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KANT'S CONCEPTION OF LOGIC

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# KANT'S CONCEPTION OF LOGIC

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## ABSTRACT

Saying something that is both true and intelligible about Kant's views on logic requires sensitivity to three sorts of interpretive concerns, corresponding to the expectations of three sorts of potential audiences. Kant-scholars will demand a sensitivity to the internal constraint of consistency with the rest of Kant's philosophical architectonic. Those working on modern philosophy will demand a sensitivity to the fact that the technical terms of Kant's logic have had a very specific meaning conferred upon them by developments in the late Scholastic and Early Modern periods, a meaning which often-times is quite distinct from (or even at odds with) present-day usage. Nevertheless, present-day philosophers of logic will demand that, if Kant's views are to be taken seriously, they should be able to be framed in a way that allows for dialogue with the most promising views currently on offer.

In the present work, I aim to be responsible to all three demands, and so engage with all three sorts of readers. The payoff of sensitivity on these several fronts is significant indeed, for it will show that many widely-held beliefs about Kant's views on logic are gravely mistaken and unfounded. I have in mind here primarily the beliefs that: (1) Kant simply inherits and repeats what the tradition has taught about logic since Aristotle, (2) his logical doctrines carry little weight in his philosophical system, and (3) his views have been so thoroughly superceded by more recent work (e.g., by Frege) that they are unable to contribute anything to contemporary debates. My thesis demonstrates that, to the contrary, Kant's views on logic: (1\*) though essentially indebted to his (especially Rationalist) predecessors, are clearly innovative in relation to them, (2\*) are absolutely central to his Critical project (both in its content and in its methodology), and (3\*) directly engage foundational discussions in present-day philosophy of logic.

The picture of Kant's conception of formal (or, as he also calls it, 'pure general') logic that emerges from my work is distinguished by the following features: (i) logic has the disciplinary status of a science (and so is neither an art, nor a mere 'instrument'), (ii) logic's subject-matter is the capacity for 'understanding [Verstand]' or thinking 'in general' ('as such [überhaupt]'; and so is not, in the first instance, about either 'being' or 'language'), (iii) logic takes up this capacity according to a method of *a priori* reflection (not 'inner' observation) and

analysis (not institution, construction or convention), (iv) logic's method allows it to disclose the basic modes of thought (conceiving, judging, inferring, constructing a science), and to do so systematically and exhaustively, so that (v) logic's aim is to display all of the possible forms in which understanding may be achieved, regardless of what specific sort of 'thing' it is (e.g., an object of nature, a free act, a poem, a logical or mathematical principle) that is to be understood, (vi) the findings of logic are thoroughly intensional (rather than ontologically determinative), and finally (vii) logic's results provide the constitutive (not prescriptive-normative) rules or laws that express the *sine qua non* for thinking as such – i.e., those conditions which are absolutely necessary for something to meet, if this 'something' is to be counted as a thought or an accomplishment of understanding at all.

In the **Introduction**, I emphasize need for caution as we undertake an investigation of Kant's views on logic, in light of two prevalent trends among Kant's recent interpreters. On the one hand, we need to beware of succumbing to the temptation of anachronism, and so need to be on guard against ascribing to Kant views which would in fact be quite alien to his pre-Fregean outlook, in particular concerning the logical nature of concepts and judgments. The danger here is that we will overlook important continuities between Kant and his predecessors on central logical doctrines. On the other hand, we need to avoid

the opposite extreme of taking Kant's innovative contributions to philosophy to lie entirely elsewhere, in other, completely self-sufficient 'compartments' of his thought, compartments which in no way depend on or involve Kant's views on *logic* in particular. For this approach, by contrast, neglects the deeply intimate connection that in fact obtains between Kant's logical doctrines and the rest of his transcendental philosophy, and overlooks as well those moments within Kant's thought about logic which *do* represent significant and decisive breaks with his tradition.

After concluding the Introduction with some remarks about the historical context of the development of Kant's views on logic, I turn in **Chapter I** to a more sustained comparison of Kant's understanding of logic with those of his predecessors. As I noted above, the subject-matter of logic is, for Kant, the mental capacity which he calls *Verstand überhaupt*: the capacity for 'understanding as such' or 'in general'. The organizing principle of logic is then derived from the basic sort of use to which this capacity can be put – namely, the use of understanding in *judgment*. The investigation of this capacity and its uses is something that, for Kant but unlike his predecessors, constitutes a philosophical *science* in its own right, rather than being merely an 'art' or an 'instrument' useful for the production of further scientific knowledge. Moreover, and most importantly, Kant breaks with his predecessors in taking logic to be distinguished

from all other philosophical sciences – including natural and practical philosophy – insofar as logic alone is a purely *formal* discipline.

I explore the consequences of this break in the following Chapter (II). First, however, in Chapter I, I compare Kant's views with those of the Aristotelian tradition, in order to help bring out what is at stake in Kant's classification of logic – especially, in his separation of logic from both natural and practical philosophy within the taxonomy of disciplines. I begin with the Aristotelian taxonomy, since it is perhaps the most well-known and most influential pre-Kantian classificatory scheme, though I then turn as well to the assessments of the nature of logic put forward by some of Aristotle's most prominent successors (Stoics, Medievals) and Kant's most influential predecessors (Port-Royal, Leibniz, Wolff), to help place Kant within the tradition of early modern logic.

I end the first Chapter by providing a more substantial (though still, to be sure, preliminary) characterization of 'Verstand', through the introduction of a key cluster of Kant's technical terms – e.g., 'synthesis', 'combination', 'function', 'form' – in order to prepare for the direct investigation of the sense of logic's 'formality', which I take up in **Chapter II**. This Chapter represents in many ways the pivot around which my entire study is oriented, insofar as it treats what is surely Kant's most fundamental thesis about the nature of logic – namely, that



logic is a *purely* formal science. I set out to explicate this cardinal thesis by giving an account of what this language of ‘formality’ is meant to signify, primarily by bringing out the severity of the kind of abstraction this imposes upon logic’s subject-matter, insofar as it requires that we bracket everything involved in thought’s *relation to objects*.

Though it is no longer widely recognized, it is first in Kant’s hands that logic becomes a discipline whose task is defined by the analysis of thought *as such* – i.e., an analysis of the realm of cognitive significance from a point of view which ‘puts out of play’ (so to speak) all questions about the possible referential (semantic) relationships in which thought might be involved. To help bring into view several of the relevant philosophical distinctions at work in this discussion, I draw out the overlap between Kant’s understanding of the formality of pure general logic and two other, better-known philosophical distinctions: first, the contemporary distinction between *syntactic* and *semantic* characterizations of a language, and second, the traditional early modern/late scholastic distinction between the *formal* and *objective* reality of thinking (and, with the latter, the Brentanian notion of ‘intentionality’).

I argue as well that arriving at this characterization of formal logic – and so, getting clear on what Kant requires of a distinctly formal science of thought – is a necessary condition for a full appreciation of Kant’s more obviously

‘innovative’ contribution to philosophy: namely, his discovery of a *transcendental* ‘field’ for philosophical analysis and his identification of a theoretical ‘space’ *between* our thought and its objects. For though logic treats thought without concern for the conditions which must be in place for thought to bear a *relation* [Beziehung] to objects beyond itself – that is, it studies what is ‘internal’ to thought itself – the possibility for the study of what would pertain to thought as such (i.e., what would remain after such ‘bracketing’) is a possibility which comes to light due to Kant’s increasing concern to analyze the conditions of thought’s relation to objects (i.e., what is comprised ‘within’ the brackets themselves). This points to the fact that Kant’s discovery of the ‘transcendental’ is coeval or co-originary with his discovery of the purely ‘formal’.

As with his ‘transcendental’ turn, it is hard to overstate the significance of Kant’s reconceptualization of the subject-matter of logic from this new purely formal perspective – even if both the radicality and the novelty of this construal of logic have typically been either watered down or simply overlooked by most interpreters. For it is only through such a reconfiguration of ‘form’ in general and of logic in particular that Kant takes himself to have achieved a sufficiently radical break with his Rationalist predecessors, and so takes himself to have reached a new axis, so to speak, along which to construct his distinctive type of (‘formal’) idealism (as Kant calls it in his 1783 *Prolegomena*).

It is only by winning through to this precise delimitation of the transcendental field of inquiry that Kant thinks we will occupy the correct position from which to inquire after the conditions which must be met if thought as such is to become thought ‘of an object’ – that is, if the logical *functions*, as mere forms of *understanding* in general, are to become *categories* or pure concepts of *objects* ‘in general’. The science of the basic ‘forms’ of thinking about objects is itself something that Kant calls a ‘logic’, though because this logic is not a purely formal science of thinking, but instead an investigation of thought’s contribution to the constitution of the *relation* between itself and its objects, Kant gives this science the name: ‘*transcendental* logic’.

Yet – and this brings us to Kant’s commitment to (an at least minimal form of) Empiricism – one of Kant’s equally fundamental theses is that the constitution of the transcendental field of the ‘object-relatedness’ of thought (its objective purport) is not something that can be achieved *solely* through reflection upon the elementary features of *thought* about objects ‘in general’. We are in possession of finite, discursive intellects, which entails that the material for thinking is given to our thought from ‘without’, through other ‘means’ – more specifically, it is given to us through our capacity for *sensing*. Insofar as our capacity for sensing is itself something which is exercised according to certain forms, these forms of sensing must also be taken into account if we hope to give

an analysis of the conditions of the possibility of thought's bearing a relation to objects.

Hence Kant demands that the true constitution of the transcendental field is something which will only be accomplished if and when we show how it is possible for the forms of thought about objects as such (the categories) interact with the forms of our being given material for such thinking. This is the task of a hybrid science which would develop the forms of cooperation between understanding and sensibility, forms which Kant calls 'schemata', which consist essentially in the integration of the categories and the forms of sensibility. The science of such schemata is again something which Kant calls a 'logic', and something, moreover, that he prosecutes under the heading of 'Transcendental Logic' in the first *Critique*, though I argue in this Chapter that it would be more correct to say that this represents the *special* logic of thought about objects of possible sense-experience – in short, the special logic of thought about *nature*.

I close this Chapter by consolidating the foregoing results together in a proposal for a three-tiered classification of Kantian 'logics', a classification based upon the distinction between *general*-logical form, *transcendental*-logical category, and *pure-special*-logical schema. This brings out a distinctive merit of the interpretation offered here: since it alone carefully distinguishes the radical sense in which pure general logic is 'formal', this interpretation alone allows us, in turn,

to clearly delineate this feature from the various other sorts of ‘generality’ intertwined in Kant’s notions of the ‘pure concepts of the understanding’ and their ‘schemata’. This is what gives us a principled manner for distinguishing the various sciences (‘logics’) occupied with each level.

As I noted above, this construal of the formality of logic also gives us a more straightforward way to appreciate the novelty of Kant’s conception of logic, especially when viewed in the context of the Rationalist tradition out of which it is developed. For Kant, the assertion of the formality of logic amounts to the denial that one can derive any positive *ontological* knowledge from logical reflection alone. The detachment of logic from ontology shows itself perhaps most dramatically (for our purposes, at least) in Kant’s claim that it is the special logic of nature, and *not* formal logic, which is appropriately entitled the logic of *truth*. **Chapter III** focuses upon the consequences that this claim has for Kant’s understanding of the formal-logical essence of judgment. Here I argue that, unlike many contemporary philosophers, and to the contrary of most of his interpreters, Kant does not define the logical essence of a judgment in terms of its ‘truth-evaluability’. This conclusion follows readily once we combine Kant’s definition of truth, as the *agreement* of thought with its object, with the theses that support his conception of the formality of logic (examined in the previous Chapter (**II**)), especially the necessity of abstraction within logic from all relations between

thought and objects. Since ‘agreement’ is itself a species of object-relation, truth simply cannot function as a central concept of formal logic.

By contrast, I argue that the essence of Kantian judgment is grounded upon both its *pragmatic* as well as its *intensional* features. (The consequences of Kant’s ‘intensionalism’ for his *Begriffslehre* form the subject-matter of the next Chapter (IV)). This can be seen once we recognize that the path to Kant’s alternate explanation of the logical essence of a judgment goes directly through his difficult but central notion of the *unity of apperception* or self-consciousness, which Kant claims is the ‘highest point’ to which one must ‘affix the whole of logic’ (B134n). As I argue in Chapter VI, Kant means to deploy this notion in a non-psychologistic fashion, though here in III I limit myself to showing why recognition of this non-‘extensional’ characterization of the logical essence of our understanding will be required if we are to see how Kant can make accord with logical form be a necessary condition for *any* sort of intellectual activity without exception, and hence a condition for the possibility of both scientific and non-scientific (e.g., poetic, ethical) discourses.

I conclude this Chapter by providing a sketch of the peculiar form of ‘agreement’ which does appear in a formal-logical context, by giving an analysis of what Kant calls ‘the agreement of the understanding *with itself*’, or with its own fundamental principles. This notion of self-agreement, or *consistency*, will prove

essential for Kant's account of the peculiar sense of 'truth' that pertains to analytic judgments, something I take up in Chapter V. Here I lay the foundation for such an account by showing how the highest principle for analytic judgments, the Principle of Contradiction, is itself formulated in such a way as to refer solely to the ('qualitative') opposition between affirmative [bejahende] and negative [verneinende] *acts* of predication or concept-combination, rather than codifying the difference between truth-values.

In **Chapter IV**, I articulate the basic commitments of Kant's formal-logical *Begriffslehre*, first, by contrasting Kant's understanding of a concept with Frege's thesis that a concept is a function from an object to a truth-value. While Kant agrees with Frege that the defining feature of concepts is their contribution to judgments, not only does he differ from Frege in possessing a broader notion of judgment (i.e., broader than one defined by reference to truth-values; cf., Chapter III), Kant also departs from Frege by dissociating the logical essence of a concept from its relation to individual objects.

This leads Kant to a different understanding of both the predicative nature of concepts, as well as their determinability and generality. In contrast to the resources that both Frege but also Leibniz take to be available within logic – exemplified by the latter's doctrine of the complete individual concept – Kant holds that all attempts to construct representations of fully determinate

individuals within logic will rest upon what he calls a ‘transcendental presupposition’ concerning the actual existence of a determinate totality of thinkable content. Kant’s rejection of such presuppositions leads him to a picture of concepts as necessarily general and always further determinable. This entails that Kantian formal logic itself has no essential use of the concept of an individual (or of a first-order identity-predicate, for that matter), which I take to be further vindication for the argument in Chapter II that it is *transcendental* and not formal logic which is the logic of thought *of objects*.

I further elucidate these anti-Rationalist features of Kant’s logic by appealing to his construal of the structure of conceptuality along the lines of what I call a ‘Porphyrian’ hierarchy, or an inverted tree-structure of ‘containment’-relations. I show how, in a striking departure from his predecessors, Kant takes the ‘tree of concepts’ to be necessarily *indefinitely* extensible and hence comprised of *concepts alone* (‘all the way down’, so to speak). Reflection on Kant’s relation to earlier developments within this Porphyrian tradition provides grounds from which to argue against the common though unwarranted assimilation of Kant’s notion of an ‘Umfang’ of a concept (i.e., what is contained ‘under’ a concept) to the contemporary notion of an ‘extension’ of a predicate. In particular, a Kantian ‘Umfang’ differs essentially from a modern extension insofar as the former would



be judged today to be, in fact, an ‘intensional’ entity, since it refers only to *lower concepts* and not to the individual objects.

This focus upon ‘Umfang’ in the latter part of the Chapter is complemented in **Chapter V**, when I turn from concepts ‘as such’ to the class of judgments which express the (containment-)‘Inhalt’ of a concept (i.e., what is contained ‘in’ or ‘above’ a given concept), or what Kant calls *analytic* judgments. To this end, I develop, first, Kant’s understanding of conceptual ‘analysis’ to further explicate the notion of containment-‘in’ content that was introduced in the previous chapter. In this regard, I show how Kant’s account of the operations which might be performed on concepts – most significantly, ‘abstraction’ and ‘division’ – can be used to further elucidate his ‘Porphyrian’ understanding of conceptuality as such. This leads us directly to a discussion of the peculiar nature of the ‘truth’ of analytic judgments. Most importantly, having the Porphyrian picture in mind will allow us to see that analytic ‘truth’ – like the ‘formal’ agreement canvassed in Chapter **III** – consists in an ‘agreement’ of a judgment, not with objects, but rather with the necessary (logical) structure of *conceptual* containment as such.

In the second part of this Chapter, I further extend the doctrines *de continente et contento* from conceptuality in general to Kant’s understanding of *inferential validity*, by reconstructing the beginnings of Kant’s system of ‘syllogistic’.

Building up this system will put us in a position to examine more systematically the last ‘element’ of Kantian formal logic, ‘inference [Schluß]’. Here I take up the principles which Kant takes (implicitly or explicitly) to underlie both ‘immediate’ inferences of the understanding, as well as the ‘mediate’ inferences that comprise those forms of reasoning associated with the traditional categorical syllogism.

In the second half of this Chapter, I also raise questions about the precise nature of the notion of *validity* that Kant recognizes, a notion that I argue is closely related to our earlier discussions of the role of ‘agreement’ within logic. Here I contend that the above, purely conceptual or intensional account of the ‘truth’ of analytic judgments supplies us with the tools necessary to give an equally intensional account of inferential validity. In these sections I also explore the grounds upon which Kant admits as valid certain inference-patterns that, to a modern eye, would seem to presuppose ‘existential commitment’. Here we find another significant consequence of the fact that Kant’s sub-judgmental ‘variables’ range only over concepts and not objects – since this entails that Kant’s use of the quantifier ‘Some [Einige]’ cannot be readily assimilated to that which underwrites standard readings of ‘ $\exists$ ’.

After this more detailed analysis of the elements of Kant’s logic, in the final **Chapter VI**, I return to the broader vantage-point of the opening chapters. Having identified the basic forms of understanding and several of principles

which govern these forms, I then take up the task of investigating more generally the *status* of the capacity and its laws. That is, I ask, first, about what I call the *ontological* type to which ‘Verstand’ belongs: what kind of ‘being’ does it have, if any? Is it an ‘object’ in any sense? Does it have a ‘history’? Second, I ask about the *nomological* type of the laws which govern understanding: with what form of lawfulness or bindingness do these laws govern our capacity for thought? Third, I set out to determine the form of the *epistemic* accessibility that we have with respect to such laws, by asking the very Kantian question: how is logical knowledge possible for human knowers?

In addressing these questions, I show, first, that Kant responds to the question of the nature of our access to logical forms and principles by construing such access as a special form of *self-knowledge*, though I also show that the precise nature of the ‘self’ at issue is, by Kant’s own lights, entirely problematic. I then argue that Kant’s position on the bindingness of logical law is best explicated by interpreting his account, not through an analogy with the relation which obtains between *norms* or *imperatives* and free activity, but rather as a version of the ‘Leibnizian’ construal of laws as *constitutive* possibilities for the faculty for thought as such. In the concluding part of this Chapter, however, I caution against drawing too close an analogy between Kant and Leibniz, given the Kantian disconnection of the ‘essence’ of thinking from anything demonstrably *eternal* –

even if this disconnect has the effect of making all the more pressing Kant's need for a positive account of the ground of logic's necessity and validity which is both essentially tied to features of our discursive, finite form of 'mindedness' and yet neither viciously 'psychologistic' nor crudely 'conventionalist'.

# INTRODUCTION

## Why Kant's Logic Now?

### §I. Rethinking Kant's Debt to Aristotle

Kant makes the following notorious remark about logic in the 'Preface' to the second (1787), 'B-edition' of his *Kritik der reinen Vernunft*:

[S]ince the time of Aristotle [logic] has not had to go a single step backwards, unless we count the abolition of a few dispensable subtleties or the more distinct determination of its presentation, which improvements belong more to the elegance than to the security of that science [Wissenschaft]. What is further remarkable about logic is that until now it has also been unable to take a single step forward, and therefore seems to all appearance [Ansehen] to be *finished* [geschlossen] and *complete* [vollendet]. (Bviii; my ital.)<sup>1</sup>

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<sup>1</sup> Aside from the first *Kritik* – which I will cite primarily from the B-edition pagination – I will cite Kant's works according to the 'Akademie' Edition pagination, which runs in the margins of the Cambridge Edition of Kant's works, as well as by (what I hope will be) intuitive abbreviations of the German titles (which I will introduce parenthetically along the way). Often I will also give section-headings and numbers, to the extent that they might help one remember the general location of the passage in question. I will also frequently insert Kant's German in square brackets, to allow us to track key terms. While I will for the most part follow the published translations, I will occasionally depart from them without comment – though I will typically give the German here as well (as grounds for the departure). Hence I will be, in the end, responsible for all translations. Throughout I will cite all other works according to parts, chapters, and sections, where useful, and (besides the year-of-publication) any unadorned numerals in the citations will refer to page numbers.

