketch of how Kant views the origin of categories gives us some helpful hints as to what he may identify as the common *Principium* from which the formal rules of thinking in general are to be generated systematically. Roughly, the *Principium* may be traced to a certain “capacity” of the understanding and reason, from which those rules are to be demonstrated as “the grounds of the possibility” of its exercise. The demonstration must exhibit the self-generating power of pure reason, or the power to bring forth previously non-existent representations a priori out of itself.⁶ These points are partly reflected in the following passages.

mic version of *generatio equivoca*, see Wubnig 1969: 148 f.; Genova 1974: 264–6; Ingensiep 1994: 382 f., 386–8.

4 In biology, the terms ‘preformationism’ and ‘epigenesis’ were used in several ways, of which Kant was aware. On Kant’s evolving views about biological preformationism and epigenesis and on how they were reflected in the developments of his Critical philosophy, see Mensch 2013: 1–15, 204 n. 248; Piché 2001; Sloan 2002; Zammito 2003: 80–98; Zöllner 1988: 80–90.

5 Here Kant repeats his rejection of innate representations in the *Critique*: “The *Critique* admits absolutely no implanted or innate *representations*. One and all, whether they belong to intuition or to concepts of the understanding, it considers them as *acquired*.” (ÜE 8: 221) For discussions about Kant’s objection to innatism, see Zöllner 1989 and Callanan 2013.

6 Otherwise, one would have to say either that the rules are empirically derived or that we have innate representations of them. Kant would reject the former alternative for the same reason that he dismisses the empiricist account of the origin of categories: what is a priori, as all logical rules are, cannot come from experience. He would reject the latter alternative because innatism con-

Logic treats of the objective laws of reason, i. e., how it should proceed That reason explicates, according to its own laws, the laws according to which it ought to think, means that reason provides [*bedient*] the rules that it will discover first of all. (Refl 3939, 17: 356, translated in Kant 2013: 43)

Logic is called a science because its rules can be proved by themselves[,] apart from all use[,] a priori

Logica will thus have no other grounds or sources than the nature of human understanding. (V-Lo/Blomberg 24: 25)

To these we may add Kant's note that, although logical rules can be proved independently of all use as what "contain the ground of all judgments, namely, their form," logic "does not precede use," insofar as the latter "contains the first acts [*Handlungen*] of the understanding" (Refl 1602, 16: 31 f.). In other words, the use of the understanding provides the *occasion* for reflecting on such use, although the reflection is supposed to bring about an a priori cognition – namely, logic – of the formal conditions for the very possibility of the use in question (V-Lo/Wiener 24: 793).

In these terms, the *Principium* of logical rules has presumably to do with the characteristic act or capacity of the human understanding, i. e. thinking (A69/B94). With respect to categories, Kant treats the understanding in view of its capacity to bring synthetic unity to a given manifold of intuition and thereby relate it to an object a priori. In that connection, categories are just the various "acts [*Handlungen*] of pure thinking" through which the said capacity is exercised (A57/B81). It is in the "expectation" of these pure concepts – and in terms of the "distinction between pure and empirical thinking of objects" (A55/B79–80) – that we first form the idea of a transcendental logic, as a science that treats "the laws of the understanding and reason ... solely insofar as they are related [*bezogen*] to objects a priori" (A57/B81 f.). By contrast, general logic abstracts from any such relation to objects and "considers only the logical form in the relation [*Verhältnisse*] of cognitions to one another, i. e., the form of thinking in general [*überhaupt*]." That is, it "considers representations ... merely in respect of the laws according to which the understanding brings them into relation to one another when it thinks," no matter how those representations may be related to objects (A55–7/B79–82). In anticipation, then, to demonstrate these laws a priori is to derive them as the various *modi* in which the act of thinking in general – be it pure

flicts with the strictly scientific nature of logic. In his view, the hypothesis of innate representations is "very unphilosophical" – for there would be no true "investigation" but only "revelation" of anything inborn (V-Met-L1/Pölitiz 28: 233; see V-Met/Mron 29: 760–3; V-Met/Vigil 29: 949–52).

or empirical – must take place, much as categories are derived as the different *modi* for relating a manifold of intuition to an object a priori. The demonstrated laws will constitute the grounds of the possibility of thinking in general, just as categories are the grounds of the possibility of experience in general from the side of pure understanding. To spell out the details of such a demonstration, though, we need materials from other parts of Kant's logic corpus.