Now, in light of such a remark, Kant's conception of logic might not appear to be an especially promising topic for a book-length study, at least not one which would hope to be of anything more than merely historical interest – especially for someone working after the innovations in logic made by (among others) Frege, Gödel, and Tarski in the early half of the 20<sup>th</sup> century. For it is common knowledge nowadays – if anything is – that the 'Aristotelian' paradigm in logic has long since been discarded within mainstream philosophy.<sup>2</sup> In this regard, W.V. Quine's estimation is representative:

A partial development of logic, in the sense of the term, stems from Aristotle and has been known traditionally as 'formal logic'. But the past century brought radical revisions of concepts and extensions of method; and in this way the confined and stereotyped formal logic of tradition has come to be succeeded by a vigorous new science of logic, far surpassing the old in scope and subtlety.<sup>3</sup>

To be sure, the general consensus among philosophers today is not so much that Aristotelian logic is a false or falsified theory, but rather that it is radically incomplete and so represents an early and unfinished stage in the development of the science. That is, Aristotle's logic is taken to treat only a fragment of logic's true subject-matter, and moreover to do so by way of a cumbersome and out-dated methodology. In Quine's words, '[t]he traditional formal logic is not

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<sup>2</sup> Though not everyone writing logic textbooks today would agree. Cf., Raymond McCall, *Basic Logic*, 2<sup>nd</sup> ed. (New York: Barnes and Noble, 1952): 'practically no additions to the principles of *formal* logic have emerged since the time of Aristotle, who was the first man to write a treatise on the subject' (xxii).

<sup>3</sup> W.V. Quine, *Elementary Logic*, rev. ed. (Cambridge: Harvard, 1980), §1, 2.

repudiated, not refuted, but its work is done more efficiently by the new logic as an incidental part of a larger work' (ibid.). But this is just to say that there is general consensus today that *Kant could not have been more wrong* in his estimation of Aristotle's achievement in logic.

What is more, it seems that, with such a judgment, Kant is admitting quite straightforwardly that he has no intention himself of making any new contributions to the science of logic. For both of these reasons, then, it would seem to be entirely appropriate that Kant's views on logic have been largely neglected by Kant-scholars and historians of logic alike.<sup>4</sup> Indeed, in light of such considerations, it is not at all difficult to see why the majority of Kant's readers are of the opinion that, whatever might be exciting and innovative about his philosophy, it will surely be found elsewhere than in his writings on logic.

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<sup>4</sup> To my knowledge, aside from Alan Shamon's 1979 Columbia University Ph.D. thesis, *Kant's Logic* (supervised by Charles Parsons), there has not yet been a book-length treatment of Kant's logic published in English. Neither do any of the now-standard reference-works – e.g., the *Cambridge Companion to Kant* (Cambridge: Cambridge, 1992), the *Cambridge Companion to Kant and Modern Philosophy* (Cambridge: Cambridge, 2006), or *A Companion to Kant* (Oxford: Blackwell, 2006) – have entries on Kant's views on logic. Those interested and able might look around for one to translate into English, but here too the pickings are quite small, and none of these have made a significant mark on either the tradition of Kant-interpretation or studies in the history and philosophy of logic. Happily, at least within the history of philosophy of logic, there are signs that the reasons for this neglect are beginning to be challenged; for example, volume 3 of the *Handbook of the History of Logic* (Amsterdam: Elsevier, 2004) contains an entry by Mary Tiles on Kant, alongside entries on Leibniz and Frege. Further signs of a possible shift in the appreciation of the significance of Kant's thought about logical matters can be found in Robert Hanna's *Kant and the Foundations of Analytic Philosophy* (Oxford: Clarendon, 2001), as well as Jaakko Hintikka's earlier *Logic, Language Games, and Information: Kantian Themes in the Philosophy of Logic* (Oxford: Clarendon, 1973).

The chief aim of the present work is to show, by contrast, that Kant's thought about logic *is* in fact both innovative and exciting. Moreover, in what follows, I will demonstrate that seeing *how* Kant is an innovative thinker about logic – in particular, recognizing his radical re-theorization of logic as a *formal* science – is a necessary condition for achieving a proper understanding of those well-known and more obviously 'revolutionary' aspects of Kant's 'Critical' philosophy.

My general strategy will be to argue that we can reach these conclusions even while insisting nevertheless that we take Kant at his word in those notorious remarks with which we began – that Aristotelian *logic* itself, in the first-order (i.e., its principles, axioms, theorems), is, in Kant's mind, a completed doctrine. What I will show, however, is that this is entirely consistent with our coming to see that one of the central pillars of Kant's Critical project is his second-order *reconceptualization* of the status and significance of this traditional logic, within the philosophical architectonic of transcendental idealism. For in Kant's *conception* of logic we find something every bit as novel, substantial, subtle – and perhaps, as problematic – as the rest of his Critical programme.



## §II. Avoiding Anachronism and Compartmentalism

From a different point of view, however, the relative neglect of Kant's views on logic might come as something of a surprise. For the vast majority of Kant's readers have taken the Critical project itself to represent a singular turning point in the history of modern philosophy,<sup>5</sup> with many going further and defending Kantianism as a still-viable philosophical perspective in its own right. In fact, as has been well-documented, there is at present a tremendous resurgence of interest in almost every other aspect of Kant's 'Critical' programme among English-language philosophers.<sup>6</sup>

The temptation for many recent philosophers, then, has been to take what I will call a *compartmentalist* approach to Kant's views on logic. Those who take this approach are fully convinced that there are genuine intellectual advances and philosophical insights – 'gold', so to speak – to be found in Kant's thought, but just not in his writings on logic, which ought therefore, as much as is possible, to be quarantined from the rest of his philosophy.

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<sup>5</sup> '[F]or several generations now the man most widely regarded as the greatest philosopher since the ancient Greeks has been Immanuel Kant.' These are the words of Bryan McGee, *The Great Philosophers* (Oxford: Oxford, 1987), 170, but a similar sentence can be found in almost every history of philosophy written in the 20<sup>th</sup> century. (Just for good measure, here is A.J. Ayer, writing in an 'Editorial Foreword' to S. Körner's *Kant* (London: Penguin, 1955): 'By common consent Kant is one of the greatest philosophers that has ever lived' (9).)

<sup>6</sup> See Karl Ameriks, *Interpreting Kant's Critiques* (Oxford: Oxford, 2003), 'Introduction', §1. On the other side of the alleged 'analytic'/'continental' divide, compare Alain Badiou: 'Our contemporary moment is defined by an immense 'return to Kant'' (*Ethics*, tr., P. Hallward (London: Verso, 2000), 8); cf., as well Richard Rorty's accusation that 'on both sides of the Channel...most philosophers have remained Kantian' (*Philosophy and the Mirror of Nature* (Princeton: Princeton, 1979), 162).

More recently, however, there have been a number of Kant's admirers who have been drawn to an opposite approach – what I will call an *anachronistic* approach – out of a sense that, despite such apparent pronouncements by Kant himself to the contrary, there *is* something significant and novel going on in Kant's thought about logic. Yet these readers then go on to claim that we can find in Kant commitments which would push his logic in the direction that will ultimately culminate in the science expounded in today's textbooks – i.e., a science which takes logic to consist (roughly) in the study of functions between truth-values ('propositional' logic) and of first-order quantification-relations within a domain of individual objects ('predicate' logic).<sup>7</sup>

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<sup>7</sup> Though, looking ahead, it will be necessary to distinguish between model- and proof-theoretic approaches to the languages involved in the construction of 'first-order logic', for now I will simply take the current textbook understanding of logic – indeed, the understanding that, for most English-language students of philosophy, has been prevalent since the middle of the 20<sup>th</sup> century – to consist in what W.V. Quine says it to mean. Logic 'in its modern form', as Quine tells us in his *Elementary Logic*, is divided into three parts: the theory of truth-functions, the theory of quantification, and the theory of membership. The theory of *truth-functions* sets forth the nature of 'those logical structures which emerge in the construction of compound statements from simple statements by means of the particles 'and', 'or', 'unless', 'if...then', etc.' (op.cit., §1, 2). 'Statements' are 'just those sentences which are true and those which are false' (op.cit., §2, 5), and the 'truth-functional' particles are those which form new statements whose truth-value is purely a function of the truth-value of its constituent statements. The theory of *quantification*, secondly, gives an account of the internal logical structure of simple statements, by introducing 'generalizing particles' such as 'all', 'any', 'some', 'none' (op.cit., §1, 2), along with variables which can be filled in by noun-phrases, which themselves stand for individual objects. The theory of *membership*, finally, takes up the relation of an element's 'belonging to' a class or set (op.cit., §1, 2-3). In fact, Quine himself has argued that 'logic proper' ought to be taken as consisting in the theory of truth-functions and quantification alone, with the theory of membership (set-theory) being classified as an 'extralogical branch of mathematics' (op.cit., §1, 3). As I argue below, the sentiment behind this restriction puts Quine quite close to Kant's own position on the extralogical status of mathematics, something Quine himself notes on at least one occasion (cf., 'Carnap and Logical Truth', *Synthese* 12.4 (Dec., 1960) §II, 354).

These two approaches to Kant's work are, in effect, made in one another's image: the anachronists think that Kant *is* innovative with respect to logic, while the compartmentalists insist that he *is not* innovative, and (in light of Kant's remark quoted above) self-consciously so. This is, however, because both approaches share the same idea of what Kant would have to have done to count as an 'innovative' theorist of logic – namely, Kant would have had to anticipate the basically *Fregean* analyses of concepts, judgments, and inferences still employed by our present-day science of logic.

I will argue that, in the end, it is precisely this shared picture of 'innovation' which prevents either of these approaches from achieving either an adequate appreciation or an accurate interpretation of Kant's views on logic. That is, I will show that both sets of readers are prevented from doing justice to the true significance of Kant's doctrines of logic – either for the rest of his own philosophy, or for the history of philosophy of logic – due to the unfortunately narrow sense that they each associate with the ideas of creativity and insight in the realm of logic.

Even so, I want to emphasize at the same time that I embrace wholeheartedly the spirit behind the anachronist approach. For I think that readers like Michael Friedman and Béatrice Longuenesse are exactly right in their sense that there is something of genuine philosophical interest that is going on in

the pages in which Kant lays out his views on logic.<sup>8</sup> What I find unsatisfactory about these readings is rather the particular forms of anticipation that they are led to attribute to Kant. To highlight a few of the more important examples of such problematic interpretations (all of which will receive further discussion in what follows), these readers are led to ascribe to Kant (i) a proto-Fregean doctrine of *concepts* as essentially open sentences to be completed by names of individual objects, (ii) a concurrent commitment to the now-standard ('object-concept') picture of the logical structure of an *atomic judgment*, and, furthermore, (iii) a picture in which *truth* is the central concept of formal logic.

I will argue that these ascriptions must be judged anachronistic since they ignore the extent to which Kant *does* mean to take over a good deal of his logical doctrines from the Aristotelian tradition. Perhaps most importantly, they neglect the extent to which Kant's logic is a thoroughly *intensional* logic, insofar as (i\*) it is a logic whose concept of a 'concept' is of something which consists in essentially general (and indefinitely determinable) 'thinkable contents' (intensions), contents which can in no way be reduced to whatever sets of objects that these terms might (actually) be 'true of' (i.e., contemporary 'extensions'). As a consequence, (ii\*) Kant's picture of the formal-logical structure of an atomic judgment likewise departs from modern practice insofar as it has no 'place' or 'role' for essentially

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<sup>8</sup> I agree so much so, that I have devoted the entire following study to just this topic. Cf., Friedman's *Kant and the Exact Sciences* (Cambridge: Harvard, 1992), e.g., 63; Longuenesse's *Kant and the Capacity to Judge*, tr., C.T. Wolfe (Princeton: Princeton, 1998), e.g., 103. I discuss the views of Friedman and Longuenesse below, especially in Chapter IV.

*singular* expressions or representations, but – taking its cue from the traditional syllogistic treatment – consists instead in the expression of a containment-relation between *concepts* alone (again, understood as essentially general representations). Finally, (iii\*) Kant is similarly ‘intensionalist’ about the fundamental formal-logical principle of the unity of judgment, insofar as he takes judgments to be formal-logically defined, not by their susceptibility to truth, but instead by their relation to what Kant calls ‘apperceptive unity’ – roughly, the unity of *sense* (as opposed to reference), or the ‘thematic’ unity which pertains to anything in which we can find meaning (as opposed to nonsense).<sup>9</sup>

Now, as I will show in what follows, the precise nature and extent of Kant’s divergence from contemporary views on these matters is something that becomes more evident once we resituate Kant’s thought within its historical context. Hence I take it to be a virtue of the other, compartmentalist approach – one put forward by Stephan Körner and Jonathan Bennett, among others<sup>10</sup> – that its proponents freely acknowledge, and indeed insist that we recognize, Kant’s continuity with his predecessors. Yet I also think that it can be shown that most of those who insist on this continuity-thesis both overestimate the cost thus

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<sup>9</sup> The relation between judgment and truth is treated instead in a discipline that Kant calls ‘transcendental’ logic. I discuss the relation between judgment, sense, and truth in Chapter **IV**.

<sup>10</sup> See Körner’s *Kant* (London: Penguin, 1955) §3.3, 52; Bennett’s *Kant’s Analytic* (Cambridge: Cambridge, 1966) §25, 88-89.

incurred, and completely underestimate its philosophical and interpretive benefits, of taking Kant at his word in those 'notorious' remarks with which we began.

What is more, in their (correct) demand for the recognition of the ways in which Kant's views are traditional, such readers are thereby prevented from picking up on important moments of *discontinuity* between Kant's views and those of his predecessors. They fail to see, for example, the innovation in the *use* to which Kant puts Aristotelian logic. In particular, they fail to see the pivotal significance for Kant's own 'Copernican revolution' that is borne within his claim that logic will provide the 'clue' to the organization and methodology of any and every apriori and truly philosophical inquiry which might hope to be counted as a science.<sup>11</sup>

There are, however, several even more straightforward reasons for being dissatisfied with attempts to belittle or marginalize the role that logic plays within Kant's philosophy. First of all, it takes very little effort indeed to see how logical concerns are meant to orient the large-scale structure of Kant's own 'architectonic' arrangements of his publications. For example, what is by far and away the most substantial portion of Kant's masterwork (i.e., the first *Critique*) bears the label 'logic', and its major divisions ('Analytic of Concepts', 'Analytic of Principles', 'Dialectical Inferences of Reason') follow the threefold divisions

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<sup>11</sup> By 'clue' I mean to allude, of course, to Kant's most well-known use of 'Leitfaden' in this regard, in the so-called 'Metaphysical Deduction' of the *Kritik der reinen Vernunft* (KrV).

found in the logic textbooks of Kant's time, made according to the three 'operations of the mind' (conception, judgment, inference).<sup>12</sup> Moreover, at several places (e.g., Bviii-x) Kant states quite explicitly that he considers the methodology of logic as a model of the sort of procedure by which he will conduct his own inquiry into the extent and limits of what he calls 'pure reason' (in both its theoretical and practical exercise). Finally, and most significantly, at several crucial moments in the development of various of his signature positions, Kant appeals directly to his logical doctrines, indicating that they are immediately relevant to both the explication and justification of the very details of his well-known 'transcendental idealist' commitments.<sup>13</sup>

Surprisingly, these otherwise fairly uncontroversial observations about logic's significance seem to carry little weight with most contemporary interpreters, as can be seen from the fact that very little attention has been paid to this 'keystone'<sup>14</sup> of Kant's architectonic, even by those who aim to revisit,

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<sup>12</sup> Aside from prefatory and introductory material, the first edition of the *Critique* has 855 pages, while the second runs to 883. The section entitled 'Transcendental Logic' comprises 654 pages of the first edition, and 658 of the second. (Arguably, the final section entitled 'Doctrine of Method' could be included within the 'logical' ambitions of the work, running the count to 805 and 809, respectively.)

<sup>13</sup> Approaching this fact from another angle, Kant's appeal to logical theses at such key points in the development of what are widely recognized as philosophically 'innovative' views gives us further reason for thinking that, contrary to a widely-held opinion, the specific content of Kant's logical theses cannot likewise amount to a mere reduplication of status quo positions.

<sup>14</sup> Here I mean to make three allusions. *First*, I allude to Kant's use of the term 'key [Schlüssel]' in his famous 1772 letter to Marcus Herz, in which Kant suggests that the 'key to the whole secret of metaphysics' can be found by asking the question: 'What is the ground of the relation [Beziehung] of that in us which we call 'representation' to the object [auf den Gegenstand]?' (10:130). As I argue in Chapter II, it is precisely Kant's answer to this question

reintroduce, even rehabilitate most other elements of Kant's philosophy. Instead, there is a widespread tendency to assume that Kant's views on logic are somehow *detachable from* the rest of his work. Perhaps many are moved to make this assumption as a way to reconcile their own judgment of the positive value of some other aspect of Kant's work, with the long-standing tradition to denigrate Kant's logical doctrines – a judgment still largely and unquestioningly inherited by contemporary historians and philosophers of logic.<sup>15</sup>

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which forces him to fundamentally reimagine the possibilities inherent in the discipline of logic. *Second*, I mean to refer to passages such as the following from the first *Critique*, in which Kant tells us that 'the logical concept' of reason will 'put in our hands the key to the transcendental one' (B356), reiterating the foundational status accorded to the results of logical investigation. *Third*, I am implicitly suggesting that, even though it is *freedom* (as Kant writes in the second *Kritik*) which is said to 'constitute the *keystone* [Schlußstein] of the whole structure of a system of pure reason' (5:3), it might equally be claimed that, insofar as *logic* provides the 'formal' conditions of the possibility of any rational structure or system, logic appears to achieve an equally foundational role in relation to such a system. (Put another way, while freedom provides the 'material' keystone for Kant's system, logic might well be taken to provide the 'formal' one.)

<sup>15</sup> Concerning the only work specifically on logic that Kant published during his lifetime – his 1762 essay, 'The false subtlety of the four syllogistic figures' – Michael Potter's recent judgment (in his *Reason's Nearest Kin*, paperback ed., with corrections (Oxford: Oxford, 2002)) is that it 'hard for anyone who reads [this] to regard Kant as a gifted logician by modern standards' (32). Though holding Kant to 'pre'-modern standards, William and Martha Kneale are even harsher in the few pages allotted to Kant in their classic history of logic (*The Development of Logic*, 1<sup>st</sup> ed., with corrections (Oxford: Oxford, 1975)): Kant 'says little of value about syllogistic and shows no sympathy with efforts to improve upon the legacy of Aristotle', and 'was apparently unaware of the value of any contributions made to logic after the time of Aristotle'.

This sort of estimation of the value of Kant's work in logic is echoed even by J. Michael Young, the editor of the most recent Cambridge edition of Kant's lectures on logic (Cambridge: Cambridge, 1991), who feels compelled to admit (in his 'Translator's Introduction') that 'Kant is not a major contributor to the development of formal logic' (xvi). In this regard, the following quote from Charles Parsons's essay, 'Kant's Philosophy of Arithmetic' (reprinted in *Mathematics in Philosophy* (Ithaca: Cornell, 1983)), can serve as representative of the standard assessment of Kant as a logician and as a philosopher of logic: 'What must strike a person with modern training most forcefully in considering Kant's outlook on logic is the limitation of his knowledge of and concept of it. [...] Kant not only had very limited technical resources at his command; what is more striking and more damaging to his standing as a philosopher, he was largely satisfied with logic as he found it' (115-6). Now, despite passages in Kant which might suggest otherwise, I have already adumbrated several fairly straightforward ways in which this last point is simply not



I have yet to mention what is surely the most decisive reason for taking any such ‘detachability’ thesis – and the compartmentalist approach which it spawns – to be fundamentally flawed. Any such approach will fail to appreciate the extent to which the more obviously ‘innovative’ moments in Kant’s philosophy – such as his discovery of a transcendental ‘field’ for philosophical analysis, his identification of a theoretical ‘space’ *between* our thought and its objects – are only made possible by, and can only be understood against the backdrop of, Kant’s thorough-going reconceptualization of the status of the traditional logic as an essentially *formal* science.

With this reconceptualization, Kant introduces into the history of logic what might be called a ‘proto-syntactic’ or ‘proto-schematic’ theory of the formality of logic.<sup>16</sup> That is, it is first in Kant’s hands that logic becomes a discipline whose task is defined by the analysis of *thought as such* – i.e., an analysis of the realm of cognitive significance from a point of view which brackets all questions about the possible referential (semantic) relationships which might obtain in this realm. In Kant’s terminology, logic treats thought without concern

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true – Kant does make significant changes to ‘logic as he found it’, so much so as to effect an essential transformation in the way in which logic is conceived as a discipline – a formal conception, core elements of which continue to be shared by most philosophers of logic today.