2.3 Demonstrating logical rules

Both the “Introduction” of the *Logic* and the “Prolegomena” of most transcripts of Kant's logic lectures begin with an account of thinking as the act or capacity of the understanding. On this account, thinking necessarily accords with certain rules.

Everything in nature ... takes place *according to rules*, ... The whole of nature in general is really nothing but a connection of appearances according to rules; and there is *no absence of rules* anywhere

The exercise of our powers [*Kräfte*] also takes place according to certain rules

Like all our powers, *the understanding* in particular is bound in its actions [*Handlungen*] to rules, which we can investigate. (Log 9: 11; see V-Lo/Philippi 24: 311; V-Lo/Pöhlitz 24: 502; V-Lo/Busolt 24: 608; V-Lo/Dohna 24: 693; V-Lo/Wiener 24: 790; V-Lo/Bauch, LV 1: 3–6; V-Lo/Hechsel, LV 2: 271–2; V-Lo/Warschauer, LV 2: 505)

What is special about the understanding is that it is the source of rules and can reflect on the rules that govern its own *Handlungen*.

Indeed, the understanding is to be regarded in general as the source and the faculty [*Vermögen*] for thinking rules in general the question is thus, according to what rules does it itself proceed?

For there can be no doubt at all: we cannot think, we cannot use our understanding, except according to certain rules. But now we can in turn think these rules for themselves, i. e., we can think them *apart from their application* or *in abstracto*. Now what are these rules? (Log 9: 12)

The claim that the understanding investigates the rules of its own act *in abstracto* echoes Kant's characterization of pure logic in the *Critique*, and clarifies the nature of the rules in question: they concern how we *ought* to think, rather than how we do so (Refl 1579, 16: 18, 20–1; Refl 1599, 16: 30; Log 9: 14; V-Lo/Pöhlitz 24: 504). In other words, logical rules are the necessary rules of thinking, without

which “no use of the understanding would be possible at all” – regardless of any particular objects at which the act of thinking may be directed or any empirical subjective conditions under which it may take place (Log 9: 12; V-Lo/Dohna 24: 694; V-Lo/Hechsel, LV 2: 273). Such rules are to be strictly universal or “universal according to reason” – to which there *could be no* exception – and therefore must be cognized a priori (V-Lo/Dohna 24: 694; cf. B4; Log 9: 12; V-Lo/Wiener 24: 792). Accordingly, logic is bound to be *logica artificialis* rather than *logica naturalis*, proceeding from pure reason rather than from experience (Refl 1579, 16: 18; V-Lo/Philippi 24: 314; V-Lo/Dohna 24: 696–8; V-Lo/Wiener 24: 791, 798; Log 9: 17, 93).

By this analysis of the rule-governed nature of thinking, we can “form for ourselves an idea of the possibility of” logic: it is a “science of the necessary laws of the understanding and of reason in general, or what is one and the same, of the mere form of thought as such [*überhaupt*]” (Log 9: 12 f.; cf. V-Lo/Warschauer, LV 2: 506). Now, on Kant’s generic description mentioned above, the form of thinking as such consists in the relation of cognitions to one other. To specify its various *modi*, then, one must begin with an assumption about what kinds of cognition may be properly treated in logic. For Kant, the most basic kind in this regard is concept.

Logically, all origins [*Anfänge*] in thought are divided thus:

1. The cognition is a simple cognition, a *concept*.
2. The cognitions are combined in a *judgment*.
3. That judgments are combined and that *inferences* arise therefrom.

(V-Lo/Wiener 24: 904; see V-Lo/Pölitiz 24: 565; V-Lo/Busolt 24: 653; V-Lo/Hechsel, LV 2: 389)

All cognition has matter and form. In logic, one treats the matter of cognition as given and inquires only how any given cognition is possible as far as its form is concerned (V-Lo/Philippi 24: 341; V-Lo/Dohna 24: 764; V-Lo/Wiener 24: 791; V-Lo/Bauch, LV 1: 39). Provided the above division, such inquiry begins with concepts.