<sup>16</sup> In his ‘Frege’s Conception of Logic’ (in *Future Pasts*, eds., Floyd and Shieh (Oxford: Oxford, 2001)), Warren Goldfarb contrasts the ‘schematic’ conception of logic (a point of view developed in the *Tractatus* and by Quine) with a ‘universalist’ conception put forward by Russell and Frege. I align Kant’s views with the former, and discuss his opposition to the latter, in Chapter II.

for the conditions which must be in place for thought to bear a *relation* [Beziehung] to objects beyond itself.<sup>17</sup>

To be sure, the possibility for the study of thought after such ‘bracketing’ is a possibility which emerges in Kant’s thought due to his increasing focus upon what is comprised *within* the brackets themselves. But this simply means that Kant’s discovery of the ‘transcendental’ is at the same time (and so coeval or co-originary with) his discovery of the purely ‘formal’. To quote from his 1772 famous letter to Herz, Kant’s transcendental project is motivated by the attempt to answer the question: ‘what is the ground of the relation [Beziehung] of that in us which we call ‘representation’ to the object [auf den Gegenstand]?’ (10:130). Frustrated by any account which purports to derive an answer to this question from the ‘things themselves’, Kant proposes that we try to determine what is contributed by our own capacities for representation in the establishment of such a relation. Yet if they are to provide us with the sort of guidance that Kant thinks we will need – i.e., if we are to achieve secure cognition of the ‘ground’ of this object-relation – Kant argues that we will thereby need an account of what these representational capacities are ‘in themselves’, so to speak. Put another way, we

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<sup>17</sup> As Hilary Putnam remarks in his ‘Rethinking Mathematical Necessity’ (in *Words & Life*, ed., J. Conant (Cambridge: Harvard, 1994), 245-263), Kant’s formal logic is not even concerned, in the first instance, with what is ‘true’ in ‘all possible worlds’. As Putnam puts it, this marks ‘the deep difference between an *ontological* conception of logic, a conception of logic as descriptive of some domain of actual and possible entities, and *Kant’s*...conception [my ital.]. Logic is not a description of what holds true in ‘metaphysically possible worlds’, to use Kripke’s phrase. It is a doctrine of *the form of coherent thought*. Even if I think of what turns out to be a ‘metaphysically impossible world’, my thought would not be a thought at all unless it conforms to logic’ (247).

will need an account of the universal and necessary *forms* that the exercises of such capacities will take, no matter what their aim is in being exercised. But this is just to say that the answer to the ‘transcendental’ question will, in effect, *presuppose* an answer to this ‘formal’ question. Hence the ‘transcendental’ turn not only enables a ‘purely formal’ turn, but depends essentially upon the possibility of such a turn for the resolution of its problematic.<sup>18</sup>

It is hard to overstate the significance of Kant’s reconceptualization of the subject-matter of logic from this new purely formal perspective. For it is only through such a reconfiguration of ‘form’ in general and of logic in particular that Kant takes himself to have achieved a sufficiently radical break with his Rationalist predecessors. And it is only through his recognition of the *limits* of such a formal science that Kant takes himself to have reached a new axis, so to speak, along which to construct his distinctive type of idealism.<sup>19</sup> (An idealism, incidentally, which Kant came to think would be most appropriately labeled a ‘*formal* idealism’ (cf., *Prolegomena* §49, 4:337).) And as was noted above, Kant’s

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<sup>18</sup> An early appreciation of the interdependence of Kant’s views about the formality of logic and Kant’s transcendental idealism can be found in Adolf Trendelenburg, in his *Logische Untersuchungen*, 3<sup>rd</sup> ed. (Leipzig: 1870), I.II.1: ‘It is first in Kant’s critical philosophy, in which the distinction between matter and form is quite severe, that formal logic is sharply delineated, and it truly stands and falls with Kant’ (15).

<sup>19</sup> At this level of interpretive generality, I think Longuenesse (op.cit.) is exactly right: ‘By assigning to logic the task of laying out the ‘mere form of thought’, Kant dissolved the link which the *Schulphilosophen* saw between logic and ontology. The various ways in which we combine our concepts *in judgments and syllogisms* are not the more or less adequate expression of ways in which essential and accidental marks are combined *in things*, but merely the implementation of the rules proper to our discursive activity’ (10; my ital.). In Chapter IV, however, I will give reasons for being dissatisfied with Longuenesse’s particular way of handling logic’s distance from ‘things’.

reflection on the methodology and scientific security of logic plays an indispensable role in motivating the very possibility of an apriori account of our interaction with objects in thought – i.e., of our *experience*. This is, in a way, unsurprising, since it is in the science of logic that the all-important notion of a ‘form’ of a mental activity, operation, or capacity receives its most pristine articulation. In fact, the science of logic is put forward by Kant as the only exemplar of a formal philosophical discipline.<sup>20</sup>

For all of these reasons, then, I shall argue that it is only if we have a clear grasp of what Kant means by *logical form*, and grasp the concomitant *poverty* of the science which studies such forms – that is, its inability to establish any positive cognitive relations to objects – that we will be in a position to appreciate the nature of transcendental idealism as such. By the end of this study, I intend to have demonstrated that Kant’s views on logic are presupposed by, and essentially involved in the articulation of, most (if not all) of the fundamental (positive and negative) theses of Kant’s ‘transcendental’ philosophy.

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<sup>20</sup> Kant identifies logic as the only ‘formal’ branch of philosophy in both the ‘Preface’ to the *Grundlegung zur Metaphysik der Sitten* (GMS) and the (unpublished) ‘First Introduction’ to the *Kritik der Urteilskraft* (KU). (I take up this classification in more detail, and discuss the relevant passages, in the following Chapter (I).) For a general study of the centrality of the notion of ‘form’ in Kant’s mature theoretical philosophy, see Robert Pippin’s *Kant’s Theory of Form* (New Haven: Yale, 1982). I discuss the sense of ‘formality’ relevant to Kantian logic below, in Chapter II.

### §III. Kant's Logic: Influence and Prospects

Now, I readily admit that in the preceding sections I have outlined a project which is more than a tall-enough task for even a dissertation-length treatment of this aspect of Kant's thought. Even so, I should also admit that the ambitions of the present work stretch even further, beyond mere Kant-interpretation. For a second general aim of the present study is to correct a widespread misperception of Kant's significance within the history of philosophy of logic. Far from being worthy of the mere footnote or passing mention which it is usually allotted, Kant's influence upon the 'development' of logic is quite widespread and lasting, insofar he transforms the discipline in several key respects, each of which fairly directly anticipates contemporary viewpoints. First of all, it is with Kant that the focus of logic is reoriented so as to center upon *judgments* (rather than concepts or inferences).<sup>21</sup> Kant also strikes out in a clearly 'contemporary' direction in that he forcefully denies attempts to construe logic as anything other than a *science* in its own right (rather than an 'art', or merely a 'instrument' useful for the production of further knowledge). Finally, as I have emphasized above, Kant also clears the way for a new conception of the *formality*

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<sup>21</sup> This has been emphasized in particular by Robert Brandom as Kant's recognition of the 'priority of the propositional'; see Brandom's *Making It Explicit* (Cambridge: Harvard, 1994), 79ff.

of logic, one which is at once novel and yet almost immediately (though problematically) absorbed into the field.<sup>22</sup>

In fact, as we shall see, Kant's theorization of the formality of logic – which we might encapsulate by the phrase: formality as 'semantic indifference' – presents us with an early version of a position which continues to be influential in present-day philosophy of logic, though the particularly Kantian marks persist in perhaps an all-but-invisible manner, especially as the tie between the characterization of logic as 'formal' and transcendental idealism has been lost.<sup>23</sup> Yet a recognition of the historical origin of this characterization, and so of the initially intimate connection between a 'formal' logic and transcendental idealism, brings with it an opportunity to raise significant and fundamental challenges for those today who (implicitly or explicitly) subscribe to a picture of logic as 'formal' and yet would not wish to describe themselves as 'idealist' in any sense.

This leads me to a broader challenge which might be posed to contemporary theorists by a recovered Kantian outlook on formal logic. As I

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<sup>22</sup> A compelling version of the story of the originality and influence of what he calls Kant's 'logical hylomorphism' is told by John MacFarlane in his *What does it mean to say that logic is formal?* (Pittsburgh: Ph.D. thesis, 2000), Ch. 4, especially §2 and §5.

<sup>23</sup> As MacFarlane argues (op.cit.), and as I discuss in Chapter **II**, this disconnect doesn't occur until quite recently in the history of logic. (See, for example, the quote from Trendelenburg in a previous footnote.) Other 19<sup>th</sup> century thinkers for whom the label 'formal logic' was associated with Kantianism include Johann Friedrich Herbart (1813 *Einleitung in die Philosophie*), Christian Twisten (1825 *Logik*), Moritz Wilhelm Drobisch (1836/1851 *Neue Darstellung der Logik*), and Sir William Hamilton (1860 *Lectures on Logic*). All of these thinkers have sympathies with both Kant and the idea of logic as 'formal', whereas Trendelenburg (op.cit.) and Friedrich Ueberweg (1857 *System der Logik*) mean the connection pejoratively, in the sense of 'Formalismus', and use it to criticize both Kant and his followers.

noted above, Kant's innovative conception of the formality of Aristotelian logic is linked essentially to his invention of another form of 'logic' – namely, a *transcendental* logic. Transcendental logic is the science which investigates the further conditions which must enter into consideration if one intends to move from syntactical to a *semantical* analysis of thinking. That is, transcendental logic specifies the demands which must be met if thought – or language, considered in sufficient abstraction – is to achieve a 'relation' to objects, to achieve 'objective purport'.

Now, in contemporary discussions, the investigation of semantic relations is most often treated model-theoretically, where the modeling is guided solely by a picture of the domain for the 'interpretation' of logical forms which is itself exhaustively characterizable set-theoretically – that is, *extensionally*. Yet for Kant, 'extensional' analyses would appear to simply avail themselves of a domain of objects whose properties are specifiable independently of considering the conditions on how these objects can be *given* to us. (This is, of course, precisely the intended effect of 'extensionalization'.) But the thought that such unmediated traffic with objects is possible, or that we could absolutely neutralize the effects of what mediation there might be, are thoughts which Kant would surely take to constitute a form of *transcendental realism*. Hence, Kant would insist that either we must restrict ourselves to a syntactical analysis of thinking *as such* (formal logic), or, if we wish to construct an account of the semantical dimension of our

cognitive livelihood, then we must incorporate into our analysis the distinctly *sensible* conditions which our form of mindedness requires be met if we are to enjoy successful cognitive relations to objects. Simply put, all semantical analysis must be made the business of a transcendental logic.

In this regard, the richness of the knowledge-theoretic context within which Kant develops the idea of a 'transcendental' logic might be seen as fertile ground for the growing number of philosophers who are dissatisfied with the 'extensionalist' understanding of logic that became prevalent during the middle part of the last century. That is, in Kant's own systematic justification of the distinction between formal and transcendental logic, there is reason to think that we can hope to find further insights for the construction of a 'logic' which takes features traditionally classified as 'intensional' (such as temporality and modality) to be *essential*, rather than supplementary, to the very intelligibility of semantic valuation.<sup>24</sup>

In brief, then, and in opposition to the prevailing consensus among philosophers and historians of logic that sustains the present gap in scholarship, it

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<sup>24</sup> What I am suggesting is, in effect, that Kant should be viewed as an intensional logician *avant la lettre*, and so a forerunner of philosophers like Arthur Prior, who, in his attempt to reconstrue the basic form of predication as making essential reference to *temporality*, appeals to considerations more than roughly akin to Kant's own (against Leibniz), concerning the necessary incorporation of conditions of temporal determinacy into the conditions of individuation of individuals. See Prior's *Time and Modality* (Oxford: Clarendon, 1957), and his 'Identifiable Individuals', *Review of Metaphysics*, 13 (1959/1960), 684-96. For a more recent attempt to give a broadly Kantian defense of the necessity of incorporating 'transcendental' considerations for any logic in which the concept of an object is to play a central role, see Sebastian Rödl, in his *Kategorien des Zeitlichen: Eine Untersuchung der Formen des endlichen Verstandes* (Frankfurt: Suhrkamp, 2005); see especially 'Introduction', §2 and Chapter 1.



will be my contention that Kant's conception of logic is at once: (i) central to Kant's own philosophical project, (ii) both innovative and transformative (marking a significant departure from his predecessors), as well as highly influential (altering the subsequent trajectory of the history of logic), and (iii) once recovered, a conception that presents a vibrant and still-viable dialogue-partner with the potential to make substantial contributions to contemporary debates within the philosophy of logic.

Each of these theses, if they are correct, will force a revision of each of the relevant areas of inquiry. First, the demonstration of the central importance of logic for Kantianism should force us to rethink many details of standard interpretations of Kant's philosophy as a whole – especially those which accord privilege to so-called 'epistemological' dimensions of Kant's Critical project.<sup>25</sup>

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<sup>25</sup> I realize that this proposal for revision will be especially controversial, since in the minds of many recent interpreters, it is clearly this element of Kant's work which has the 'priority'. Robert Pippin (*Kant's Theory of Form*) provides a helpful summary of this prevailing viewpoint: 'Put simply, the so-called epistemological view [of Kant] stresses Kant's claim (more properly, his way of completing Descartes's) to have prepared the way for future work by asking first such questions as, What is human knowledge, is there any, what kinds of things can human beings know, how do they gain knowledge? and the like' (18). For example, in his *Kant's Transcendental Idealism* (New Haven: Yale, 1983), Henry Allison seems to accord this sort of priority of epistemology within Kant's philosophy when he writes that 'the interpretation of transcendental idealism which I hope to develop in this study will...emphasize its connection with Kant's claims concerning the conditions of human knowledge', and that 'the main business of transcendental logic is to establish a set of epistemic conditions' (10). As this last quote from Allison might suggest, an unfortunate consequence of the 'epistemological' interpretation is that Kant's logical doctrines – e.g., his theses concerning the essence of judgment – have come to be seen, not only as subordinate to, but as merely an element of, his epistemological doctrines. Cf., David Bell: 'Traditionally, then, the theory of judgement was that...part of epistemology which dealt with human propositional abilities' (*Frege's Theory of Judgment* (Oxford: Clarendon, 1979), 3).

Pippin's reference to the 'completion of Descartes' helpfully alerts us to the fact that this way of interpreting Kant neatly reinscribes Kant within a very widely accepted version of the history of (early) modern philosophy, one stated succinctly by Michael Dummett (*Frege: Philosophy*

Second, recognition of Kant's substantial influence within the history of logic will force us to rewrite the record of the development of the discipline, both within this late modern period (i.e., turn of the 19<sup>th</sup> century) and beyond – including the (equally) 'revolutionary' era at the turn of the 20<sup>th</sup> century.<sup>26</sup> Finally, the

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*of Language*, 2<sup>nd</sup> ed. (Cambridge: Harvard, 1981)): "The most far-reaching part of Descartes's revolution was to make epistemology the most basic sector of the whole of philosophy: the whole subject had to start from the question, "What do we know, and how?" (xxxiii). This story is echoed and amplified by Richard Rorty (*Philosophy and the Mirror of Nature*) who goes so far as to claim that 'the notion that philosophy's core was 'theory of knowledge' [i.e., epistemology]', though a notion that we can 'trace back at least to Descartes', is one which 'did not achieve self-consciousness until Kant' (132). Rorty proceeds to speak thereafter of the 'Kantian picture of philosophy as centered in epistemology' (133).

Dummett attributes the 'overthrow' of this picture to Wittgenstein (op.cit., xxxiii), though Anthony Kenny, in his *Frege* (Oxford: Blackwell, 2000), gives the honor to Frege himself: 'Frege not only founded modern logic, but also gave a fresh start to the philosophy of logic. He did so by making a sharp distinction between the philosophical treatment of logic and...epistemology (with which it is sometimes conflated by philosophers in the tradition stemming from Descartes)' (7). The very same story is told by Robert Solomon in his *Continental Philosophy since 1750* (Oxford: Oxford, 1988): 'Frege rebelled against the obscurity of German idealism, and looked back beyond the Cartesian and Kantian revolutions in philosophy to Aristotle and the medieval scholastics, who agreed that logic, not the theory of knowledge or any grand view of the self, was the foundation of philosophy' (100).

Not only do I agree with Pippin in his rejection of this 'epistemological' reading of Kant, I shall argue that we must contend (against Dummett, Rorty, Kenny, and Solomon) that it is rather *already with Kant himself* that we see something like an 'overthrow' of the so-called 'Cartesian' organization of philosophy around epistemology, and with it, the reorientation of philosophy *around logic*. Kant makes this point quite clearly in his 1782-3 lectures on metaphysics, stating that 'transcendental philosophy' itself – the form of philosophy which Kant is advocating and is himself practicing – '*could also be called transcendental logic*' (29:756; my ital.). (What is more, *pace* Solomon, it is not at all clear that Aristotle himself even took logic to be a *part of*, rather than an instrument for, philosophy, let alone its 'foundation'; cf., below, Chapter I.)

<sup>26</sup> The 'irrelevance' of Kant's thoughts about logic is belied by reflection upon Frege's own 'revolutionary' work, for Frege refers to and engages with Kant's philosophy, both implicitly and explicitly, and as frequently as any other interlocutor. In addition, we can trace the lines of Kant's influence beyond Frege to both of his most influential successors, Ludwig Wittgenstein and Bertrand Russell, as well as elsewhere in other traditions in modern logic, such as in Brouwer's *intuitionism*, Hilbert's *formalism*, and C.I. Lewis's *intensionalism*.

The significance of Kant in the development of Frege's views has been pointed out by (among others) Hans Sluga, *Gottlob Frege* (London: Routledge, 1980); Wolfgang Carl, *Frege's Theory of Sense and Reference* (Cambridge: Cambridge, 1994); Philip Kitcher, 'Frege's Epistemology', *Philosophical Review*, 88, (Apr 1979), 235-262; Joan Weiner, *Frege in Perspective* (Ithaca: Cornell,

accomplishment of these first two tasks, and the alignment of Kant's views and present-day 'discontents' with the extensionalist paradigm, should clear the way for Kant's conception of logic to be given a fresh hearing in the contemporary debate about the correct understanding of the nature of logic as a discipline.

To put all of this under an even more general motivation – though one which surely projects an ever more distant horizon for future work – my basic hope in revisiting *Kant's* conception of logic in particular is that it will allow us to re-interpret logic in a way that (1) is sensitive to the travails of the 'human condition', and so (2) makes logic once again an existentially relevant (rather than

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1990); and most recently John MacFarlane, 'Frege, Kant, and the Logic of Logicism', *Philosophical Review* 111.1 (Jan 2002), 25-65.

The parallels between Kant and Wittgenstein, as well as the role of Kantian doctrines (via Schopenhauer) in the development of Wittgenstein's thought, are now beginning to achieve a more central stage-position in the literature; see A.W. Moore's 'Transcendental Idealism in Wittgenstein, and Theories of Meaning', *The Philosophical Quarterly*, 35.139 (Apr., 1985), 134-155, and his *Points of View* (Oxford: Oxford, 1997), esp. Ch. 6; see also H-J. Glock, 'Kant and Wittgenstein: Philosophy, Necessity and Representation', *International Journal of Philosophical Studies*, 5.2 (June 1997), 285-305; cf., as well, for the mediating role of Schopenhauer, P.M.S. Hacker, *Insight and Illusion* (Oxford: Clarendon, 1972), esp. ch. III. Russell's relation to Kant has been studied primarily under the guise of Russell's relation to British neo-Hegelianism ('Idealism'); see Peter Hylton's *Russell, Idealism, and the Emergence of Analytic Philosophy* (Oxford: Oxford, 1993); and Nicholas Griffin, *Russell's Idealist Apprenticeship* (Oxford: Oxford, 1991).

For Brouwer's Kantianism, see his 1912 address, 'Intuitionism and Formalism': 'In Kant we find an old form of intuitionism' (reprinted in *Philosophy of Mathematics*, 2nd ed., eds., Benacerraf and Putnam (Cambridge: Cambridge, 1983), 78). For some discussion of the relation between intuitionism and Kant, see Stephan Körner, *Kant* (London: Penguin, 1955) §2.3, and Carl Posy, 'Brouwer's Constructivism', *Synthese* 27.1-2 (May/June, 1974), 125-59. Hilbert's 1925 address, 'On the Infinite', contains the following remark: 'we find ourselves in agreement with the philosophers, most notably with Kant' (reprinted in *Philosophy of Mathematics*, 192).

The foundations of Lewis's intensional logic – grounded on concepts of possibility, consistency, and 'strict' implication – can be found in his 1918 *Survey of Symbolic Logic* and his 1938 *Symbolic Logic*, co-authored with C.H. Langford. ('Strict' is meant to contrast with 'material', where material implication is identical to 'Fregean' implication, i.e. as a purely 'extensional' relation between truth-values.) Lewis's Kantianism can be found in his 1929 *Mind and the World-Order*.

arid, merely ‘technical’) discipline, and (3) finds a necessary, even inspiring role for logic to play, not only alongside other parts of philosophy, but at the very heart of a comprehensive account of contemporary human life in general – within what might be called (following Kant) a *philosophical anthropology*.<sup>27</sup>

I will return to the question of the relation between the nature of logic and Kant's general account of humanity in the final chapter (VI). My study will begin by addressing the place of Kant's logic within his philosophical architectonic (I), and then giving an account of the meaning of the ‘formality’ in the context of Kant's logic (II), before turning to the elements of Kant's logic (judgments (III), concepts (IV), and inferences (V)). But before we move to a direct investigation of Kant's conception of logic, it will be useful to provide a few introductory remarks about some of the more pertinent aspects of the historical context out of which Kant's views were developed (§IV), as well as say a few words about the texts which will be used in the course of my study (§V).

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<sup>27</sup> Compare Kant's May 4<sup>th</sup> 1793 letter to Carl Friedrich Staudlin, in which Kant claims, first, that the traditional branches of philosophy (metaphysics, ethics, and religion) are organized around certain fundamental questions – namely, ‘what can I know [wissen]?’; ‘what ought [soll] I to do?’, and ‘what can I hope for?’ – such that a *fourth* question should follow: ‘what is man? [Was ist der Mensch?]’ (11:429). The burden of answering this question would then fall to a fourth discipline (anthropology), which would represent the ‘ultimate’ discipline. Hence part of Kant's assessment of the philosophical worth of these three traditional disciplines is their *instrumental* value, insofar as their findings further the goal of the construction of an answer to *the question of humanity*.

The subordination of these three questions to the question of ‘Menschheit’, as well as the derivation of a similar relation between them, is repeated in Jäsche's *Logik*, ‘Introduction’ §III (9:25); compare also the so-called ‘Pölitz’ 1790-1 *Vorlesungen über die Metaphysik* (28:533-4). For some discussion of what a Kantian philosophical anthropology might look like, as well as an inquiry into the role that these four questions might play in Kant's work, see especially Heidegger's 1929 ‘Kant-Buch’, *Kant und das Problem der Metaphysik*, §§36 et seq.

#### §IV. The Historical Context of Kant's Logical Doctrines

As a student at the University of Königsberg (1740-1748),<sup>28</sup> Kant would have learned logic from Johann David Kypke, one of Kant's predecessors as *professore ordinario der Logik und Metaphysik* at Königsberg.<sup>29</sup> Kypke lectured from Paul Rabe's 1703 *Cursus philosophicus*, a work written by a still-earlier possessor of Kant's position, which included discussion of logic under the headings of 'analytics' and 'dialectics'. Apparently Kant was also exposed to this division through Kypke's own 1729 *Brevissima deliniatio scientiarum dialecticae et analyticae ad mentem philosophi* (Kuehn, 74-5).<sup>30</sup> Kypke himself was somewhat eclectic in his philosophical views, propounding an admixture of Wolffian and Aristotelian doctrines (*ibid.*).

Kant was exposed to a different sort of eclecticism by Martin Knutzen, the most well-known of Kant's influences at Königsberg. A Pietist, Knutzen blended

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<sup>28</sup> The main sources I have used for these historical and biographical remarks are Manfred Kuehn's *Kant: A Biography* (Cambridge: Cambridge, 2001) and Ernst Cassirer's 1918 *Kants Leben und Lehre*, J. Haden, trans. (New Haven: Yale, 1981). Invaluable details about Kant's education, teachers, textbooks, lectures, correspondents, and a whole host of other things, can also be found at the following web-pages: <<http://web.uni-marburg.de/kant/>>, maintained by Werner Stark; and <<http://www.manchester.edu/kant/>>, maintained by Steve Naragon (links active as of May, 2007).

<sup>29</sup> When Kypke died in 1758, the professorship was given to another of Martin Knutzen's students, Friedrich Johann Buck. Kant was appointed to the position in 1770, with Buck getting bounced over to a position in mathematics without having even been consulted about the switch; cf., Kuehn, 118, 189.

<sup>30</sup> Kuehn suggests (442n61) that Kant would have also been led to orient his thought about logic according to the 'analytic'/'dialectic' division through engagement with Christian Gabriel Fischer's 1716 *Problematica dialectica*.

an appreciation for Wolffian metaphysics and Newtonian natural philosophy with a more empirical bent, influenced in this regard by British philosophers, especially Locke.<sup>31</sup> Knutzen was himself at the time (since 1734-5) an associate ('ausserordentliche') professor of logic and metaphysics at Königsberg,<sup>32</sup> and so would have also taught Kant logic, as well as math, philosophy, rational psychology, and natural philosophy, among other things (Kuehn, 79, 81; Cassirer, 25f). Near the end of Kant's time as a student (1746-7), Knutzen published his two-volume *Elementa philosophiae rationalis*, which bears the suggestive subtitle: *With a general as well as a more special logic demonstrated according to the mathematical method [logicae cum generalis tum specialioris mathematica methodo demonstrata]*. The introduction of a 'special' logic, which dealt with the sources and forms of error [Irrtüm] represents – at least according to Erdmann (*Martin Knutzen*, 109) – one of Knutzen's more 'significant enrichments' of the Wolffian tradition. This too anticipates at least the 'letter' of a Kantian division within logic, though as we shall see in the next chapter, Kant himself would have taken the investigation of error to fall, not to a special logic, but rather to what Kant calls 'applied

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<sup>31</sup> Knutzen departs from the Leibniz-Wolffian philosophy in his defense of a 'physical influx' model of causality, over and against the model of 'pre-established harmony'; for discussion, see Eric Watkin's *Kant and the Metaphysics of Causality* (Cambridge: Cambridge, 2005), 50-73. For a discussion of the influence of 'British philosophers' on Knutzen, see Kuehn, 79ff. Borowski is the source of the story that it was Knutzen who first introduced Kant to Newton; cf., *Darstellung des Leben und Charakters Immanuel Kants* (Königsberg, 1804). 92.

<sup>32</sup> In his *Martin Knutzen und seine Zeit* (Leipzig: L. Voss, 1876) Benno Erdmann gives 1734 as the year in which Knutzen became an extraordinary professor (51); on his web-page, Stark gives 1735.

[angewandte]’ logic (cf., B77-79). In any case, Kant was at least familiar with Knutzen’s *Elementa*, as he singles it out for mention in his logic lectures (cf., 24:796-7; see below).

In fact, Kant’s own distinction between ‘general [allgemeine]’ and ‘special [besondere]’ logics appears somewhat closer to the division made by Joachim Jungius in his 1635 *Disputationes noematicae*. Moreover, Jungius aligns *logica generalis* with *logica formalis* (and also *logica specialis* with *logica materialis*).<sup>33</sup> According to his 1638 *Logica Hamburgensis*, *logica generalis* is itself divided into three parts, according to the three traditional ‘operations of the mind’ (*notiones, enuntiationes, dianoeas sive ratiocinationes*), while *logica specialis* is divided into two parts – *apodictica et dialectica*, which deal with necessary and probable truths respectively (*Logica*, Prol., §§18-22). This scheme fits better with Kant’s usage than does Knutzen’s, since (as we shall see (II-III)), the ‘logic of truth’ is for Kant also a ‘special’ logic of sorts, whereas Kantian general (formal) logic also deals with the operations of the higher faculty of the mind ‘as such’, in abstraction from their concern with truth. Even so,

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<sup>33</sup> Cf., Michael Wolff, *Die Vollständigkeit der kantischen Urteilstafel* (Frankfurt: Klostermann, 1995), p207n44. Wolff furnishes Jungius’s text to make the following point: ‘inside and outside of the literature on Kant, it is very often asserted (for example, in the work of G. Patzig)... that the expression ‘formal logic’ stems first of all from Kant. This assertion is symptomatic of a widespread ignorance of the traditional divisions of logic into its sub-fields, even among historians of logic’ (203n16).

Apparently the general/special distinction dates back at least as far as Averroes; cf. Jacopo Zabarella’s *De Natura Logicae* (in vol. II of his 1597 *Opera Logica*, 53): ‘tota logica duas habet praecipuas partes...quarum unam vocat Averroes universalem seu communem; alteram particularem sive propriam’. (For these historical leads I am indebted to Rudolf Meyer’s editor’s note on p.3 of his edition of Jungius’s *Logica Hamburgensis* (Hamburg: Augustin, 1962).) A great fan of Jungius’s himself (see the next note), Leibniz too makes a related ‘general’/‘special’ distinction in *Nouveaux Essais* IV.2.13, calling the logic of the geometers ‘une extension ou promotion particulière de la Logique Generale’ (G v.351).

Jungius's influence on Kant is most likely indirect at best. Though it is well-noted that Leibniz thought very well of Jungius,<sup>34</sup> it is less clear whether Kant (or Knutzen, for that matter) had first-hand knowledge of any of Jungius's writings.<sup>35</sup>

The idea of a separate 'logic of truth' is also something foreshadowed in the work of the one last influence upon Kant's thought whom I will mention here – namely, Johann Heinrich Lambert. Lambert was a mathematician who taught in Berlin, and who was one of several prominent German intellectuals to engage Kant on the claims put forward in Kant's 1770 Inaugural Dissertation (*De Mundi*).<sup>36</sup> Kant clearly thought very highly of Lambert, and was definitely familiar with Lambert's major work, his 1764 *Neues Organon*,<sup>37</sup> which is divided into four parts – 'Dianoilogie', 'Alethiologie', 'Semiotic', and 'Phänomenologie' – which

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<sup>34</sup> See, for example, Leibniz's 1698(?) letter to Burnett: 'the excellent Jungius' (G iii.224); 1679(?) letter to Philippi: 'Jungius has, in my opinion, understood general analysis and geometry better than Descartes' (G iv.282); *Theodivée* §214: 'Jungius of Hamburg is one of the most excellent men of our time' (G vi.246); in the *Characteristica* fragments of *Scientia generalis*, Leibniz mentions Jungius with Aristotle and Descartes as 'three great men to be most admired' for their contributions to science (G vii.186); 1705(?) letter to Koch: Jungius's 'knowledge of the true logic surpasses all others, the author of the *Art of Thinking* not excepted' (G vii.478); 1698(?) letter to Wagner: with regard to logic, 'I hold Jungius eminently high' (G vii.523).

<sup>35</sup> The *Personenindex zu Kants gesammelten Schriften* (Berlin: de Gruyter, 1969) doesn't list an entry for Jungius, nor does *Kants Lektüre* (Elke König's 'databank', building off of earlier work by Arthur Warda) list any of Jungius's works as holdings in Kant's library. (König's findings can be found on Stark's website, cited above.)

<sup>36</sup> See Lambert's October 13, 1770 letter to Kant (10:103f), which criticizes especially the claims in the Dissertation that Kant makes about the ideality of time.

<sup>37</sup> Kant mentions Lambert's *Neues Organon* in the 'Dohna-Wundlacken' version of the student transcripts (24:796); Lambert is mentioned in Jäsche's edition of Kant's lectures as well (§II, 9:21); in addition, cf. logic *Reflexion* 1629 [1780's] (16:48); and metaphysics *Reflexionen* 4866 (18:14), 4893 (18:21), and 4900 (18:23) [all from 1776-8].



have to do with our ‘powers [Kräfte] of the human understanding’, ‘truth and error’, ‘language [Sprache]’, and ‘illusion [Schein]’, respectively (‘Vorrede’, v).

Lambert’s division between ‘Dianoilogie’ and ‘Alethiologie’ is of particular interest, insofar as it too clearly anticipates Kant’s division of general and special – and most importantly, between general and *transcendental* – logics. As the etymological clues might suggest, Lambert defines ‘Dianoilogie’ as the ‘doctrine of the laws of *thought*’, as ‘the doctrine of the laws according to which the understanding conforms in thinking’, and which guide thinking when it wants to ‘advance from truth to truth’ (ibid.). ‘Alethiologie’, by contrast (and again, unsurprisingly), is the ‘doctrine of *truth* *itself*’, insofar as it is ‘opposed to error’ (v-vi).<sup>38</sup> Finally, it is also worth noting is the reason Lambert gives for his choice of a title: ‘these four sciences are *instrumental*, or even so many *tools* [Werkzeuge], which will be of service to the human understanding in its exploration of truth’ (vi; my ital.). This is striking, as we will see in Chapter I, since Kant will claim of his own logic that it is precisely *not* an organon.

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<sup>38</sup> Like Knutzen, Lambert represents a sort of synthesis between Wolff and Locke: ‘In the Dianoilogie, namely where it deals with method, I am quite close to Wolff. By contrast, in the first chapter of the Alethiologie, where the discussion is concerned with the simple or basic concepts of our cognition, I fall back on those which are given by Locke. [...] In the second chapter of the Alethiologie, I combine Locke’s simple concepts with Wolff’s method, and through this bring out the foundations [Grundlage] of various sciences, which are apriori in the strictest sense’ (‘Vorrede’, viii). This particular way of achieving synthesis too is striking, since Kant too takes Locke to have provided an insight lacking in Wolffian rationalism, concerning the necessary *sensible* conditions on our capacity to enjoy objective cognition, even as Kant continued to praise Wolff’s logic till the end of his life (see below).

We will examine Kant's own deployment of these (and related) distinctions, as well as their relation to distinctions found in the modern tradition, in more detail in later chapters. Let me now, however, say a few words about Kant's experience as a teacher of logic. From 1755 (when Kant himself earned the privilege of lecturing at Königsberg as a Privatdozent) until 1796 (when he gave his last lectures), Kant lectured on logic every year except 1767 – in total, as many as 56 times, and hence more frequently than any other course.<sup>39</sup> In part, this perennial preoccupation with logic is explained by the fact that, as of 1770, Kant's official position in the University was the professor of logic (as well as metaphysics), but Kant had groomed himself, and patiently waited for over a decade, for this position in particular.

Kant's preferred logic textbook was Georg Friedrich Meier's 1752 *Auszug aus der Vernunftlehre*, an abbreviated ('Excerpt') version of Meier's *Vernunftlehre* of the same year. We have it from Gottlob Benjamin Jäsche – the 'author' of the 1800 *Immanuel Kants Logik*, a text which was the result of Kant's request that Jäsche edit Kant's own lecture notes for publication<sup>40</sup> – that Kant used Meier's *Auszug* from at least 1765 onwards (9:3). In his 'Editor's Introduction' to a recent translation of student notes from Kant's logic lectures, J. Michael Young claims

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<sup>39</sup> Cf., Naragon (website), building off of research by Stark in his *Nachforschungen zu Briefen und Handschriften Immanuel Kants* (Berlin: Akademie, 1993), as well as the much earlier work of Emil Arnoldt and his editor, Otto Schöndörffer, collected in Arnoldt's two-volume *Kritische Exkurse im Gebiete der Kant-Forschung* (Berlin: Bruno Cassirer, 1908-9).

<sup>40</sup> More on this text and its peculiar status within Kant's corpus below.

that Kant *always* used the *Auszug*,<sup>41</sup> although this is contradicted by Manfred Kuehn, Elfriede Conrad, Riccardo Pozzo (following Conrad), and Max Heinze (the editor of volume 9 of the Akademie Ausgabe, where Jäsche's text is reprinted), all of whom are following Emil Arnoldt.<sup>42</sup> Arnoldt's original claim is that there is good reason to think that, at least once early on, Kant used the entire *Vernunftlehre* – possibly each semester of the 1755-56 school year, on the strength of the mention of Meier's *Vernunftlehre* in Kant's announcement for his lectures in the summer semester of 1756 (cf., 1:503).

In any case, Meier himself was a student of Alexander Baumgarten, who was in turn a student of Christian Wolff. Meier's text represents a condensation of sorts of the so-called 'Leibniz-Wolff' understanding of logic. Wolff had written two 'logics' of his own, a German logic (*Vernünfftige Gedanken von den Kräften des menschlichen Verstandes und ihrem richtigen Gebrauche in Erkenntnis der Wahrheit*) whose first edition appeared in 1713, and a Latin logic (*Philosophia rationalis sive logica*) in 1728. In 1761, Baumgarten, too, published a short treatise on logic, his *Acroasis logica*, which was a very brief summary of Wolff's *Logica*.

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<sup>41</sup> See J.M. Young, 'Editor's Introduction', *Lectures on Logic* (Cambridge: Cambridge, 1992), xxiii.

<sup>42</sup> See Kuehn, op.cit., 452n35; E. Conrad, *Kants Logikvorlesungen als neuer Schlüssel zur Architektonik der Kritik der reinen Vernunft* (Stuttgart: Frommann-Holzboog, 1994), esp. 66-74; R. Pozzo, 'Prejudices and Horizons: G. F. Meier's *Vernunftlehre* and its Relation to Kant', in *Journal of the History of Philosophy*, 43.2 (2005) 185-202, esp. 186; M. Heinze, 'Sachliche Erläuterungen' (9:505); and E. Arnoldt, 'Möglichst vollständiges Verzeichnis aller von Kant gehaltenen oder auch angekündigten Vorlesungen nebst darauf bezüglichen Notizen und Bemerkungen', *Gesammelte Schriften* (Berlin, 1909), Bd 5, 177-179.

Appreciation of the Wolffian context of Kant's teaching will prove essential to coming to grips with several aspects of Kant's own mature position, especially concerning Kant's conception of the logical essence of concepts in general and of the 'terms' which can function in syllogistic (chapters **IV-V**). For despite Kant's generally critical attitude toward the assumptions made by this school, on behalf of the metaphysical significance of logical principles, Kant consistently gives high praise to the Wolffians for their clear and orderly manner of presenting the logical principles themselves. For example, in student lecture notes from the 1780's, Kant is reported to have given the following positive estimation of this approach to logic: '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 he was again extended by Meier' (*Wiener Logik* 24:796). This judgment is also repeated almost verbatim in Jäsche's text: 'Among modern philosophers there are two who have set general [allgemeine] logic in motion: Leibniz and Wolff. [...] The general logic of Wolff is the best we have. [...] Baumgarten, a man who has much merit here, concentrated the Wolffian logic, and Meier then commented again on Baumgarten' (JL §II, 9:21).<sup>43</sup>

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<sup>43</sup> It is difficult (to say the least) to see how Meier's 1752 text is supposed to represent either a commentary on or an extension of a text that Baumgarten didn't publish until 1761. At any rate, we can note that, in both the *Wiener* and the *Jäsche* logics, Kant mentions Johann Peter Reutsch (presumably his 1734 *Systema logicum*), and in the *Wiener* transcripts he also mentions Knutzen's *Logicae*.

This assessment of the Wolff-Baumgarten logic is also reiterated by Kant in his September 11, 1787 letter to Ludwig Heinrich Jakob, a teacher at Halle. Jakob had written to Kant earlier that year (July 28), asking for advice on logic textbooks, since Jakob had not yet found a satisfactory one, and had therefore been seriously considering the idea of writing one himself (10:491). (In the letter, Jakob even provides Kant with a sketch of the plan (the ‘skeleton [Skelet]’) that such a text would follow (10:492).) After complaining that the textbooks by J.G.H. Feder and J.A.H. Ulrich are ‘unsystematic and wholly useless’,<sup>44</sup> Jakob tells Kant that he takes ‘Wolf [sic] and Baumgarten (in the edition of Tollner)’ to ‘have the most correct grasp of the idea of logic [die Idee der Logik am richtigsten gefaßt zu haben]’ (10:491-2). (Jakob has in mind Johann Gottlieb Töllner’s revised, second (1773) edition of Baumgarten’s 1761 *Acroasis Logica*.) Jakob then tells Kant that he would be happy to follow Baumgarten’s text, but that he would especially like to order his lectures according to the idea of logic given by Kant himself, in the first *Critique*, at which point Jakob proceeds to present the ‘skeleton’ of what he takes this ‘order’ to amount to (10:492).<sup>45</sup> In his reply, Kant writes in agreement, both about the need for a ‘critical’ presentation of logic, and

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<sup>44</sup> Presumably, Jakob is referring to Feder’s 1777 *Institutiones logicae et metaphysicae* and Ulrich’s 1785 *Institutiones logicae et metaphysicae scholae suae* scripsit.

<sup>45</sup> In the following year, Jakob would in fact go on to produce one of the first ‘logics’ written according to ‘critical’ principles – his 1788 *Grundriß der allgemeinen Logik und kritische Anfangsgründe der allgemeinen Metaphysik*.

about the shortcomings of Feder's book, but also with Jakob's judgment that 'Töllner's textbook is quite good for lectures on logic' (10:494).

Jakob's lectures on Kantian logic and metaphysics in Halle made such an impression on one of his students, J.G.K.C. Kiesewetter, that Kiesewetter traveled to Königsberg in 1789 to sit in on Kant's own courses. He proceeded to become close enough friends with Kant to share his company at dinner and to be entrusted with various copy-editing tasks surrounding the publication of the third *Kritik*.<sup>46</sup> In December 1789, Kiesewetter himself began to lecture in Berlin on logic and on Kant's second *Kritik* (cf., 11:109). By now, his exposure to Kant's work led Kiesewetter to revise his first book, *Über den ersten Grundsatz der Moralphilosophie* (1788), and to include in the second 1790 edition a treatise on how his position agrees with Kant's system of morals (cf., 11:137). In 1791 Kiesewetter even went so far as to compose a 'logic' text suggestively entitled *Grundriß einer reinen allgemeinen Logik, nach Kantischen Grundsätzen*, which was distributed by Kant's own publisher from Berlin (La Garde), and dedicated to Kant himself (cf., 11:264).

What is of special interest in this episode, for our purposes, is the fact that, in the composition of his *Grundriß*, there is evidence that Kiesewetter made substantial use of notes from Kant's own logic lectures. Hence, we can assign a

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<sup>46</sup> See the 1789-90 correspondence between Kant, Kiesewetter, and Kant's new publisher in Berlin, François Théodore de la Garde; e.g., 11:97, 11:108, 11:124-5, etc.

special place for Kiesewetter's text among those works produced during the *aetas kantiana*. What makes this work an even more curious one, however, is that Kiesewetter apparently captured the essence of Kant's own views on logic to such a high degree that, upon receiving his copy of Kiesewetter's text, Kant reacted as though Kiesewetter had been guilty of plagiarism.<sup>47</sup> Kiesewetter had sent Kant a copy of the *Grundriß* on June 14, and already by July 3 he was compelled to write to Kant a long apologetic letter, after having heard the news from La Garde that Kant was 'indignant' about the publication of a 'textbook of pure general logic according to your [Kant's] principles' (11:266).

In this *apologia*, Kiesewetter claims that, already while he was still in Halle with Jakob, he had decided to attempt to write a pure general logic from the Kantian point of view, and had even commenced with its composition, bringing the early fragments of this manuscript with him to Königsberg (*ibid.*). He then goes on to remind Kant that he (Kiesewetter) had even read out to Kant various pieces of this work while in Königsberg during 1789, for Kant's 'assessment [Beurteilung]', and that Kant had been good enough, not only to discuss these ideas with him, but also to correct his ways of presenting the material, even going so far as to dictate material to Kiesewetter for an introduction to the science of logic (11:267). Even so, Kiesewetter asserts emphatically that he didn't print any

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<sup>47</sup> For some of the details of Kant's response to Kiesewetter's publication, see Gerhard Lehmann's 'Einleitung' to the volume 24 of the Akademie Ausgabe (Berlin: de Gruyter, 1966): 'Das nahm ihm Kant offenbar recht übel' (24:958). See also Lehmann's essay, 'Bemerkungen zu dem Brief Kants an Kiesewetter vom 27. März 1790', *Kant-Studien*, 55.2 (1964), 244-249.

of Kant's own pages (for this would of course have required Kant's permission), but rather insists that 'the whole is my work' (11:268). He then compares his own book to Jakob's text on logic and metaphysics, and to other works which had recently attempted to set forth a 'Kantian' position on various subjects,<sup>48</sup> asking Kant why he (Kant) should take particular offense at his (Kiesewetter's) work, and yet have no problem with these others (ibid.).