By Kant’s analysis, every concept as to form originates within the understanding, even though the representations out of which it is made may have to come from without. Since logic deals merely with the form of cognition, it “expects that representations will be given to it from elsewhere, whatever this may be,” and asks only how the given representations may be “transform[ed] ... into concepts” through the work of the understanding (A76/B102). The form of a concept is a “universal representation, or a representation of what is common to several objects” (Log 9: 91; see V-Lo/Pölitiz 24: 567 f.; V-Lo/Wiener 24: 904, 908; V-Lo/Bauch, LV 1: 151 f.; V-Lo/Hechsel, LV 2: 390, 395; V-Lo/Warschauer, LV 2: 609). In that respect, a concept is “always made [*gemacht*]” (Log 9: 93) and “grounded on the spontaneity of thinking” (A68/B93). Thus arises the first question to be addressed in the demonstration of the formal rules of thinking in general: “Which acts [*Hand-*

lungen] of the understanding constitute [ausmachen] a concept? or what is the same, Which are involved in the generation [Erzeugung] of a concept out of given representations?" (Log 9: 93; see V-Lo/Pölitiz 24: 566; V-Lo/Wiener 24: 907).

Accordingly, the logical doctrine of the elements of thinking begins with an account of the "logical *actus* of the understanding" – such as comparison, reflection and abstraction – that "are the essential and universal conditions for generation of every concept whatsoever" (Log 9: 94; see V-Lo/Wiener 24: 907–10; V-Lo/Hechsel, LV 2: 393–5; V-Lo/Warschauer, LV 2: 609 f.). The specification of these logical acts does not result from an empirical study of how we actually form concepts, but from an inquiry about the a priori conditions or rules – from the side of the understanding – of concept formation in general. Such rules supposedly follow from the preceding analysis of concept regarding its form, which determines how the understanding *must act* in order to transform a given multitude of singular representations into a universal one, namely into a concept. The resulting account of the relevant logical acts, such as abstraction, in turn determines what kinds of relations concepts, *qua* universal representations, can stand with one another – e. g., in a series of subordination that can, in principle, have the highest genus but no lowest species (Log 9: 96–8; V-Lo/Pölitiz 24: 568–70; V-Lo/Wiener 24: 910–12; V-Lo/Bauch, LV 1: 153 f.; V-Lo/Hechsel, LV 2: 398 f.; V-Lo/Warschauer, LV 2: 611–13).

The demonstration of the logical rules of judging – as the essential and universal conditions for generating judgments – likewise begins with the analysis of judgment regarding its general form. Though the wording of the analysis varies from one text to another, it usually goes as follows: a judgment is a representation of the unity in a relation among many given cognitions; the given cognitions comprise its matter, whereas its form is the manner in which those cognitions are related and united in one representation (Log 9: 101; V-Lo/Pölitiz 24: 577; V-Lo/Wiener 24: 928; V-Lo/Hechsel, LV 2: 422; V-Lo/Warschauer, LV 2: 623). Relating and uniting several cognitions in one is an act of the understanding. Accordingly, the logical forms of judgment are often introduced as the various "actions of the understanding [Verstandeshandlungen] that appear in a judgment," which "reduce to" quantity, quality, relation, modality (V-Lo/Wiener 24: 929; cf. V-Lo/Pölitiz 24: 577; V-Lo/Hechsel, LV 2: 423; V-Lo/Warschauer, LV 2: 623 f.).

Why should all judgments be considered precisely in accordance with those four ways? The modality of a judgment, to begin with, concerns "the relation of the whole judgment to the faculty of cognition," not the way in which several cognitions are related in it. That is, a judgment is either problematic or assertoric or apodictic, given that the act of judging can be accompanied with a consciousness of its mere possibility, actuality, or necessity (Log 9: 108; V-Lo/Pölitiz 24: 579; V-Lo/Busolt 24: 662; V-Lo/Wiener 24: 935 f.; V-Lo/Bauch, LV 1: 176 f.; V-Lo/Hechsel,

LV 2: 432 f.; V-Lo/Warschauer, LV 2: 626). As for the way in which multiple cognitions are related and united in a judgment, there are exactly three questions to be asked about it: *quae* (what), *quails* (of what quality), *quanta* (of what quantity) (V-Lo/Wiener 24: 932; V-Lo/Hechsel, LV 2: 427). These correspond to the relation, quality, and quantity of a judgment. The three moments of relation (categorical, hypothetical, disjunctive) are distinguished by whether the cognitions related in a judgment are concepts or judgments and, if the latter, how the judgments are related with one another “for the unity of consciousness” (through one being subordinated to another) (Log 9: 104–8; V-Lo/Wiener 24: 932 f.; V-Lo/Hechsel, LV 2: 427–9; V-Lo/Warschauer, LV 2: 625 f.). As for quantity and quality, they have to do with the relation between two concepts in a categorical judgment. Kant presents the three moments of quantity (singular, universal, particular) and those of quality (affirmative, negative, infinite) in reference to his account of concept as a universal representation in form. Every concept, as such, is treated in logic as capable of representing many objects, which constitute its logical extension or sphere. (I explain Kant’s notion of logical extension – which is needed to understand his logical theory of judgment properly – in Lu-Adler 2012.) The quantity of a categorical judgment concerns what is represented by the subject-concept – as to whether the concept is used to signify one object or a multitude of objects and, if the latter, whether the multitude is taken as a whole or only in part in relation to the extension of the predicate (Log 9: 102; V-Lo/Philippi 24: 463; V-Lo/Busolt 24: 664 f.; V-Lo/Wiener 24: 931; V-Lo/Hechsel, LV 2: 426 f.; see Lu-Adler 2014). The quality of the judgment lies in how the extension of the predicate is posited with respect to that of the subject, i. e., whether the former is placed inside or outside the latter or, otherwise, in the infinite extension that lies outside the latter (Log 9: 103 f.; V-Lo/Pölitiz 24: 577 f.; V-Lo/Wiener 24: 930 f.; V-Lo/Hechsel, LV 2: 424–6; V-Lo/Warschauer, LV 2: 624 f.).

The demonstration of the rules of inference likewise proceeds from a general analysis of the nature of inference, as that by which one judgment is derived from another in virtue of form, either with or without a mediating judgment (Log 9: 114–30; V-Lo/Pölitiz 24: 583–93; V-Lo/Busolt 24: 670–8; V-Lo/Bauch, LV 1: 181–203; V-Lo/Hechsel, LV 2: 439–73; V-Lo/Warschauer, LV 2: 632–47). It is not necessary to elaborate such a demonstration here, since my primary aim in the current section is to demonstrate the logical forms of judgment on which *Metaphysical Deduction* depends.⁷ Still, enough has been said to support Jäsche’s following claim.

⁷ I have not mentioned the law of contradiction either. Kant seems to distinguish two kinds of logical rules. Some rules, such as the ones demonstrated here, specify the various *ways to relate* multiple representations and combining them in one. Other rules, such as the law of contra-

I would put forth the great man's ideas and principles most fittingly if ... I held myself to his express explanation, according to which nothing more may be taken up in the proper treatment of logic, and in particular in its *Doctrine of Elements*, than the theory of the three essential principal functions of thought: *concepts*, *judgments*, and *inferences*. (Log 9: 4)

Although Jäsche failed to specify – with textual evidence – the “express explanation” in question or to be fully transparent about the exact materials from which he “put forth” the Doctrine of Elements, he was right about what, according to Kant, strictly belongs to a logical treatment of the “principal functions of thought.” In comparison, I have been more straightforward about how I have proceeded in constructing a Kantian account of those functions.

To recapitulate the procedure, we began with a specific philosophical problem: how would Kant demonstrate all the basic logical forms of judgment, a demonstration that is required for the success of Metaphysical Deduction? To fix the parameters for constructing a likely demonstration on Kant's behalf, we examined his Critical account of logic as a proper science, of the sense in which a science is complete, and of the origin of such pure cognitions as categories. We were thereby led to anticipate that the demonstration would proceed from a general analysis of thinking – as the act or capacity of the understanding – and eventually arrive at the logical forms of judgment as the various *modi* in which such an act must take place and therefore as what constitute the grounds of the possibility of thinking as such. To spell all that out, we then selected the relevant materials from Jäsche's *Logic* in conjunction with Kant's handwritten notes on logic and the available transcripts of his logic lectures. Progressing in such an order was meant to minimize, if not entirely cancel out, any negative effect from the philological problems of those texts.

2.4 Kant: A “great reformer” of modern logic?

Earlier I speculated that it might be instructive to approach Kant's logic corpus in light of certain philosophical problems that he inherited from the history of logic. More often than not, however, we may not get a full grasp of such problems until after we have sorted out Kant's own views as are contained in his logic corpus. Indeed, the above construction of a Kantian demonstration of logical rules fore-

diction, determine the formal-logical conditions for the resulting relation *to represent something* (viz., an object, or a true thought). This is a distinction within general logic. I explain some of its implications in Lu-Adler 2013.

grounded many aspects of Kant’s conception of logic that not only set it apart from all the other major developments in modern logic, but also offered us a perspective to identify, articulate, and evaluate the philosophical issues raised by those developments. Jäsche described Kant as “the great reformer” of philosophy in general and of logic in particular (Log 9: 5). In light of post-Kantian ~~and Fregean~~ innovations in logic, this characterization may strike readers today as peculiar or even unwarranted. But the reformative nature of Kant’s approach to logic, as I shall explain next, is clearly reflected in the demonstration of logical rules presented above.