Kiesewetter's offense was, apparently, serious enough in Kant's mind to break off correspondence with Kiesewetter for two years – the next exchange occurring in 1793, with Kant sending Kiesewetter a copy of his *Religion within the Bounds of mere Reason*.<sup>49</sup> Yet what is especially tantalizing about these events is the strong possibility that *Kant himself* judged Kiesewetter's *Grundriß* to express a 'pure general logic according to Kantian principles'. (It is, at least, hard to see what other reason Kant would have had to become so 'indignant'.) To be sure, Kant never wrote a review of this work, nor did he venture any further assessment of the work in later publications or in his correspondence – though he was not at all hesitant to make known his opinions of the writings of other self-styled 'Kantians' (e.g., Reinhold, Fichte). Even so, it would seem that, insofar as it draws, not only from material from Kant's own lectures, but also from dictations given by Kant

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<sup>48</sup> Aside from Jakob's 1788 *Grundriß*, Kiesewetter mentions K.C.E. Schmid on moral philosophy (i.e., Schmid's *Versuch einer Moralphilosophie*), and Gottlieb Hufeland on natural law (i.e., Hufeland's *Lehrsätze des Naturrechts und der damit verbundenen Wissenschaften*). Both works appeared in 1790.

<sup>49</sup> Their relationship mended in the years to follow; compare Kant's warm letter to Kiesewetter from July 8, 1800 (12:315-6).



himself, and insofar as we know that Kant, at the height of his Critical project, was familiar with this text, Kiesewetter's text has a quite substantial claim to represent the most definitive statement of the mature Kantian position on logic to be published within Kant's lifetime.

The only other text which might have claim to this title would be *Immanuel Kants Logik*, the text prepared by Jäsche in 1800, though there is no evidence that Kant himself ever saw this text at any stage of its production. Jäsche's work came to print four years after Kant had retired from teaching and was, by all accounts (including his own), far from being in full possession of his philosophical powers<sup>50</sup>. In any case, Kiesewetter's *Grundriß* had a fair bit of success – according to Hans Lenk, 'Kiesewetters *Grundriß* ist eines der meistzitierten Logikwerke in der Nachfolge Kants'<sup>51</sup> – so much so that it made its way to Tolstoy's Russia and even makes a cameo in *The Death of Ivan Ilych*.<sup>52</sup> Given its unique status, I will have occasion to refer to this text in what follows, though a more thorough comparative study of the *Grundriß* would surely be fruitful, and I hope to

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<sup>50</sup> Kant died a few years later, in 1804, though by his own accounts, his intellectual powers seemed to be failing him as early as 1798-9. See Manfred Kuehn, *Kant: A Biography*, 413ff.

<sup>51</sup> *Kritik der logischen Konstanten* (Berlin: de Gruyter, 1966), 62. It is cited, for example, by Trendelenburg (*Logische Untersuchungen*), and by John Veitch and Henry Mansel in their 1860 edition of William Hamilton's lectures on logic.

<sup>52</sup> 'Ivan Ilych knew he was dying, and he was in continual despair. In the depth of his heart he knew he was dying, but not only was he not accustomed to the thought, he simply did not and could not grasp it. The syllogism he had learned from Kiesewetter's logic: 'Caius is a man, men are mortal, therefore Caius is mortal', had always seemed correct as applied to Caius, but certainly not as applied to himself' (First lines of chapter IV, Maude translation). Cf. Zweig's editorial note to Kiesewetter's June 14, 1791 letter, in the Cambridge Edition of Kant's correspondence (Cambridge: Cambridge, 1999), 378n1.

undertake such a study in the near future.<sup>53</sup> For now let me note that even Jäsche admits in his 'editorial preface' to *Immanuel Kants Logik*, that, with the appearance of '[s]everal recent textbooks on logic [which] are to be regarded...more or less as fruit of...Kantian ideas on logic', logic has become

more purified [gereinigter]...it has become more systematic [systematischer] and yet at the same time, with all scientific strictness of method, simpler [einfacher] – of this everyone must be convinced, even by the most fleeting comparison of older textbooks of logic with modern ones worked out in accordance with Kantian principles [nach Kantischen Grundsätzen]. (9:5-6)

This last phrase is almost surely an allusion to Kiesewetter's *Grundriß*.

## §V. Kant's 'Writings' on Logic

Kant himself only published one text specifically devoted to logic – his early 1762 essay, *Die falsche Spitzfindigkeit der vier syllogistischen Figuren* – though many of his writings throughout this decade (especially the two essays of the following year (1763): *Der einzig mögliche Beweisgrund zu einer Demonstration des Daseins Gottes*, and *Versuch den Begriff der negativen Größen in die Weltweisheit einzuführen*) contain sections which treat of logical topics, such as the nature of judgment and inference, as well as the nature and status of the principles of identity and contradiction. It is also from this decade that we have an announcement of

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<sup>53</sup> Aside from Lenk (op.cit.), I have found almost no mention – and never more than a passing mention – of Kiesewetter among present-day commentators.

Kant's upcoming logic lectures, the *Nachricht von der Einrichtung seiner Vorlesungen in dem Winterhalbenjahre von 1765-1766*, which gives us a glimpse of how, at least at this point in his development, Kant conceived of the role of logic within a philosophical education and, in general, within both a 'contemplative' and an 'active and civic life' (cf., 2:310-11). In any case, what is arguably the most important discussion of logic in Kant's published work occurs in the very brief introduction to the 'Transcendental Logic' of the first *Kritik* (B74ff).<sup>54</sup> All of these works – as well as additional passages scattered throughout Kant's writings – will be treated at length in what follows.

Let me now discuss the text which most commentators refer to simply as 'Kant's *Logic*' – namely, a work which appeared at the end of Kant's life, in 1800, with the title of *Immanuel Kants Logik: ein Handbuch zu Vorlesungen*. Though this text is included in the Akademie edition under the first 'Abteilung', otherwise reserved for the works which Kant himself published during his lifetime, it was actually prepared by Gottlob Benjamin Jäsche, a student of Kant's in the early 1790's and then, from 1799-1801, lecturer at Königsberg. Moreover, as I mentioned above, there is no evidence that Kant himself ever saw the text at any stage of its composition (cf., J.M. Young, op.cit., xviii), even if Kant did declare

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<sup>54</sup> In his *A Commentary to Kant's Critique of Pure Reason* (2<sup>nd</sup> ed.; London: Macmillan, 1923), Kemp Smith argues that this section of the first *Kritik* 'is probably later than the main body of the *Analytic*', and 'in any case, it is externally tacked on to it' (167).

publicly (in a 1801 'Nachricht an das Publicum') that he did in fact authorize Jäsche to produce such a text (cf., 12:372).

In his editorial preface, Jäsche claims to have 'received [Kant's] very own manuscript, that [Kant] made use of in his own lectures', which then formed the basis of the published *Logik*, even if 'everything that relates to the exposition [Vortrag], the clothing [Einkleidung] and the execution [Ausführung], the presentation [Darstellung] and ordering [Anordnung] of the thoughts [Gedanken] is in part to be reckoned to me [i.e., Jäsche]' (9:3). We are given more clues as to what actually ought to be 'reckoned' to Kant himself – i.e., the 'manuscript' in question – later in Jäsche's preface:

The copy of [Meier's *Auszug*] that [Kant] himself used in his lectures, like all the other textbooks he used for the same purpose, is interleaved with paper; his general remarks and elucidations, as well as the more special ones that relate in the first instance to the text of the compendium in its individual sections, are found partly on the interleaved paper, partly on the empty margin of the textbook itself. And what has been written by hand here and there in scattered remarks and elucidations, taken together, constitutes now the storehouse of materials which Kant built up in his lectures here, which in part he expanded from time to time through new ideas, and which in part he again and again revised anew and improved in regard to various individual materials. Hence it contains at least the essentials of what the famous commentator on Meier's textbook was accustomed to communicate to his listeners concerning logic in lectures that were given in a free manner, and that which he esteemed worthy of writing down. (9:3-4)

Hence Jäsche appears to have been given at least a copy of the marginalia Kant wrote in his personal copy of Meier's *Auszug*. The 'manuscript' consists,

therefore, in what are now called Kant's logical *Reflexionen*, which have been reprinted in volume 16 of the Akademie edition, along with Meier's original text.

As anyone who takes even the most cursory of looks at this Akademie volume can see, a major problem with Jäsche's so-called 'manuscript' (as Jäsche himself intimates) is that these marginalia represent a hodge-podge of originally undated remarks, often of a quite fragmentary nature, entered into Meier's textbook throughout all stages of Kant's forty-year career as a logic lecturer. Given Kant's continuous development as a philosopher throughout this time, the difficulties in constructing a single text from these entries which is both internally consistent, and accurately representative of any particular moment in Kant's thought, are both obvious and considerable.<sup>55</sup>

To complicate matters further, there has been consistent conjecture that, in addition to Kant's copy of the *Auszug*, Jäsche must have had at his disposal one or more of the student transcripts of Kant's logic lectures which were floating around Königsberg at the time. This thesis was first put forward by Benno

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<sup>55</sup> Compare Terry Boswell, 'On the Textual Authenticity of Kant's *Logic*', *History and Philosophy of Logic*, 9 (1988), 193-203: 'It needs to be emphasized that Jäsche's task did not simply consist in editing a continuous lecture manuscript. Kant's copy of Meier's manual is filled with some 2000 notes. A few of them run continuously for a few pages, but most of them are short and fragmentary, and many do not even consist of complete sentences. Presumably, many of them were nothing more than cues which Kant used to prompt himself to more extended verbal remarks before his audience. Given that his task was to produce a book out of such a large, unordered mass of material, Jäsche had no choice but to select, rearrange, even reword' (196).

Erdmann in 1880,<sup>56</sup> who compared Jäsche's text with one of the then-extant student transcriptions, and thought there was significant enough overlap to rule out accidental coincidence.<sup>57</sup> The particular transcription Erdmann used was since destroyed, and now goes under the name of *Logik Hoffman*.<sup>58</sup> On the basis of a date on the manuscript, Erdmann judged the student notes to be from lectures given in 1782, placing them in the Critical decade, but none of these claims by Erdmann can now be substantiated.<sup>59</sup> Yet given all of the well-known perils involved in the transmission of the content of a lecture by way of student notes, it is difficult to see how such a transcription on its own could be of significant support to any claim that the sentences of Jäsche's text are authentically Kant's own.<sup>60</sup>

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<sup>56</sup> Cf. Erdmann's review of Moritz Steckelmacher's *Die formale Logik Kants in ihren Beziehungen zur transscendentalen*, in the *Göttingische gelehrte Anzeigen*, Stück 20 (19 Mai 1880), 609-634.

<sup>57</sup> In Erdmann's words (*op.cit.*), 'Jäsche's compendium agrees almost verbatim [fast wörtlich übereinstimmt] with the [lecture] manuscript in all essential points' (617).

<sup>58</sup> Fragments of it have survived by being quoted in other works (e.g., by Otto Schlapp; see next footnote), and are collected and reprinted in *Akademie* v.24.

<sup>59</sup> See Lehmann, 'Einleitung', 24:984. As Lehmann and Boswell (*op.cit.*, 202) note, Otto Schlapp also compared these same notes with Jäsche's text in 1901, and found there to be less overlap than Erdmann suggests. See Schlapp's *Kants Lehre vom Genie und die Entstehung der Kritik der Urteilskraft* (Göttingen: Vandenhoeck & Ruprecht, 1901), 22. One can only surmise as well that it is on the authority of Erdmann that Hartman and Schwartz – in their 'Translator's Introduction' to *Immanuel Kant: Logic*, 2<sup>nd</sup> edition (New York: Dover, 1988) – feel able to write that 'Jäsche's text of Kant's *Logic* is of 1782 and thus belongs to the critical period' (xvii), though they themselves give absolutely no support for such a claim, nor do they show any signs of consciousness of the immensity of the hermeneutical difficulties involved in the work they have translated. Compare Boswell, *op.cit.*, 202.

<sup>60</sup> One thinks here as well of Klaus Reich's well-known dismissal of Jäsche's *Logic* (in his classic *Die Vollständigkeit der kantische Urteilstafel* (Berlin, 1932/48); trs., J. Kneller and M. Losonsky; Stanford: Stanford, 1992)), in which Reich claims that this text should be counted as a

Along with the *Logik Hoffman*, we have evidence that at least twenty other transcripts of student notes from Kant's logic lectures existed at some time, though now we have portions of only eleven of them.<sup>61</sup> If we include these transcripts – and those of Kant's metaphysics lectures as well, which contain many discussions of logical topics – at the lower end of the spectrum of reliability, then we will have four sorts of 'primary' texts from which to draw Kant's views: the transcripts, Kant's own published texts, his letters, and his *Reflexionen*.

In what follows, I will take work that Kant himself composed for publication as the firmest of grounds for my interpretive claims, followed closely by his letters. These two sources will represent the final word on Kant's position, with which everything must be made to be coherent (or rather, as coherent as the published texts themselves are). Since, ideally, all of my interpretive claims would be directly supported by these two sources as well, whenever possible I will supply texts from the published works and letters. I will take the *Reflexionen* along with Jäsche's *Logik* to represent a second-tier of evidence, and will take the

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piece of secondary literature *on* Kant, rather than a work *by* Kant (117n19). Reich's advice is that 'if one wishes to gain insight into Kant's lectures on logic, the lecture notes of Count L.E.F. Dohna are decisively preferable to Jäsche's handbook' (18).

<sup>61</sup> Cf., Young, op.cit., xxiv, who is following Warner Stark, 'Neue Kant-Logiken', in *Kant-Forschungen*, Bd 1 (Hamburg: Meiner, 1987), 123-64. In his *Untersuchungen zu Kants physischer Geographie* (Tübingen: Mohr, 1911), Erich Adickes is quite harsh in his assessment of the reliability of the student notes: 'by far the most of the extant transcriptions were not prepared in the courses themselves at all, but rather are either fair copies (based on a rough copy from the course sitting) or-much more often-copies of transcriptions, resp. compilations from such, and these were very often not written by students, but rather by copyists and uneducated people. That is in the most evident manner clear from the mistakes which distort the meaning, which very many texts are teeming with-mistakes which even students in the earliest semesters scarcely could have allowed themselves to be guilty of' (36; cited in Boswell, op.cit., 198).

student lecture notes as a third-tier, and so to be the least valuable resource – though not, to be sure, without *real* value.



## CHAPTER I

### The Place of Logic in Kant's Architectonic

– Eine jede Wissenschaft muß in der Enzyklopädie aller Wissenschaften ihre bestimmte Stelle haben. (KU, §79; 5:416)

#### A. Preliminary Remarks

§1 What, then, *does* Kant mean by ‘logic’? Kant gives the following general ‘definition’ of logic in the first *Kritik* (KrV): logic is ‘the science [Wissenschaft] of the rules [Regeln] of the understanding [Verstand] in general [überhaupt]’ (B76).<sup>1</sup> As the brackets suggest, there are four key terms involved in Kant’s definition – ‘science’, ‘rules’, ‘understanding’, and ‘überhaupt’ – all terms whose meanings themselves must in turn be elucidated. But it will also be useful, along the way, to dwell upon some of the terms which philosophers today would expect to hear in an introductory specification of the nature of logic, but which are *omitted* from

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<sup>1</sup> That this is meant as (in some sense) a definition is supported by the logic lectures and Reflexionen; cf., for instance, (1790’s) *Wiener Logik*: ‘Definition: logica est scientia regularum universalium usus intellectus’ (24:792), which is mirrored in the earlier (1780’s) R1628: ‘logica est scientia regularum generalium usus intellectus’ (16:46). The phrasing shows up much earlier; cf., (1773-5) R1603: ‘Die Logik ist eine Wissenschaft (a priori) von den [allgemeinen] reinen Gesetzen des Verstandes und (der) Vernunft überhaupt’ (16:33). (And I say ‘in some sense a definition’ only to admit that Kant’s theory of ‘definition’ is quite complex; however, it need not detain us at the moment.)

Kant's most general definition – terms like 'inference', 'consequence', 'validity', and 'truth'. In fact, such 'determination by negation' will allow us to begin to position Kant's definition over and against those on offer from both his ancient and early modern predecessors as well as his late modern and present-day successors.

Yet in addition to examining this 'explicit' definition of logic from the first *Kritik*, we should also take our orientation from Kant's classification of logic within his philosophical 'architectonic', since, in effect, this classification provides us something of a 'contextual' definition of logic. Kant's most general definition of philosophy is given, among other places, in the (unpublished) 'First Introduction' to his *Kritik der Urteilkraft* (KU): 'philosophy is the *system* of rational cognition through concepts [Vernunfterkentniß durch Begriffe]' (KU 20:195; cf., B760). Here Kant claims that '[t]he division [Einteilung] of the system can at first only be that into its formal and its material part [Teil]', the formal part being *logic*, which 'concerns merely the form of thinking in a system of rules [die Form des Denkens in einem System von Regeln]' (ibid.).

Kant expands on this disciplinary classification of logic in the 'Preface' to his 1785 *Grundlegung zur Metaphysik der Sitten* (GMS), by way of a comparison with the divisions to be found in 'ancient Greek philosophy':

Ancient Greek philosophy was divided into three sciences [Wissenschaften]: *physics*, *ethics*, and *logic*. This division [Einteilung] is

perfectly suitable to the nature of the subject [Sache] and there is no need to improve upon it except, perhaps, to add its principle, partly so as to insure its completeness and partly so as to be able to determine correctly the necessary subdivisions.

All rational cognition [Vernunftkenntniß] is either *material* and concerned with some object, or *formal* and occupied only with the form of the understanding and of reason itself and with the universal rules of thinking in general [allgemeine Regeln des Denkens überhaupt], without distinction of objects. Formal philosophy is called *logic*. . . (4:387)

Hence, not only is it a *science*, logic is a *part* of philosophy; it is ‘formal philosophy’.

Logic is thus a discipline which provides a type of scientific, ‘rational’, cognition through concepts – systematic cognition of the form of understanding and reason itself.

Now, it is not at all clear that ‘ancient Greek philosophy’ as a whole would actually subscribe to Kant’s threefold division of philosophy. Moreover, as we will see in the next few sections, in both in his classification and in his definition of logic, Kant would have met with substantial resistance, not only from some of his ‘ancient Greek’ predecessors, but also from his more immediate ancestors in the ‘modern’ philosophical tradition. Seeing why will help us to get into view what Kant himself means by ‘logic’, and will also begin to point up the ways in which Kant’s conception of logic represents a break with the textbook understanding of his day.

In fact, we can see Kant beginning to break with the early modern tradition already with the very first term in his definition of logic – namely,

‘science [Wissenschaft]’. For by calling logic a ‘science’, Kant at the very least intends to differentiate logic from any ‘art [Kunst]’. In KU §43, Kant spells out the relevant difference between ‘science’ and ‘art’ as follows:

[A]rt [Kunst] as a skill [Geschicklichkeit] of human beings is...distinguished from *science* [Wissenschaft] (*to be able* [Können] from *to know* [Wissen]), as a practical faculty [Vermögen] is distinguished from a theoretical one, as technique [Technik] is distinguished from theory [Theorie]. (5:303)<sup>2</sup>

By calling logic a science, the implication, then, is that, for Kant, logic is not meant to provide us, in the first instance, with an ‘art’, ‘technique’ or ‘skill’, or to give us a new ability, but rather is meant to provide us with a theory, with scientific-theoretical knowledge.<sup>3</sup> That is, logic is to provide us with a scientific theory of understanding itself.

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<sup>2</sup> As Guyer’s editorial note here tells us (Cambridge Edition of the KU, 381n23), R1892 (16:150) contains a similar formulation of the contrast, while in R2704 (16:477) we even find the suggestion that the very word ‘Kunst’ is an historico-etymological derivative of ‘können’. (Both Reflexionen date from the late 1770’s to the early 1780’s.)

<sup>3</sup> This important distinction is entirely covered over by Béatrice Longuenesse (‘Kant on *apriori* Concepts’, in *Cambridge Companion to Kant and Modern Philosophy*, ed., P. Guyer (Cambridge: Cambridge, 2006); 129-68), who simply aligns Kant’s conception of logic with that of the Port-Royal logicians (137; see below, §\_). It is also missed by Mary Tiles (‘Kant: From General to Transcendental Logic’, *Handbook of the History of Logic*, vol. 3), who identifies the ‘general logic’ mentioned in the first *Kritik* with the ‘art of reasoning’ (91), though one of the transcripts of Kant’s logic lectures from the Critical period that she quotes elsewhere in her essay is precisely the one cited in the previous note (*Wiener Logik*), which states unequivocally that logic is a *scientia*. To be fair, Jäsche’s text does state that logic is the ‘universal art of reason [allgemeine Vernunftkunst]’ (9:13), and there is (though, to my knowledge, *only*) one Reflexion from the Critical period (1780’s, R1623) which reads: ‘Logica est ars cogitandi generalis’ (16:42). Yet a Reflexion from the same period (R1628) speaks of logic as an ‘ars critica, nicht cogitandi’ (16:45). I will take up the question of the difference between an ‘art of criticism’ and an ‘art of thinking’ below.