By tracing the source of the formal rules of thinking to the understanding ~~and reason~~, the demonstration in question can be seen as a way to determine the domain and validity or legitimate use of those rules, much as Kant means transcendental logic to “determine the origin, the domain [*Umfang*], and the objective validity [*Gültigkeit*]” of the categories (A57/B81). In this regard, Kant is reacting to two developments in modern logic, which pertain to the domain of logic and the validity of its rules, respectively. Apropos of the domain of logic, he observes that

some moderns have thought to enlarge it by interpolating *psychological* chapters about our different cognitive powers (about imagination, wit), or *metaphysical* chapters about the origin of cognition or the different kinds of certainty in accordance with the diversity of objects (about idealism, skepticism, etc.), or *anthropological* chapters about our prejudices (about their causes and remedies). (Bviii)⁸

By Kant’s analysis, such attempts at expanding the domain of logic not only reveal an “ignorance of the peculiar nature of this science,” but also threaten its prospect as a science: “It is not an improvement but a deformation of the sciences when their boundaries [*Grenzen*] are allowed to run over into one another.” (Bviii) On Kant’s account, as we have seen, logic – **qua** proper science – treats thinking in such a way that totally disregards “whether this thinking be empirical or a priori, whatever origin or object it may have, and whatever contingent or natural obstacles it may meet with in our minds.” The boundary of logic is precisely delineated thereby, leaving no room for the afore-mentioned psychological, metaphysical, or anthropological chapters (Bix).

Meanwhile, Kant notes that logic “has been [mistakenly] used as if it were an organon for the actual production of at least the semblance of objective assertions,” when in essence it is only a “canon for the assessment [*Beurtheilung*]”

⁸ When Kant claims that origin of cognition is a topic of metaphysics as opposed to logic, he presumably has in mind origin as to *matter*. So construed, the claim is compatible with his treating the origin of concepts regarding *form* as a properly logical issue.

of cognitions as to form. In other words, logic “teaches us nothing at all about the content of cognition, but only the formal conditions of agreement with the understanding, which are entirely indifferent with regard to the objects” (A61/B85 f.). That is because, in order to present strictly universal and necessary laws of thinking, logic is “obliged to abstract from all objects of cognition and all the distinctions between them,” so that in it “the understanding has to do with nothing further than itself and its own form.” Accordingly, logical rules have valid use only for the formal assessment of cognitions, not for their “acquisition [Erwerbung]” (as regards content) (Bix). Nor is logic “a universal art of discovery” or “an algebra, with whose help hidden truths can be discovered” (Log 9: 20; cf. Log 9: 13, 16; V-Lo/Wiener 24: 793).

When we look at other parts of Kant's logic corpus, it becomes more obvious that, in thus clarifying the domain of logic and the valid use of its rules, he is partly responding to specific developments in modern logic. His lectures often included a brief commentary on the history of logic with references to particular philosophers. The following excerpt from the Wiener Logik, for instance, tells us whom Kant might have in mind when he claimed that some moderns had mistaken views about logic.

After [Aristotle and Ramus] come Malebranche and Locke. This last wrote a treatise *de intellectu humano*. But both writings deal not only with the form of the understanding but with content. They are preparatory exercises for metaphysics. Among the moderns, Leibniz and Wolff are to be noted. The logic of Wolffius is the best to be found. It was subsequently condensed by Baumgarten, and the latter was again extended by Meier The logic of Crusius is crammed full of things that are drawn from other sciences, and it contains metaphysical and theological principles. Lambert wrote an organon of pure reason. (V-Lo/Wiener 24: 796; see Refl 1629, 16: 48; Log 9: 21; V-Lo/Blomberg 24: 37; V-Lo/Philippi 24: 337 f.; V-Lo/Pöhlitz 24: 509; V-Lo/Busolt 24: 613; V-Lo/Dohna 24: 701; V-Lo/Hechsel, LV 2: 288–90)

In a historical review like this, Kant is not just enumerating names. He is assessing the philosophical merits and shortcomings of different approaches as well. In particular, given that he views logic as a sort of philosophical cognition, a general reflection on the method of philosophy is directly relevant. We shall see how such a reflection gives Kant the framework within which to position his own conception of logic vis-à-vis the alternatives.

To begin, it is worth noting that when Kant praised the Wolffian logic as “the best to be found” he was referring only to its formal features such as being *demonstrative*, *distinct*, and *orderly* (Refl 1629, 16: 48; Refl 1641, 16: 62; V-Lo/Philippi 24: 337 f.). From Kant's perspective (given his account of science as a demonstrated system of cognitions), Wolff's contribution to logic lies in having identified some conditions for turning logic into proper science – insofar as its form is concerned.

At the same time, however, Kant would see Wolff – due to his dogmatic philosophical method – as having failed to examine the true *ground* of such a science. In this respect, Kant finds a promising alternative – namely, a critical method – in Locke’s *An Essay Concerning Human Understanding*. The contrast is clear from the following passages.

All the efforts of our philosophy are

1. dogmatic
2. critical.

Among critical philosophers Locke deserves priority. Wolff, however, and the Germans generally, have a methodical philosophy

Locke’s book *de intellectu humano* is the ground of all true *logica* (V-Lo/Blomberg 24: 37; cf. Refl 1636, 16: 60; V-Lo/Philippi 24: 338; V-Lo/Bauch, LV 1: 29)

Leibniz and Locke are to be reckoned among the greatest and most meritorious reformers of philosophy in our times. The latter sought to analyze the human understanding ... As for what concerns the special dogmatic method of philosophizing peculiar to Leibniz and Wolff, it was quite mistaken. Also, there is so much in it that is deceptive that it is in fact necessary to suspend the whole procedure and instead to set in motion another, *the method of critical philosophizing*, which consists in investigating the procedure of reason itself, in analyzing the whole human faculty of cognition. (Log 9: 32; see V-Lo/Wiener 24: 804; V-Lo/Hechsel, LV 2: 301)

In so many words, Wolff (together with Leibniz) proceeded dogmatically in that he constructed a logical system without premising it on an analysis of the human understanding or reason.⁹ Locke’s method in the *Essay* is “critical” by doing the exact opposite. The point, from Kant’s perspective, is that “the logic of universal human reason” must be founded on an examination of the faculty in question (V-Lo/Wiener 24: 794). Kant rejects Locke’s “physiological” approach to the subject, though, which focuses on how the faculty of reason operates under empirical-psychological conditions, when it should really be studied in abstraction from all such conditions (Refl 4851, 18: 8 f.; Refl 4866, 18: 14; Refl 4893, 18: 21).

Kant’s attitude toward the Wolffian and Lockean treatments of logic is comparable to how he reviews the history of metaphysics and thereby articulates his

⁹ Kant was apparently never exposed to any of Leibniz’s writings that were specifically on logic. Nevertheless, he saw Leibniz as having laid the philosophical basis for Wolff’s logical system (presumably through the *New Essays on the Human Understanding*): “Although actually having written no logic, [Leibniz] nonetheless did much to illuminate concepts (he wrote in defense of his countrymen against the Englishman Locke). In his works he expressed ideas which subsequently moved Wolff to his system” (V-Lo/Dohna 24: 701).

own conception of metaphysics in the *Critique*. In his view future metaphysics, as a strict science, must exhibit the “dogmatic procedure of pure reason” – as has been superbly exemplified by Wolff’s system – without the Wolffian “dogmatism,” but rather with “an antecedent critique of its own capacity” (Bxxxv). More specifically,

in the future system of metaphysics, we will have to follow the strict method of the famous Wolff, the greatest among all dogmatic philosophers, who gave us the first example ... of the way in which the secure course of a science is to be taken, through the regular ascertainment of the principles [*Principien*], the clear determination of concepts, the attempt at strictness in the proofs, and the prevention of audacious leaps in inferences; for these reasons he had the skills for moving a science such as metaphysics into this condition. (Bxxxvi)