Here I might also remind the reader of a point made above in my Introduction (cf., §III), that there have been serious misgivings expressed about the fidelity of the position stated in

This, of course, leaves open the question of what exactly Kant means by ‘science’. Yet before we say more about this term, it is important to recognize that, with this aspect of his definition, Kant is quite self-consciously taking sides in a long-standing debate about where to locate logic within a taxonomy of the disciplines. Moreover, the debate within which Kant is here positioning himself is one that takes place within a tradition shaped by the *Aristotelian schema* of disciplinary classification. Indeed, Kant’s own understanding of the division between art and science is quite close to (and no doubt influenced by) the Aristotelian conception of this difference, just as his general philosophical architectonic is organized along divisions which are quite close in many respects to the Aristotelian schema itself.

Of course, all of this might seem relatively unsurprising, given Kant’s notorious remarks about the status of Aristotle’s achievement in the discipline of logic (cf., Bviii; see above, §I). Yet, as I will show in what follows, Kant makes a clear break with the Aristotelian conception of logic in at least three respects. First, the Aristotelian tradition had consistently classified logic as a mere ‘instrument’ (*organon*) for philosophy, but not as a *part* of philosophy itself. By

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Jäsche’s text to any one specific period of Kant’s thought (rather than as presenting a mish-mash of Critical and pre-Critical views). (Klaus Reich, for instance, in his 1932/48 *The Completeness of Kant’s Table of Judgments*), questions, in addition to its fidelity, even the internal coherence of Jäsche’s text, going so far as to quip that it is ‘properly a part of the literature on Kant and not of Kant’s works’ (117n19; cf., 18f.). As I stated earlier, my policy will be to cite Jäsche’s text with caution, and always in comparison to other (if possible published) passages. (Hence, nothing that I mean to argue will rest *solely* upon Jäsche’s text.)

contrast, as we saw above, for Kant, logic stands on par with ethics and natural philosophy. Secondly, and relatedly, Kant takes logic to represent a theoretical *science* in its own right, and not merely a tool for theoretical science. Though it was much more common in Kant's day to take logic to be (or deal with) an 'art' – namely, logic was thought of as the *art* of thinking – for Kant, logic provides us instead with the *science* of thinking, insofar as it gives us scientific (theoretical, systematic, 'rational') cognition, namely cognition of understanding and reason itself. Third, and most importantly, it will turn out that the particular type of science that Kant takes logic to be – a purely *formal* science – is one which has no straightforward 'home', one which had not yet been reflectively 'thematized', within the Aristotelian disciplinary taxonomy.<sup>4</sup>

In the end, I will argue that Kant's conception of logic is not especially 'Aristotelian' after all. If anything, among the 'ancient Greek philosophers',

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<sup>4</sup> To anticipate a bit: Aristotle does take *mathematics* to be a 'formal' science in the sense that it considers the properties of objects of nature which can be 'thought in separation from motion' (*Physica* II.2, 194a33-4), but as *Metaphysica* E.1 reminds us, these attributes do not thereby exist 'as separable, but as embodied in matter' (1026a14-15). Cf., Jonathan Lear, *Aristotle: The Desire to Understand* (Cambridge: Cambridge, 1998), ch.6, §§1-2. On the other hand, metaphysics is even more abstractive, in that it considers those properties which are separable from both whatever pertains to the movable and the material; its domain is being qua 'eternal [aidion], immovable [akineton] and separable [choriston]' (1026a10-16); hence, arguably it would be metaphysics (or the 'first' theoretical discipline) which might represent the *formal* science par excellence. Whether or not its domain is co-extensive with the sort of 'being' at issue in Aristotelian logic, must be left open at this point; I return to such a thought below in the discussion of the *Categoriae*.

Note that here already we have a preliminary indication of the fact that (despite his own self-characterizations) Kant does not simply inherit his conception of logic from some ready-to-hand Aristotelian tradition. Later in this chapter, I point out other key differences between Kant's conception and his predecessors, including (especially) over the correct principle of organization (i.e., *judgment*); subsequent chapters continue to highlight Kant's 'innovations'.

Kant's picture of logic, as well as his general division of philosophy, shares more affinities with that of the Stoics than with that of the Peripatetics. For Kant's tripartite division of philosophy (logic, ethics, physics) is precisely that of the Stoics.<sup>5</sup> Moreover, like the Stoics, Kant puts *judgments* rather than concepts at the center of his logic.<sup>6</sup> Finally, Kant follows the Stoics in explicitly assigning the study of 'categories', not to formal logic, but rather to a 'material' branch of philosophy.<sup>7</sup> This is not to say that Kant simply takes over the Stoic conception

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<sup>5</sup> Compare Diogenes Laertius, *De clarorum philosophorum vitis*, who attributes the division (*to de logikon meros, to de phusikon, to de ethikon*) to Zeno of Citium ('Zeno', VII.39). This threefold division was, apparently, a well-known mark of Stoic philosophy; cf., §26 of Long and Sedley's *The Hellenistic Philosophers* (Cambridge; Cambridge, 1998). Diogenes Laertius tells us that Epicurus as well makes a similar threefold division of philosophy, 'canon, physics, and ethics [to te kanonikon kai phusikon kai ethikon]' (*De vitis*, 'Epicurus', X.29). Kant himself mentions Epicurus's use of 'canon' as a name for logic in *Wiener Logik* (24:796) and *Jäsche Logik* §I (9:13); cf., R3414 [1775-80] (16:820).

<sup>6</sup> I.M. Bocheński, *Ancient Formal Logic* (Amsterdam: North Holland, 1957), §13C: 'While the Aristotelian logic corresponds in its main part (syllogistics) to what is called today 'logic of classes' (or 'of predicates'), all extant theorems of the Stoic-Megaric School belong to the *logic of propositions*' (80). Like Kant, the Stoics also focus their analysis in logic upon the 'intensional' realm of the *lekta*, or 'what can be meant'; cf., Bocheński, op.cit., §14B: 'It may be said that the *lekton* corresponded to the intension or connotation of the words' (84). Cf., Bocheński, *A History of Formal Logic*, tr., ed., I. Thomas (Notre Dame: Notre Dame, 1961), §19B: 'To use Frege's language it is the sense (*Sinn*) of an expression, scholastically the *conceptus objectivus*, what is objectively meant' (110); also, Benson Mates, *Stoic Logic* (Berkeley: California, 1961): 'In their semantical theory, the Stoics employed a distinction very similar to the sense-denotation and intension-extension distinctions of Frege and Carnap. Stoic logic is the logic of propositions and not of sentences' (4; cf., 19ff).

I shall argue below that Kant's logic, too, deals first and foremost with judgments (and concepts and inferences) as 'objective' *Sinne* (i.e., as intensions or what can be 'objectively meant'), and not with anything merely subjective or empirical-psychologically tractable. This is true, even if, unlike Frege and the Stoics, Kant does not take the idea of such judgeable content to be defined by way of the possibility of an advance from it to a *truth*-evaluable claim.

<sup>7</sup> On this, cf., I.M. Bocheński, *Ancient Formal Logic*, §14F: 'The categories (*ta genikotata*) do not seem to belong to Stoic logic, but rather to their physics. There is, according to them, a supreme genus, the something (*to ti*)' (87). I develop Kant's distinction between logical 'form' and 'category' below (cf., **II.D**). Kant seems to depart, however, from the Stoic treatment of an

of logic either, but rather that Aristotle should not be thought to be the *only* ‘ancient Greek philosopher’ that influences Kant’s thought on logic.<sup>8</sup>

Nevertheless, it will prove to be worthwhile to take a brief look at the traditional Aristotelian disciplinary classification-schema and the principles of its division, since it provides an extremely useful point of comparison with Kant’s own division of the ‘material’ branches of philosophy, as I will show in the next section. Furthermore, by looking at the reasoning behind the Aristotelian division, as well as at the difficulties that thinkers after Aristotle have faced in trying to classify logic – or rather, the Aristotelian discipline which deals with argument (under the title of ‘demonstration’) – we can begin to see why Kant is ultimately compelled to place logic outside of ‘material’ philosophy altogether.<sup>9</sup>

## B. Pre-Kantian Disciplinary Classifications of Logic

§2 We can take our bearings from the taxonomic scheme given in *Metaphysics* E.1, which is meant to provide a classification for each ‘discipline [episteme]’ that

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individual, insofar as the Stoics model individuals as lowest species; cf., Diogenes Laertius, op.cit., VII.61; Mates, *Stoic Logic*, 23.

<sup>8</sup> Zeno of Citium, Cleanthes, and Chrysippus are explicitly mentioned in the *Wiener Logik* (24:803) and the *Jäsche Logik* §IV (9:30); Zeno comes in for mention as well in *Dobna-Wundlacken Logik* (24:699).

<sup>9</sup> By familiarizing ourselves both with the idea of a philosophical architectonic and with two of its exemplars, we can start to see just how much is lacking from reflection upon the nature of logic in contemporary discussion, how much room there is for reflection and dispute. As I will argue in chapter VI, this failure to survey the landscape – the space of possible *Stellen* for sciences – is responsible for an unnecessarily narrow interpretive consensus concerning the nature of logical laws in Kant.



involves ‘thinking [dianoia]’ (1025b19f).<sup>10</sup> The divisions we find therein are: *theoretical* discipline, *practical* discipline, and *art* (as ‘productive [poietike]’ discipline), with metaphysics itself as either a separate enterprise or as a special theoretical discipline.<sup>11</sup> The first sort of discipline deals with what can be known [episteton], the second with what can be done [prakton], the third with what can be made [poieton], and metaphysics with ‘being qua being [to on he on]’ (cf., Γ.1 (1003a21)).

As this suggests, the principle of division of disciplines is one which takes its cue from the form of *being* that is dealt with in each discipline. In *Physics* II.1, Aristotle makes the following general claim: ‘of things that exist, some exist by nature [phusei], some from other causes [allas aitias]’ (192b8-9). Returning now to *Metaphysics* E.1, we learn that the general class of that which does not exist ‘by nature’ can be further divided into beings whose existence is grounded upon action [praxis] and choice [proairesis], on the one hand, and those which are

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<sup>10</sup> In general, an ‘episteme’ is a systematically ordered body of rules or laws, though I use ‘discipline’ as a rendering of ‘episteme’ to help bring out the breadth of the application of Aristotle’s term.

<sup>11</sup> Of course, ‘metaphysics’ as the name for the science of ‘being *qua* being’ is not Aristotle’s own. At 1026b19f, Aristotle classifies ‘theology [theologike]’ under ‘theoretical science’, though there is some debate about whether this science is simply identical to the science of ‘being qua being’ (cf., Ross, ‘Commentary’, Oxford ed. *Metaphysics*, I, 253). This threefold classification scheme for disciplines involving ‘thinking’ reoccurs at *Nicomachean Ethics* VI.2 (1139a27f) and *Topics* VI.6 (145a15).

grounded upon production [poiesis], on the other.<sup>12</sup> And with this threefold division of ‘ways of being’, we arrive straightforwardly at a threefold classification of the disciplines which take up these ways of being: theoretical [theoretike], practical [praktike], and productive [poietike] (1025b25).

We can, for the moment, leave metaphysics to one side, noting only that it is a discipline which does not ‘cut off’ or delimit any particular way of being (genus of being), but simply deals with being qua being (1025b8-10) – whatever this may mean in the end. Let us instead look a bit more closely at *Metaphysics* E.1, to more fully determine the form of being at issue in each of the other disciplines. First we should note that, while a theoretical discipline deals with what exists ‘by nature’, a practical one deals with that which exists ‘by action’, with beings for whom ‘the principle of action is in the doer – viz. choice’. (Aristotle here equates ‘that which is done [prakton]’ and ‘that which is chosen [proaireton].’) A productive discipline, by contrast, deals with what exists (unsurprisingly) ‘by production’, with beings whose principles are ‘in the producer’ (Aristotle’s examples of ‘producers’ here are ‘reason [nous] or art [techne] or some capacity [dunamis]’) (1025b23-5).

Finally, we should attend to the fact that Aristotle holds that, along with the difference in relation to its principles and origins, ‘episteton’ is to be

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<sup>12</sup> I bracket, for the moment, the somewhat problematic class of ‘the spontaneous [automaton]’, i.e., the beings who exist ‘spontaneously [tautomatou]’ (cf., *Physics*, II.4; *Metaphysics*, VII.7).

distinguished from both from ‘prakton’ and ‘poieton’, in that what can be known *cannot be otherwise* but rather is, or comes into being, ‘with necessity [ex anankes]’, since ‘in accordance with nature [kata phusin]’ (*Nich. Eth.*, VI.4, 1140a14). By contrast, both ‘prakton’ and ‘poieton’ deal with the class of beings that *can* be otherwise, again because their ‘origin [arche]’ lies outside of (their) nature: art, on the one hand, is concerned with that which is ‘capable of either being or not being’ (1140a13), and on the other hand, ‘that which can be done [prakton] is capable of being otherwise [endechetai allos echein]’ (1140b3).<sup>13</sup> The reason for this is that the ground or principle of their being lies in the one who does (chooses) or produces them, and since it is not necessary that the producers or choosers will bring these particular things into being, they themselves cannot be said to exist ‘with necessity’, but are rather contingent modes of being.

Let us return, now, to our initial line of questioning. Where, in any of this, does Aristotle find a place for the discipline of *logic*? And what type of ‘being’, if any, is it concerned with? It is worth noting, first of all, that Aristotle himself does not use the word ‘logic’ to mark off a discipline.<sup>14</sup> As is well-known, however, those several texts which have been collected (by Aristotle’s editors

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<sup>13</sup> Cf., ‘art [techne] and practical wisdom [phronesis] deal with things that can be otherwise [ta endechomena allos echein]’ (1141a1).

<sup>14</sup> At one point in the *Organon* (*Topica* I.14), Aristotle does gesture at a threefold division of ‘propositions [protaseis] and problems [problemata]’, into ‘ethical, natural, and logical ones [hai ethikai, hai de phusikai, hai de logikai]’ (105b19-21). I am indebted to Jonathan Beere for alerting me to these terminological issues, and also for very helpful discussion of much else contained in these sections concerning Aristotle.

around the sixth century)<sup>15</sup> under the name ‘Organon’ exhibit a fair degree of thematic unity; in them Aristotle’s investigation is focused upon *demonstration* [apodeixis], especially demonstration through syllogistic reasoning [sulligismos], and upon those elements involved in demonstration (such as a statement or assertion [apophansis], whose elements are, in turn, noun [onoma] and verb [rhema]). We can reframe our question, then, as follows: what is the correct classification of the discipline which deals with demonstration [apodeixis] (*Prior Analytics* I.1, 24a11). Does ‘what is demonstrated [apodeikton]’ pick out a way of being that exists ‘by nature’, and so can be known [episteton], or rather should it be classed with that which can be done [prakton], or finally, with that which can be made [poieton]?

On first blush, it might not seem to require much of a stretch to place ‘what is demonstrated’ among *each* of these kinds of ‘being’. Aristotle writes in *Prior Analytics* (I.1) that demonstration is a form of syllogism, which in turn is a ‘form of words [logos] in which certain things are assumed and there is something other than what is assumed which necessarily follows [sumbainei ex anankes]’ (24b18-20). ‘What is demonstrated’, then, would seem to possess the right kind

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<sup>15</sup> In his *Aristotle* (6<sup>th</sup> ed.; London: Routledge, 1995), W.D. Ross writes that while ‘Organon’ was applied to logical doctrine generally ‘by Alexander of Aphrodisias (200 A.D.)’, it was only applied to these works of Aristotle ‘in the sixth century’ (21, 60n5-6). Friedrich Solmsen (in ‘Boethius and the History of the *Organon*’, *American Journal of Philology* 65.1 (1944)) claims that ‘the existence of the *Organon* (or of any fixed order of these writings) by A.D. 500 has never been proved’ (69).

of being for the discipline which deals with demonstration to be classified under the theoretical sciences.

Yet, on the other hand, it seems as though we can easily speak of the ‘act’ of demonstration, as something which is ‘done’ by the scientist or mathematician. This fact – viz., that a scientist can demonstrate – might seem to indicate that ‘apodeikton’ is closer to ‘prakton’, and so cannot exist ‘by nature’, since, for example, the scientist might very well never actualize this capacity (and so not ever ‘do’ the demonstrating).

From still another point of view, however, we seem quite free to consider the demonstration as a ‘thing made’ – as something which can be useful or even beautiful (think of the ‘elegance’ of mathematical theories). From this perspective, it would thus appear that the principle of the production of a demonstration must lie within the producer, rather than in the demonstration itself. This too would count against the discipline of demonstration being classed among the theoretical sciences. But, now, returning to the first point, isn’t there still a sense of ‘being’, in which what *can be* demonstrated cannot really *be* otherwise?

As an answer to the historical question, we can simply note that Aristotle himself does not provide anything like a decisive statement of the placement of the discipline of demonstration. Indeed, the judgment of Robert Adamson seems quite accurate: that though ‘we find a systematic exposition of many of these

problems [concerning demonstration]' in Aristotle's works, in the end 'it is left by him doubtful what place in the general scheme...should be assigned to it'.<sup>16</sup> This

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<sup>16</sup> *A Short History of Logic* (London: Blackwood & Sons, 1911), §8; 31. Compare also I.M. Bocheński, *Ancient Formal Logic*, §5A: 'Logic seems to have no place in Aristotle's system of sciences' (25). Later in this work (§9), Adamson makes the striking claim that 'little doubt can remain' that 'the matter of analytical (i.e., logical) researches' is 'being as truth and non-being as falsity' (35), referring to the second of the four 'ways' in which 'being can be said', laid out in *Metaphysica* Δ.7, taken up again in E.4 and Θ.10. The grounds upon which Aristotle (in E.4) rejects the notion that this 'way' can provide the correct determination of 'being qua being' – since 'that which is in the sense of being true, or is not in the sense of being false, depends on combination and separation', and 'the combination and the separation are *in thought* [en dianoia] and not in the things' (1027b17-27; my ital.) – could equally be taken as grounds for supposing that it is precisely this 'way' that *can* provide the correct determination of being *qua thought*, and thus the correct determination of the domain of a discipline concerned with thought: logic. Later we will find Kant saying something quite close to Adamson's following amplification of (extension from) Aristotle's theses: 'it is the very possibility' that 'thought...*moves in a definite sphere*, that of the combinable or separable' which 'lies at the root of all the analytical researches' (35-6; my ital.).

I should note that this cuts against the general tenor of the assessment offered by Jan Łukasiewicz in his masterful *Aristotle's Syllogistic* (2<sup>nd</sup> ed.; Oxford: Oxford, 1957), who argues (§6) that 'the laws of logic do not concern your thoughts in a greater degree than do those of mathematics. What is called 'psychologism' in logic is a mark of the decay of logic in modern philosophy. For this decay Aristotle is by no means responsible. Throughout the whole *Prior Analytics*, where the theory of syllogism is systematically exposed, there exists not one psychological term. Aristotle knows with an intuitive sureness what belongs to logic, and among the logical problems treated by him there is no problem connected with a psychical phenomenon such as thinking' (13). Yet against this, and in support of Adamson's interpretation, compare again Bocheński (op.cit.): 'In the *Posterior Analytics*, Aristotle says that the demonstration is not about words but about *things in the soul*, and, while the whole structure of the *De Interpretatione* and the *Topica* supposes that logical formulae are sequences of spoken words, it is asserted in the former that the laws hold about the 'spoken affirmations' because similar laws hold with regard to the 'judgments of the mind'. Thus we may say that for Aristotle logic is primarily an affair of right *thinking*' (26; my ital.).

Concerning logic's placement in the more general division, Ross, for one, claims that the discipline of demonstration (what he straightforwardly identifies with logic), 'if it entered into this classification, would have to be included among the theoretical sciences' (*Aristotle*, 21); compare Bocheński, *Ancient Formal Logic*, §5A: 'Aristotle's term for 'logical' is *ek ton keimenon*, i.e. 'following from the premisses', or *analutikos*, while the term 'logical' (*logikos*) in his works generally means the same as 'dialectical', i.e. 'probable' (25). Though, as Ross notes, 'the name *logic* is unknown to Aristotle', and though Aristotle's 'own name for this branch of knowledge, or at least for the study of reasoning, is 'analytics'' (ibid.), we should be alert to the fact that, as Robin Smith (in his 'Logic', in *Cambridge Companion to Aristotle*, ed. J. Barnes (Cambridge: Cambridge, 1995)) points out, along with the 'analytics' of 'demonstration', the investigation of 'dialectical argument' makes up the half of the traditional 'organon' (28-9). As we shall see,

can be true, despite the fact that Aristotle still (self-consciously) succeeds in providing the discipline of demonstration with its first ‘systematic exposition’.

It is, perhaps, less surprising that, on the basis of considerations similar to those surveyed above, philosophers ever since the time of Aristotle have been widely divided over the correct classification of this discipline, placing it in turn under each one of these three – four, if we include metaphysics – types of discipline identified in the ‘canonical’ Aristotelian schema. For example, in his 1893 *Grundzüge der Logik*, Theodor Lipps famously claimed that logic is the ‘*physics* of thinking’ or it is nothing. Partly in reaction to naturalistic-reductive positions such as that of Lipps, philosophers in the 19<sup>th</sup> and 20<sup>th</sup> centuries (such as Frege) have attempted to draw out analogies between logic and *ethics* (and aesthetics as well, conceived as a normative discipline).<sup>17</sup> Finally, in the hands of Leibniz (and, later, in Hegel), logic becomes ‘scarcely different’ from the true metaphysics.<sup>18</sup>

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Kant’s ‘logic’, too, will contain both an ‘analytic’ and a ‘dialectic’, though he will refuse to classify either of them as parts of an ‘organon’.