In brief, a properly scientific metaphysics “must necessarily be dogmatic, carried out systematically, ... hence with scholastic correctness [*schulgerecht*].”¹⁰ This condition was fully satisfied by Wolff’s metaphysics. Wolff, however, failed “to prepare the field for [metaphysics] by a critique of ... pure reason itself,” which critique is “the preparatory activity necessary for the advancement of metaphysics as a well-grounded science [*Beförderung einer gründlichen Metaphysik als Wissenschaft*]” (Bxxxvi). As for the Lockean approach, which attempted to determine the “lawfulness” of all metaphysical claims through an inquiry about the human understanding, its promise to end all controversies of metaphysics turned out to be illusory. For, by basing metaphysics on a “physiology of the human understanding” and tracing its origin to “the rabble of common experience,” Locke attributed to it a false genealogy (Aix). From these critical assessments emerges Kant’s own proposal for steering metaphysics onto the secure course of a science. He shares the Lockean insight that metaphysics must be preceded by a study of the human understanding, but contends that such a study must be true critique rather than physiology: “The study ... of the subject is either physiological or critical. Critique separates 1. the pure from the empirical faculty of cognition, 2. sensibility from the understanding” (Refl 4951, 18: 9). The requisite critique boils down to a “self-cognition [*selbsterkenntnis*]” a priori on the part of pure reason,

¹⁰ By ‘dogmatic’, Kant means different things in different contexts. When he distinguished dogmatic and critical approaches and disapproved of the former, he was referring to the practice of asserting something without examining the ground of its legitimacy (V-Lo/Dohna 24: 744; V-Lo/Wiener 24: 885; Refl 2667, 16: 459; Refl 5645, 18: 293 f.) The dogmatic procedure he now recommends is meant as what ensures the strict universality and apriority of a science. Dogmatic cognition in this case – as cognition of reason from concepts alone – is contrasted with “historical” or “mathematical” cognition (V-Lo/Blomberg 24: 99; V-Lo/Dohna 24: 723 f.; V-Lo/Wiener 24: 830 f.; Refl 5645, 18: 290 f.).

through which it may “secure its rightful claims while dismissing all its groundless pretensions, and this not by mere decrees but according to its own eternal and unchangeable laws.” Only then can there be a “decision about the possibility or impossibility of a metaphysics in general, and the determination of its sources, as well as its extent and boundaries” (Axi–xii).

Kant’s account of a true or properly scientific logic can be reformulated in similar terms: it must contain a dogmatic presentation of the rules of thinking in general without dogmatism, but preceded by an examination of the human understanding *in abstracto* and a priori. More specifically, as pure logic, it is “the scholastically correct [*schulgerecht*] presentation of a doctrine of the elements of the understanding” (A54/B78; on “scholastic” as opposed to “popular” presentation, see Log 9: 19, 47, 148; Refl 6358, 18: 683; V-Lo/Dohna 24: 779; V-Lo/Wiener 24: 795 f., 820 f.). This requires a dogmatic procedure in the sense depicted above, whereby all those elements are systematically demonstrated from ascertained principles (*Principien*) a priori. Such a procedure boils down to a self-cognition of pure reason as regards the laws in accordance with which the act of thinking ought to take place. These laws are necessary not by decrees, but in virtue of being self-prescribed on the part of pure reason as the universal, a priori conditions of thinking with respect to its form. The self-prescriptive nature of logical rules at the same time limits their validity: they can be legitimately used only for the assessment of cognitions merely as to form, not for the discovery of material truths. From Kant’s standpoint, then, it is by tracing all logical rules to their origin a priori in pure reason – which was achieved by the demonstration presented in this chapter – that one establishes the possibility of logic as a proper science and determines its extent and boundaries (Axi–xii).

It is hence clear that the Kantian demonstration of logical rules constructed above is significant not only because it is required for the success of Metaphysical Deduction, but also because it touches the deepest point at which Kant connects with the history of logic. In this respect, the demonstration in addition gives us an angle to appreciate what Kant really means by claiming that logic since Aristotle “seems to all appearance to be finished and complete [*vollendet*]” (Bviii). To some readers this claim might suggest that Kant simply held an “invincible belief in the adequacy and finality” of Aristotle’s logic thanks to its time-tested “prestige” (Kemp Smith 1918: 184; cf. Kneale and Kneale 1962: 355 f.). On my reading, Kant would take Aristotle’s logic – that is, logic as Aristotle presented it – to be complete at most in the loose sense of having not omitted any formal rules of thinking, but not in the strict sense of being a systematically demonstrated science from principles a priori. In fact, even to prove that Aristotle’s logic is complete in the first sense, Kant would have to explain precisely what rules *must* be included

in logic, which explanation would essentially be the kind of demonstration constructed in this chapter.