<sup>17</sup> Compare the opening remarks to Frege’s 1897 (unpublished) ‘Logik’: ‘Beim Eintritt in eine Wissenschaft hat man das Bedürfnis, vorläufig wenigstens eine Ahnung von ihrem Wesen zu erlangen. Man wünscht ein Ziel zu sehen, dem man zustreben wird, einen Zielpunkt aufzustellen, der die Richtung gibt, in der man fortschreiten will. Für die Logik kann das Wort ‘wahr’ dazu dienen, ein solches kenntlich zu machen, in ähnlicher Weise wie ‘gut’ für die Ethik und ‘schön’ für die Ästhetik’ (*Nachgelassene Schriften*, 139). Similar positions can be found earlier in Wilhelm Windelband’s 1884 *Präludien*, and later in W.E. Johnson’s 3 volume 1921-4 *Logic*. A particularly striking example of this sort of classification also occurs in Friedrich Ueberweg’s 1857 *System der Logik*, §6, ‘The place of Logic in the system of Philosophy’. Here Ueberweg divides philosophy as the ‘science of principles in general, insofar as they are common to all entities’, into philosophy of nature and philosophy of spirit; the philosophy of spirit, in turn, is divided into three ‘normative sciences [normative Wissenschaften]’: logic, ethics, aesthetics. Spirit is defined as ‘personality’, or the ‘capacity for self-knowledge and moral self-determination’ (7), the latter being brought about by ‘the consciousness of the normative laws or laws of what ought to be [Gesetze des Sollens]’, which is ‘that through which spirit raises itself above nature’

But even if, in the long run, the discipline of ‘demonstration’ has floated around in a sort of disciplinary ‘homelessness’, the most common classification of logic in the immediate aftermath was as a type of *art*, or productive discipline. This is no doubt a consequence of the choice of Aristotle’s more immediate successors to group the relevant texts (together with those on ‘dialectics’) under the title of ‘Organon’, or ‘instrument’.<sup>19</sup> In the next section, I want to explore the variety of senses in which logic was said to be ‘art’ – most importantly, the senses involved in the titles ‘ars inveniendi’ and ‘ars iudicandi’ – in order to help bring

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(9). The division of the science of the principles of spirit follows the ‘three chief tendencies of the life of the spirit’ – i.e., ‘knowledge, will, and feeling’ – since each ‘is governed [beherrscht] by its special idea’. There thus ‘arise three sciences of normative or ideal laws [Norm- oder Ideal-Gesetzen], co-ordinate to each other – i.e., the sciences of the laws of truth, goodness, and beauty’ (9). I criticize a ‘normative’ interpretation of Kant’s logic in Chapter IV.

<sup>18</sup> Leibniz makes this claim in a letter from 1678 (most likely to Countess Elizabeth), writing that he has ‘recognized that the true metaphysics is *scarcely different* from the true logic’ (G iv.292). Compare Hegel’s *Enzyklopädie Logik*, ‘Vorbegriff’, §24 ‘Logic therefore coincides with [fällt daher zusammen mit] *Metaphysics*, the science of things set and held in thoughts [*Dinge in Gedanken gefaßt*]’ (*Werke* VIII.81). On some (e.g., neo-Kantian) readings, Kant himself closely aligns a sub-species of logic (perhaps: special, transcendental) with metaphysics (construed as the science of being, or onto-logy), with good textual grounds: ‘the proud name of ontology [...] must give way to the modest one of a mere analytic of the pure understanding’ (B303). (For some, Aristotle too identifies logic with metaphysics, through an underdetermined characterization of the ‘categories’, as both ways of *saying* being and ways of *being*; cf., G. Tonelli, *Kant’s Critique of Pure Reason in the Tradition of Modern Logic*, 8-9, 165f.) On still further readings of Kant – some of which are criticized below – Kant himself is committed to the view that logical law is either subordinate to, or a type of, *practical* legislation, and so essentially a sort of practical science.

<sup>19</sup> ‘Organon’ as a name was first applied to the doctrine of demonstration by Alexander of Aphrodisias in 200 A.D., but its application was extended to include the whole analytical and dialectical corpus in the 6<sup>th</sup> century. (See Solmsen, *op.cit.*) And while Cicero is among the first to have used the term ‘logike’ in the relevant sense (see *De Finibus*, I.7.22), this same Alexander of Aphrodisias appears to be responsible for aligning ‘logike’ specifically with the analytical doctrines. Cf., Ross, *Aristotle*, 21, 60-1n; and D.J. Sullivan’s ‘Thomistic’ textbook, *Fundamentals of Logic* (New York: McGraw-Hill, 1963), 4n2.



out the precise meaning of Kant's *rejection* of 'art' as an adequate characterization of logic.

§3 Can we say a bit more about what it might mean to claim that logic is an instrument? Presumably, this classification means to say something about what one can do with logical principles, rather than about how one comes to arrive at logical principles in the first place. Instruments are typically used to 'produce' further, distinct ends, but what are the ends of logical 'production'? Here the most commonly suggested end – what is to be produced – is *knowledge* itself, or theoretical *science* properly so-called, or even *philosophy*. Compare Boethius' statement in his influential late 6<sup>th</sup> century Commentary on Porphyry's *Isagoge*, that logic is 'not so much a part of philosophy as an instrument of philosophy'.<sup>20</sup> Eventually, a classification guided by this editorial denomination will become so entrenched that St. Thomas, having already cited Boethius' statement approvingly (in his own 1255-9 Commentary on Boethius' *De Trinitate*),<sup>21</sup> can himself write (in

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<sup>20</sup> In *Isagogen Porphyrii Commenta*, 2<sup>nd</sup> ed., 1.3 (Corpus Scriptorum Ecclesiasticorum Latinorum v48, 142); Eng. trans. p. 77.

<sup>21</sup> Cf., *Super Boetium De Trinitate*, Part III, Question 5, Article 1, Reply to 2<sup>nd</sup> Objection: 'Unde secundum Boethium in *commento super Porphyrium* non tam est scientia quam scientiae instrumentum'. In the passage to which Thomas is referring, Boethius actually considers logic to be an instrument of 'philosophia', not 'scientia' as I have quoted above.

the Foreword to his 1270 Commentary on *Posterior Analytics*) that logic should be viewed as the very ‘art of the arts [ars artium]’ (I.1.3).<sup>22</sup>

A full history of the more immediately ‘pre-Kantian’ tradition of classifying logic as a type of art (productive discipline) would need to look at the wide variety of late-medieval, early-modern texts which bear titles such as *The Art of Logick* (by e.g., Zachary Coke, Henry Ainsworth) or even Ralph Lever’s 1573 *The Arte of Logick, rightly termed Wit-craft*.<sup>23</sup> But even a glance at these titles, or a cursory look at the most well-known early modern logic texts, can serve to indicate the prevailing sense that logic is something closer to an ‘art’ than a science. To take perhaps the most well-known example, the subtitle of the highly influential (Descartes-Pascal-inspired) ‘Port-Royal’ *Logique* of Antoine Arnauld and Pierre Nicole (1662-83), is likewise ‘*l’art de penser*’. Similarly, the very first sentence of

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<sup>22</sup> Even Aquinas, however, does not refrain from characterizing logic (the ‘art’ that is ‘needed to direct the act of reasoning’) as the ‘science of reason [scientia rationalis]’. This ambivalence continued up to Kant’s own day, as we shall see below, when we consider Georg Meier’s 1752 *Auszug aus der Vernunftlehre* – the text upon which Kant based his own lectures on logic (see above, §III). And the dual characterization of logic continues even today in the Thomistic tradition – cf., Raymond McCall, *Basic Logic*: ‘Logic in general is the science and art of right thinking’ (xvii); ‘as a science it is a *speculative* science, that is, it is concerned simply with *what is* right reasoning and *why* it is right. As an art it is a *liberal* art, that is, it seeks to develop in us a stable habit by which in the act of reasoning we can proceed in *ordered, easy, and errorless* fashion. The function of the art of logic, then, is to equip our minds for a certain action, the principles of which the science of logic enables us to understand’ (xx-xxi).

Incidentally, Thomas’s position is the precise opposite of Edmund Husserl’s conception of logic in his 1900-1 *Logische Untersuchungen*, where he deems logic to be the ‘science of science’ (Prol. §5); like Kant, Husserl explicitly distinguishes logic qua science from logical ‘technology [Kunstlehre]’ (LU, Prol. §3, §11).

<sup>23</sup> Though this classification is by no means limited to the pre-Kantian period, and is particularly alive in the Thomistic tradition. See, for example, Jacques Maritain’s *Formal Logic*, tr., I. Choquette (New York: Sheed & Ward, 1946), §1: ‘Logic studies reason itself as an *instrument* of knowledge, or as a means of acquiring and possessing the true. It may be defined as: the art *which directs the very act of reason*’ (1).

Isaac Watts' 1725 (Locke-inspired) *Logick, or the right use of reason*, reads: 'logick is the *art of using reason well* in our enquiries after truth, and the communication of it to others' (1; my ital.).

The correctness of the classification of logic as an *ars* becomes less straightforward as we approach Kant's own time. For example, in Christian Wolff's 1713 (so-called) *Deutsche Logik* (with many later editions),<sup>24</sup> we find logic classified as a 'part' [Teil] of philosophy (Chapter 1, §10), and since philosophy itself is defined as a 'Wissenschaft' (ch.1, §1), one might take this to imply that Wolff sees logic too as a science. Wolff's explicit definition of 'logic' in the *Deutsche Logik*, however, is as 'Vernunftkunst' (ch.1, §12). What is interesting for our purposes is that Wolff shifts his classification of logic over time. In the 'Discursus Praeliminaris' to Wolff's 1728 'Latin' logic (*Philosophia rationalis sive logica*), we again find philosophy defined as a 'science [scientia]' – namely, the 'science of *possibilia*, insofar as they are able to be [scientia possibilium, quatenus esse possunt]' (II, §29). Philosophy here is divided into theology, psychology, and physics, according to the three sorts of 'entities [entia]' that we can know: 'God, the human soul, and bodies or material things' (III, §55). Psychology is, in turn, divided into logic and practical philosophy, according to the two sorts of faculties that belong to the soul, cognitive and appetitive, respectively (III, §60).

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<sup>24</sup> The official title of the work is *Vernünfftige Gedanken von den Kräften des menschlichen Verstandes und ihrem richtigen Gebrauche in Erkenntnis der Wahrheit*, and is reprinted as Band I of the first 'Abteilung' of Wolff's *Gesammelte Werke*, (Hildesheim: G. Olms, 1965), edited by Hans Werner Arndt.

Hence, like the *Deutsche Logik*, logic is a *pars philosophiae*, the part ‘which treats of the use of the cognitive faculty in the cognizing of truth and avoiding of error’ (III, §61; cf., III, §88). Yet in contrast to the earlier *Logik*, here Wolff defines logic as a part of psychology,<sup>25</sup> and even emphasizes the fact that logic will draw its principles from psychology, as well as from ontology (III, §89). In addition, Wolff defines logic *only* as a ‘science’: logic is the ‘science which directs the cognitive faculty in the cognizing of truth [in cognoscenda veritate]’ (III, §61; cf., *Logica*, Prol., §1). Instead of treating logic *per se* as an art, Wolff identifies a separate *ars inveniendi* (‘art of discovery’), whose task is to ‘explicate the rules which direct the intellect to latent truths’, rules which ‘happily bring latent truths into the sunlight’, and in this way ‘augment science’ (III, §74).

Wolff here is alluding to a distinction that had come to be made within logic, between two ‘arts’, an *ars inveniendi* and *ars iudicandi*, one which had become traditional by Wolff’s day, and which (as Kant himself notes)<sup>26</sup> had been introduced into the modern period by Petrus Ramus in his 1543 *Dialecticae Partitiones*.<sup>27</sup> Leibniz, too, refers to this distinction explicitly in an unpublished

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<sup>25</sup> In the *Deutsche Logik*, Wolff had divided philosophy into five parts: 1. Logik (Vernunftlehre), 2. natürliche Theologie (Gottesgelehrtheit), 3. Pneumatologie (Geisterlehre) und Physik (Naturlehre), 4. Ethik (Sittenlehre), and 5. Metaphysik (§§10-14). Logic is distinguished by its concern for the ‘right use’ of the ‘capacity [Vermögen]’ of the soul to cognize truth, whereas pneumatology analyzes the ‘powers [Kräfte] and effects [Würcungen]’ of the soul in general.

<sup>26</sup> See R1635 [1755-6] (16:56); cf., *Wiener Logik* (24:796).

<sup>27</sup> The Kneales (*The Development of Logic*) note that ‘the distinction between invention and [judgment] is assumed in Aristotle’s *Topics*...is stated explicitly in Cicero’s *Topics* and Boethius’ *De*

fragment from 1683-85, entitled, ‘De Synthesi et Analysi universali seu Arte inveniendi et judicandi’ (G vii.292f). In this fragment, Leibniz defines the distinction between synthesis and analysis – and so, between the two ‘arts’ – as follows:

*Synthesis* is achieved when we begin from principles [a principiis] and run through truths in good order, thus discovering certain progressions and setting up tables, or sometimes general formulas, in which the answers to emerging questions can later be discovered [inveniri]. *Analysis* goes back to the principles [ad principia] in order to solve the given problems only, just as if neither we nor others had discovered anything beforehand. (G vii.296-7; Loemker, 357-8)

Leibniz’s judgment is ‘[i]t is more important to establish syntheses, because this work is of permanent value [valet in perpetuum], while we often do work that has already been done in beginning the analysis of a particular problem’ (G vii.297).

In this Leibniz echoes the complaint of Descartes, about the relative poverty of the ‘analytical’ method. In part II of his 1637 *Discours de la méthode*, Descartes tells us that he ‘observed with regard to logic that syllogisms and most of its other techniques are of less use for learning [à apprendre] things than for explaining [à expliquer] to others the things one already knows’ (AT VI.17). Later, in the 1647 Preface to the French edition of the *Principia philosophiae*, this observation takes the form of a complaint that ‘the logic of the Schools...is

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*differentiis topicis*’ (302). Compare Cicero, *Topica*, II.6. The idea of taking logic itself to be primarily an ‘art of discovery’ apparently arose with Raymond Lull, in his 1305 *Ars magna*.

strictly speaking nothing but a dialectic which teaches ways of making intelligible [faire entendre] to others what one already knows'; Descartes, by contrast, wants to provide 'the kind of logic which teaches us to direct [conduire] our reason with a view to discovering [découvrir] the truths of which we are ignorant' (AT IX B.13-4). This of course is what Descartes had intended the 'méthode' of the *Discours* to give us, as is indicated by that work's subtitle: 'pour bien conduire sa raison et chercher la vérité dans les sciences'.<sup>28</sup>

In the 1647 French edition of his 'Replies' to the second set of Objections to his *Meditationes*, Descartes aligns the methods of analysis and synthesis (as two 'manners of demonstration') with the methods of *resolution* and *composition*: 'La manière de démontrer est double: l'une se fait par l'analyse ou résolution, et l'autre par la synthèse ou composition' (AT IX A.121). The titles 'resolution' and 'composition' come from Jacopo Zabarella (and were later used by Jungius),<sup>29</sup> even if Descartes most likely took over his understanding of the analysis/synthesis distinction from the 1609 *Summa philosophiae*, a scholastic

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<sup>28</sup> It is not as if Descartes thought there was absolutely no value in the 'analytical' method, since Descartes himself took recourse to both 'methods' in his own published work. For example, Descartes tells Frans Burman in 1648 that the *Meditationes* proceeded by way of 'the order in which the author discovered [invenit] [his] proofs', while in the *Principia*, Descartes 'reverses the order; for the method and order of discovery [via et ordo inveniendi] is one thing, and that of exposition [docendi] is another' (AT V.153). In the *Principia*, unlike the *Meditationes*, Descartes' purpose is 'expository', and so he 'proceeds according to the synthetic method [synthetice agit]' (ibid.). The implication is that, in the *Meditationes*, Descartes had proceeded according to the analytical method, insofar as he began from certain things which were given, to a discovery of their first principles.

<sup>29</sup> Compare L.W. Beck, *Early German Philosophy* (Cambridge: Harvard, 1969), 176.

compendium by Eustachius a Sancto Paolo, in which the two methods are also called *resolutio* and *compositio*.<sup>30</sup> The authors of Port-Royal take up this tradition as well, in chapter II of part IV ('De la méthode') of their *Logique*:

There are two sorts of methods: one to discover [découvrir] the truth, which we call *analysis* or the *method of resolution*...; and the other, in order to make intelligible to others, that which one has already found, which we call *synthesis* or the *method of composition*....<sup>31</sup>

These distinctions of methodology continue to be articulated in the logic texts up to Kant's time, though we can see that they afford no real resolution of the question of the status of logic by looking to Kant's own preferred logic textbook, Meier's 1752 *Auszug*. Meier begins the *Auszug* by equating the term 'logica' with 'Vernunftkunst' and 'philosophia instrumentalis' (§1), and claims, furthermore, that logic represents 'a tool [Mittel] without which one cannot

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<sup>30</sup> See Peter Dear, 'Method and the study of nature', *The Cambridge History of Seventeenth Century Philosophy*, v.I, eds. D. Garber and M. Ayers (Cambridge: Cambridge, 1998), 149. The methodological distinction itself goes back at least as far as Pappas of Alexandria, a mathematician from the late 3<sup>rd</sup> century. In his *Mathematicae collectiones*, Pappas of Alexandria defines the distinction as follows: 'In *analysis* we assume the result we are seeking as an established fact, and look for whatever gave rise to this fact, and then again for what was prior to *that*, and we trace our steps upwards in this way until we reach one of the propositions already known to us or having the status of an axiom. In *synthesis* by contrast, we assume as facts those very propositions which in analysis we reached last, and we set out as consequences of those propositions which in analysis had prior status, joining each proposition to the next one down until finally we reach a derivation of our desired result' (634-6; trans., Cottingham, *The Rationalists* (Oxford: Oxford, 1988), 194n18). Descartes refers to Pappas in the 'Dedicatory Letter' of the *Meditations* (AT VII.4). Dear (op.cit.) claims that Pappus influences Galileo as well (151).

<sup>31</sup> In the ellipses, Arnauld and Nicole suggest that one could also call analysis the *method of invention*, and synthesis the *method of doctrine*, but the former should be explicated in the sense articulated by Descartes in his discussion with Burman (cited in earlier footnote), i.e., as a retracing of a proof already discovered *as* it was discovered (according to the 'order' of discovery), and so *not* as an *art* for future invention or discovery.

achieve any disciplined knowledge or science' (§4) (16:5). Even so, we can sense a bit of indecision when, in same 'Introduction', Meier also defines 'logica', or the 'doctrine of reason [Vernunftlehre]', as both the 'art of reason [Vernunftkunst]' and also as itself a 'science [Wissenschaft]' (§1, *ibid.*). Moreover, Meier also agrees with Wolff in taking logic to be a 'part of philosophy [Teil der Weltweisheit]', which is also defined by Meier as 'a science [Wissenschaft]', namely a science 'of the general properties [allgemeinern Beschaffenheiten] of things, insofar as they can be known [erkannt] without faith [Glauben]' (§5, 16:51). Moreover, Meier's own definition of 'art [Kunst; *ars*]' is itself so generic it might very well be made to include within it *science* itself: 'an art is a collection of rules [Inbegriff der Regeln], which are thought according to an order [nach einer Ordnung gedacht werden]' (§427; 16:798).

But in any case, through the syllogistic, Meier also takes logic to provide a method for us 'to discover [erfinden] new truths' (§413; 16:775). Or rather, like Descartes, the Port-Royalists, and Leibniz before him, Meier takes logic to provide *two* sorts of 'method [Lehrart]' for such discovery – an *analytic* method, in which the 'grounds [Gründe]' are 'posited before [vorgesetzt]' the 'consequences [Folgen]', and a *synthetic* method in which the grounds are 'posited afterwards [nachgesetzt]' (§422; 16:786). The analytic method, Meier suggests, is especially useful if one wants to 'discover [erfinden] the grounds and premises [Vordersätze] from the consequences and conclusions [Schlüsssätze]' (§423; 16:787), whereas



the synthetic method is useful if one wants instead to ‘discover the consequences and conclusions’ (§424; 16:788).

By now, perhaps, one will have had brought to mind Kant’s own discussion, in the ‘Preface’ to his 1783 *Prolegomena*, of the distinction between the ‘analytic’ and ‘synthetic’ method (4:263; cf., §4, 4:274-5). For Kant, the analytic method must ‘rely on something already known to be dependable, from which we can go forward with confidence and ascend to the sources [Quellen], which are not yet known’ (4:275). The synthetic method, by contrast, ‘requires a resolute [philosopher] to think himself little by little into a system that takes no foundation as given except reason itself [noch nichts als gegeben zum Grunde legt außer die Vernunft selbst], and that therefore tries to develop [entwickeln] cognition out of its original seeds without relying on any fact [Factum] whatever’ (4:274). Kant claims to have produced the first *Kritik* according to the synthetic method, while the *Prolegomena* represents, in effect, the same content traversed ‘analytically’ (ibid.).<sup>32</sup>

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<sup>32</sup> In the *Jäsche Logik* the distinction is defined as follows: the analytic method ‘begins with the conditioned and grounded and proceeds to principles (*a principiatis ad principia*)’, while the synthetic method ‘goes from principles to consequences or from the simple to the composite’; the analytic method could also be called a *regressive*, the synthetic, a *progressive* method (§117, 9:149). (In the ‘Anmerkung’, the analytic method can also be called the ‘method of invention [Erfindung]’, though I suggest that this should be read along the lines sketched by Descartes in an above note.)