3 Conclusion

I began this chapter by discussing the exegetical challenges posed by Kant's logic corpus. In particular, I pointed out that there is no foolproof way to determine the dates of Kant's handwritten notes, that the transcripts of his lectures can be very imprecise and may include many things not presented in the lectures, and that Jäsche failed to explain how he might have used a variety of sources to compile the *Logic*. Meanwhile, I acknowledged that these texts contain potentially valuable materials to enrich our understanding of Kant's views on many topics concerning logic, when the writings he himself prepared for publication contain only sparse discussions of them. Accordingly, I proposed the following way to use Kant's logic corpus as effectively as possible. First, identify a philosophical problem, and outline the parameters for a possible Kantian answer based on the writings that Kant himself prepared for publication. Second, with the perspective resulted from the previous step, find materials from Kant's notes, lecture transcripts as well as the *Logic* to flesh out the anticipated answer. In the process, one may also consider the relevant historical developments and see if Kant's views relate to them in philosophically interesting ways. I tried out such a procedure with the question raised by Metaphysical Deduction, as to how Kant would demonstrate the logical rules of thinking or judging in general from which the categories are supposedly deduced. The resulting demonstration turned out also to reveal the most fundamental point – concerning the ground of logic and the validity of its rules – at which Kant's conception of logic departed from but still deeply connected with what in his view were two key philosophical moves in modern logic, represented by Locke and Wolff respectively.

The same procedure may be iterated in reference to other topics discussed in Kant's logic corpus. In a sense, the above demonstration of logical rules has cleared the path for such iterations. In particular, by clarifying the notion of logic **qua** proper science and sharpening its boundary, Kant signaled a general direction for how we may handle the parts of his logic corpus that deal with such issues as imagination, provisional judgment (in contrast with prejudice), error (as opposed to merely false cognition). These topics belong to empirical psychology and anthropology, not to the strictly scientific logic as Kant defines it. Nonetheless, Kant's characterization of logic as a proper science in the *Critique* already suggested the possibility of a comprehensive course on logic that would include two parts of general logic, understood as “the science [in the broad sense of the

term] of the rules of the understanding in general” (A52/B76).¹¹ It is just that the relation of the two parts – pure logic and applied logic – must be elucidated first: the pure “part” must be explicated in entire separation from the applied part, and yet is also related to the latter in a non-trivial way – much as how pure morality relates to the doctrine of virtue (A53–5/B78 f.). Hence, if Kant’s logic corpus in fact covers all the topics that were commonly treated in modern logic texts, it is his account of the strictly scientific logic and of how it relates to other subject matters that separates his logic corpus from all the other texts. As Jäsche puts it,

however much many of the older manuals on [logic] may stand out for scientific strictness of method; for clarity, determinateness, and precision of explanations; and for conciseness and evidence in proofs; still there is scarcely a one of them in which the limits [*Grenzen*] of the various spheres that belong to universal logic in its broader extension – the merely *propaedeutic*, the *dogmatic* and *technical*, the *pure* and the *empirical* – do not run into and through each other, so that the one cannot be determinately distinguished from the other. (Log 9: 6)

In these terms, such topics as error and prejudice have a legitimate but determinately marked place in logic broadly construed. Having sufficiently clarified this point, we should then feel free to use the rich materials contained in Kant’s logic corpus to sort out his views on any of those topics. The procedure proposed and tested in this chapter thus offers a *methodical* way to approach the materials, with a view to counteracting the various exegetical challenges posed by the corpus, and might thereby open up new lines of research on Kant’s logic.¹²

11 If by ‘science’ in the narrow or strict sense Kant means a system of cognitions grounded on a priori principles, ‘science’ in the broad sense refers to any system of cognitions arranged by certain principles, *whatever they may be*. This dual use of the same term is reflected in Kant’s assessment of empirical psychology: he both denies that it is science in the strict sense – for not being based on a priori principles (MAN 4: 471) – and treats it as one among many sciences (Log 9: 18; Refl 1579, 16: 18; V-Lo/Blomberg 24: 25; V-Lo/Wiener 24: 791 f.). For discussions of metaphysics and chemistry as possible sciences, see the chapters by Courtney Fugate and Henny Blomme, respectively, in this volume.

12 I thank the editor of this volume, Robert R. Clewis, for his careful reading of and helpful comments on the first version of the chapter. I am also indebted to the participants in the first DC-Baltimore Kant Workshop (March 2014, Georgetown) – Mavis Biss, Sonny Elizondo, Michael Nance, Laura Papish, Michael Rohlf, and Oliver Thorndike – for an insightful discussion on the chapter. Any infelicities that may remain are purely my own.