In addition to the *Prolegomena*’s reference to the methods, in the ‘Introduction’ to the first *Kritik*, Kant floats the hope that the ‘complete system of the philosophy of pure reason’ can be ‘presented [dargestellt] both synthetically and analytically’ (B26). He refers again to this distinction in the introduction to the *Dialectic*, concerning the preferred ordering of the presentation of the transcendental Ideas (cf., B395n). In the *Grundlegung*, Kant claims to proceed

The relevant question for Kant would then become: which method is appropriate as a description of the procedure in the science of *logic* itself? In the following section, I will examine the role that these two distinctions – i.e., between *ars inveniendi* and *ars iudicandi*, and between the analytic and synthetic methods – play in Kant's own work, since they will turn out to help us place Kant's own positive conception of logic.

### C. Logic in the Kantian Architectonic

§4 I wanted to take the above historical detour in order to give a palpable sense of the uncertain admixture of 'traditional' views on the nature of logic with which Kant was confronted, to allow for a better appreciation of the decisiveness expressed in Kant's own definition and classification of logic. For, as I will show in what follows, Kant not only declares logic unequivocally to be a *science* rather than an art, but also consistently *denies* any claim on logic's behalf which would assign to it the task of being an 'instrument' or 'organon' for the acquisition ('discovery') of substantive cognition.

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both synthetically and analytically: 'I have adopted in this work the method that is, I believe, most suitable if one wants to proceed analytically from common cognition to the determination [Bestimmung] of its supreme principle [Princip], and in turn synthetically from the examination [Prüfung] of this principle and its sources [Quellen] back to the common cognition in which we find it used' (4:392). Cf. *Dobna-Wundlacken Logik*: 'In philosophizing one can proceed synthetically or analytically' (24:779).

Rather, by the time of the first *Kritik*, Kant understands logic to be the science which ‘*analyzes* [löset auf] the entire formal business of the understanding and reason into its elements [Elemente], and presents these as principles of all logical *adjudication* [Beurteilung] of our cognition’ (B84; my ital.). In this latter guise, Kant tells us that logic functions as a mere ‘*canon*’ for the understanding and reason – that is, as providing a merely necessary condition to be met if something is to count as a possible exercise of understanding (B85). This, however, provides us with merely a ‘negative’ (or as he will also say, merely ‘formal’) criterion for the ‘truth’ of a given claim, and cannot on its own generate any positive (or ‘material’) truths (B84f).

By claiming that logic is to be thought of as a canon and *not* an organon, Kant takes his lead from someone outside of the Aristotelian tradition – namely, Epicurus.<sup>33</sup> But more important is the fact that Kant uses this non-Aristotelian notion to contrast his views with what we have seen was the viewpoint that prevailed for much of the medieval and modern period. Kant’s claim is that ‘general logic’ is ‘merely a *canon* for adjudication [Kanon zur Beurteilung]’ (B85),

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<sup>33</sup> As was noted above, in Book X of his *De vitis*, Diogenes Laertius reports that Epicurus divides ‘philosophy’ into ‘canon, physics, and ethics’. In one of several passages that link Kant’s conception to the use of ‘canon’ by Epicurus [canonica Epicuri], Jäsche writes that logic is the ‘universal art of reason [allgemeine Vernunftkunst]’ and also that logic can be considered an ‘organon’ (9:13), but this would stand out as an anomaly in comparison with other Critical-period comments that Kant makes about the status of logic. In contradiction to the Jäsche text, in the *Wiener Logik* lectures (1780’s), for instance, where Kant also acknowledges his debt to Epicurus’ use of ‘canon’ (24:796), Kant is reported to claim that ‘logic cannot be called [an organon]’ and ‘just as little can it be an art’ (24:792); likewise in the Dohna-Wundlacken lectures (1790’s), Kant is reported to ask ‘Is logic also an organon?’; answer: ‘No. [...] Logic does not suffice for an organon’ (24:695). More evidence on this point from the *Reflexionen* is given below.

even though it has been ‘used as if it were an *organon* for the actual production [wirkliche Hervorbringung] of at least the semblance of objective assertions [Behauptungen]’; ‘in fact’, Kant writes, ‘it has thereby been *misused*’ (B85). By contrast, in Kant’s judgment, ‘general logic, as a putative organon [als vermeintes Organon], is called *dialectic*’ (ibid.):

General logic, *considered as an organon* [als Organon betrachtet], is always [jederzeit] a logic of illusion [Schein], i.e., is dialectical. For since it 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, the presumption [Zumutung] of using it as a tool [Werkzeug] (organon) for an expansion and extension of its information [Kenntnisse], or at least the pretension of so doing, comes down to nothing but idle chatter, asserting with some plausibility or contesting at will whatever one wants. (B86)

What is striking is that it is already quite early in his development that Kant came to consider the use of logic as an ‘organon’ to belong to logic *qua* ‘dialectic’. We find evidence of this classification from *Reflexionen* of the 1760’s, though the term ‘dialectic’ itself has not yet fully developed its Critical significance.<sup>34</sup> But

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<sup>34</sup> Before Kant, ‘dialectic’ was a name for the branch of logic which deals with merely *probable* truths (‘endoxa’), or with reasoning from premises merely accepted ‘for the sake of argument’, rather than themselves demonstrably true. For example, in §6 of the *Auszug*, Meier tells us that logic (‘Vernunftlehre’) treats of two sorts of ‘learned cognition’ – ‘completely certain’ and merely ‘probable’ cognition – with the former branch of logic being called ‘analytica’, the latter ‘dialectica’ or ‘logica probabilium’ (16:72). Similarly, according to Jungius’s 1638 *Logica Hamburgensis*, *logica* is divided, first into *logica generalis* and *logica specialis*, with the former in turn dividing into three parts, according to the three traditional ‘operations of the mind’, while *logica specialis* divides into two parts – *apodictica et dialectica*, which deal with necessary and probable truths, respectively (Prol., §§18-22). For a general discussion of ‘dialectics’ as it emerges in the Aristotelian tradition, see Robin Smith, ‘Logic’, *Cambridge Companion to Aristotle*, 57ff.

there are two additional points to note about these *Reflexionen*. First, Kant typically also aligns logic as a ‘canon’ with logic as ‘analytic’. Second, Kant explicates the distinction between a ‘canon’ and an ‘analytic’, on the one hand, and an ‘organon’ and a ‘dialectic’, on the other, by reference to the distinction between a discipline that is concerned with ‘*adjudication* [Beurteilung; diiudicatio]’ and one which is concerned with production, composition, or the *construction* of cognition.

For example, *Reflexion* 1579 (from the 1760’s) contains the following remark: ‘logic as canon (analytic) or organon (dialectic)’ (16:20). It then goes on to explain this distinction as follows:

[E]very logic contains either merely rules for *adjudication* [diiudication], and is theoretical: it indicates the conditions [Bedingungen] under which a cognition is complete [vollkommen]; or [it contains the rules] for *execution*: it teaches how to bring about these conditions [zu stande zu bringen]. [...] [Logic] is either theoretical or practical. The former contains the rules for adjudication and prescribes the conditions for a complete cognition. The latter contains the rules for the execution and prescribes the means [Mittel] to achieve such cognition. (The former is the general part; dialectic, the part which is the organon) [...] 1. analytic: of the elements of reason. 2. dialectic: on the production [Erzeugung] of cognitions according to rules of reason (on the use). [...] (16:20-22)

Here we find the alignment of ‘dialectic’, not only with ‘organon’, and with the part of logic that aims to ‘produce’ cognitions, but also with a *practical* part of

logic.<sup>35</sup> Kant makes this identification more explicit later in this same *Reflexion*: ‘General practical logic is the logic of holding-true [Vorwahrhalten] or of illusion [Schein]: dialectic, because application doesn’t allow for any more rules, thus it permits only critique: it is sophistical and skeptical’ (16:23).<sup>36</sup>

These thoughts are elaborated further in a *Reflexion* from 1773-5 (R1602):

General logic treated as a canon is an analytic (of the common understanding), treated as an organon is a dialectic. The logic, which should be an organon, is not general, but rather follows after the critique of science, not merely after its analysis [Analysis]. For not every analysis [Analysis] gives a canon, rather only the analysis of the essential and elementary actions [wesentliche und elementarhandlungen] of the understanding and of reason. (General pure) logic serves only for a critique of understanding and of rational cognition in general, therefore not for the generation [Hervorbringung], and is no organon (of science, rather of its critique). Yet if it is treated as an organon, then it is the logic of illusion. (16:32)

Kant is therefore quite clear that theoretical (pure general) logic is not to be treated as an organon, as it does not prescribe the means for the production or generation of rational cognition. Rather, logic is concerned *only* to provide an ‘analysis’ of the ‘essential and elementary actions’ of our intellectual capacities, and in this way provide us with a ‘canonical’ determination of its basic operations,

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<sup>35</sup> Cf., R4989 (1778): ‘[Das] Organon ist die praktische Logik’ (18:53).

<sup>36</sup> Cf., R1585 (1769): ‘Logic is therefore a theory [Theorie] and a means [Mittel] of adjudication [diudication]. Critique. Practical logic prescribes the means of execution, is an organon’ (16:26). Note that the implicit suggestion in R1579 is that ‘holding-true’ will *not* be treated in general logic. (See below, §22.)

which will thus guide us in the adjudication of actions as actions of the understanding or reason.<sup>37</sup>

In a later *Reflexion* from the 1780's, we are also given a sense of the reason *why* logic must be construed merely as a 'canon':

[Logic] is only a canon for adjudication [a criterion], not a tool for invention [Werkzeug der Erfindung]. It does not teach cognition how to achieve accord [einstimmig zu machen] with an object, rather with the general laws of thinking in general. Only that the understanding agrees [zusammenstimme] in thinking with itself and with its general rules. (R1628; 16:46)

Logic can only be a 'canon' because it is concerned, not with how our intellectual capacities can be put into agreement with an object, but rather *solely* with what it takes for these capacities to 'agree with' *itself*, with its own general rules and laws. It thus can provide no positive guidance whatever in the production of 'objective' cognition, in the production of thoughts which achieve successful accord with objects beyond themselves.<sup>38</sup> The status of logic as a mere 'canon' is thus a consequence of the *formality* of logic.

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<sup>37</sup> As he puts it in a *Reflexion* from the same period (1773-5), logic 'is a canon, but not an organon, namely [it is] an apriori demonstrable rule for *adjudication* [Beurteilung (diudication)], but not for the *construction* [construction] of our cognition' (R1603; 16:33).

<sup>38</sup> These points are summarized nicely in the *Jäsche Logik*, §II: 'Logic is divided into analytic and dialectic. *Analytic* discovers [entdeckt] through analysis [Zergliederung] all the actions [Handlungen] of reason that we perform in thinking as such. It is thus an analytic of the form of the understanding and of reason and is rightly called the logic of truth, because it contains the necessary rules of all (formal) truth, apart from which our cognition is untrue in itself [in sich selbst unwahr], regardless of its objects [unangesehen der Objecte]. Thus it is also nothing more than a canon for adjudication [Kanon zur diudication] (of the formal correctness of our cognition). If one were to use this merely theoretical and universal doctrine as a practical art

We will turn to a more complete discussion of Kant's conception of the formality of logic in the next chapter (II), and will return to the idea of the 'agreement' of the understanding 'with itself' in Chapter III. To close this section, I want to draw our attention to the significance of the fact that Kant ties together his characterization of logic as a canon for adjudication with the idea that logic is concerned merely with the *analysis* of cognitive capacities, and so not with any 'construction' or 'production' of new cognitions. As he puts it in the first *Kritik*, it is because 'merely formal logic...abstracts from all content of cognition...and concerns itself merely with the form of thinking (of discursive cognition) in general', that logic can 'also include in its analytical part the *canon* for reason, the form of which has its secure precept, into which there can be *apriori* insight through mere *analysis* [Zergliederung] of the actions of reason [Vernunft-handlungen] into their moments' (B170; my ital.).

We can see Kant's appeal to 'analysis', together with the notion of a 'canon', as a natural way to distance himself from an 'organonical' understanding of logic once we recall the traditional distinction, sketched above (§3), between an *ars inveniendi* and an *ars iudicandi*, or between the method of synthesis and that of analysis. As we can see from the preceding *Reflexionen*, Kant is quite explicitly rejecting the possibility that logic could provide an *ars inveniendi* – or, in his terms,

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[Kunst], i.e., as an organon, then it would become *dialecti*? (9:16). Compare as well *Dobna-Wundlacken Logik* (24:695);



a ‘tool for invention [Werkzeug der Erfindung]’ – and so is also rejecting as well the possibility that logic could proceed by the synthetic, constructive method. Rather, logical ‘cognition’ is restricted to what can be achieved by *resolutio*, by the analytical method, insofar as it searches for the ‘essential and elementary actions’ of understanding.<sup>39</sup>

In fact, from early on in his philosophical career, Kant claims that this is the general method of philosophy as such. It is precisely due to its analytical methodology that Kant insists that philosophical cognition must be strictly distinguished from mathematical cognition within their shared genus, ‘rational cognition’. We touched on this division at the beginning of the chapter (cf., §1), and now we can say a bit more about the ground for such a division.

In Kant’s 1764 essay, *Untersuchung über die Deutlichkeit der Grundsätze der natürlichen Theologie und der Moral*, we find a particularly clear statement of the strict distinction between the methodology of philosophy in general and that of mathematics. Here Kant claims that that ‘mathematics arrives at all its definitions *synthetically*, whereas philosophy arrives at its definitions *analytically*’ (2:276; my ital.). In general, Kant claims that

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<sup>39</sup> This is not to deny that, once these basic actions and forms of thought are uncovered through analysis, they cannot be presented according to the synthetic method, in the sense in which the first *Kritik* and the *Prolegomena* (or, as we saw above, Descartes’ *Meditationes* and *Principia*) both present the same ‘content’ according to different methods. It is in this sense that Kant could claim (as the *Dobna-Wundlacken Logik* reports) that ‘in philosophizing one can proceed synthetically or analytically’ (24:779). As we shall see below, logic and philosophy both, however, are restricted from producing *new* cognition according to the synthetic method; mathematics, by contrast, is not.

[i]t is the business of philosophy to *analyze* [zergliedern] concepts which are given in a confused fashion [als verworren gegeben sind], and to render them complete and determinate [ausführlich und bestimmt]. The business of mathematics, however, is that of *combining* [verknüpfen] and comparing given concepts of magnitudes, which are clear and certain, with a view to establishing what can be inferred from them. (2:278; my ital.)

Philosophy in general – and so logic as ‘formal philosophy’ – will proceed according to the method of ‘resolution’, while mathematics must proceed by the method of ‘composition’. As Kant puts it later in the essay, ‘geometers acquire [erwerben] their concepts by means of *synthesis* [Zusammensetzen], whereas philosophers can only acquire their concepts by means of *analysis* [Auflösen] – and that *completely changes the method* [Methode] of thought’ (2:289; my ital.).<sup>40</sup>

The thought that mathematics proceeds according to the ‘synthetical’ method is not new with Kant, and would have been familiar to Kant, not only from Descartes,<sup>41</sup> but also from Wolff and Meier. For example, in the ‘Discursus Praeliminaris’ to his *Logica*, when Wolff defines ‘ars inveniendi’, and distinguishes

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<sup>40</sup> Kant repeats these claims in the 1770’s *Blomberg Logik*: ‘all mathematical concepts are *synthetic* and arise through arbitrary composition [Zusammensetzung]. For one can most easily be conscious of that which one has oneself invented [erfunden]. In philosophy, on the other hand, all concepts are *analytic*, they are not arbitrary, as in mathematics, so that one can accept and establish something according to one’s own liking[;] instead they are already given confusedly [verworren gegeben]’ (§161, 24:153).

<sup>41</sup> See, for example, the Second Replies: ‘It was synthesis alone that the ancient geometers usually employed in their writings’ (AT VII.156). In fact, Descartes too prefers the analytical method in philosophy: ‘[synthesis] is a method which it may be very suitable to deploy in geometry as a follow-up to analysis, but it cannot so conveniently be applied to metaphysical subjects’ (ibid.). His reasons are also interesting from the Kantian point of view: ‘The difference is that the primary notions which are presupposed for the demonstration of geometrical truths are readily accepted by anyone, since they accord with the use of our senses’ (ibid.)

this ‘art’ from logic per se, the examples he gives are precisely ‘algebra and all the analytical arts of mathematics’ (§74). Similarly, in his *Auszug*, at one point Meier simply identifies ‘die synthetische Lehrart’ – ‘which has the strict intention to provide mathematical certainty to cognition’ – with ‘die mathematische Lehrart (*methodus mathematica*)’ (§426; 16:788). Of course, Kant himself develops an entirely novel account of the ground of the ‘syntheticity’ of mathematical cognition, based upon the introduction of the idea of an apriori form of sensibility, which is not to be found in any of his Rationalist predecessors, but we can put the details of this account to one side for the moment.

For an initial take on Kant’s understanding of the contrast between logic and mathematics, consider the following passage from the *Dohna-Wundlacken Logik*:

Is logic as a *canon* also a means for acquiring science [Mittel zur Erwerbung der Wissenschaft]? No. Logic abstracts from all content, hence also from all cognition, [it only makes our thought be correct [richtig]] and it is not an organon. But mathematics is not only a canon but also an excellent *organon*. (24:696; my ital.)

Kant repeats his claim that mathematics is ‘a potent instrument [ein vielvermögendes Instrument] (*organon*)’ in his *Opus Posthumum* (‘Zweites Convolut’), though there he claims that mathematics is ‘not a canon for the

science of nature' (21:209), nor a 'canon for philosophy' (21:194).<sup>42</sup> A similar distinction is marked in a *Reflexion* from the late 1770's, where we find Kant stating that 'mathematics is the highest *art of reason* [Vernunftkunst], philosophy [the highest] *science of reason* [Vernunftwissenschaft]' (R1664; 16:70; my ital.).

§5 To summarize, then: for Kant, philosophy, and so logic as well, must proceed instead from something already 'given', though 'confusedly', which is then analyzed into its basic (primitive) principles. Moreover, such analysis does not secure new substantive cognition, or furnish further 'material' truths, and any attempt to put logic to this sort of use (to treat it as an organon or an *ars inveniendi*) will inevitably result in dialectical 'illusion' (B85-6).<sup>43</sup>

Yet before we tease out more of the philosophical significance of Kant's alternative classification of logic, I want to bring out a bit further the extent to which, logic aside, Kant's taxonomy of what he would call the 'material' disciplines is, on the surface, quite close to Aristotle's own general disciplinary

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<sup>42</sup> Cf., *Jäsche Logik* §I: 'mathematics, for example, as a science that contains the ground for the extension [Erweiterung] of our cognition in regard to a certain use of reason, is an excellent organon' (9:13).

<sup>43</sup> I discuss the distinction between 'formal' and 'material' truth in Chapter III. More work would be required to place Kant's views in fully constructive dialogue with the post-Aristotelian understanding of these key concepts ('analytic', 'organon', etc.), so as to clearly demonstrate the opposition I have suggested in the foregoing. For some of the relevant philological research, see especially Giorgio Tonelli, *Kant's Critique of Pure Reason in the Tradition of Modern Logic*, ed. D. Chandler (Zurich: Olms, 1994), and Michael Wolff, *Die Vollständigkeit der kantischen Urteilstafel* (Frankfurt: Klostermann, 1995), along with (among others) the reference-resources of R. Eisler's *Kant-Lexicon*, H. Caygill's *A Kant Dictionary* (Oxford: Blackwell, 1995), and the *Historisches Wörterbuch der Philosophie*.

classification. This will be worthwhile because establishing the affinity between the two schemata will in fact give us a useful tool to diagnose why many interpreters of Kant have been misled into modeling Kant's conception of logic on one or another material discipline. We would be able to arrive at such a diagnosis because we would be able to carry over into the Kantian context the at least *prima facie* grounds we were given above (in §2) for classifying logic under *each* of the remaining branches of philosophy, which helped to motivate the problem of the disciplinary homelessness of logic in the first place. More importantly, this comparison will help us, in the following section (§6), to better appreciate the grounds for Kant's *expansion* of the traditional scheme to include an entirely separate division for logic – namely, a division of *formal* philosophy – and to appreciate as well why Kant is forced to look for a place for logic somewhere *beyond* the Aristotelian classification-scheme, and so to reach for the Stoic-Epicurean notion of logic as a 'canon'.

But let us first bring Kant's views into as close proximity to Aristotle's as possible. Like Aristotle's 'discipline involving thinking', Kant starts the elaboration of his classification-scheme from the 'highest concept' of a discipline involving 'rational cognition [Vernunftkenntnis]'. Now, unlike Aristotle, Kant immediately distinguishes two forms of rational cognition: cognition which arises from *concepts alone*, and cognition arises through the *construction* of concepts with the aid of something non-conceptual (B865). As we have seen above, Kant takes

mathematics to be the discipline which deals with rational cognition of the latter sort, while the discipline involving the first sort of rational cognition ('through concepts') is nothing other than philosophy itself.<sup>44</sup>

From here on, however, Kant's most well-known sub-division of philosophy is something which clearly proceeds along recognizably Aristotelian lines. Consider once again the (so-called) '1<sup>st</sup> Introduction' to the *Kritik der Urteilkraft*, philosophy as such is divided into 'theoretical philosophy', defined as the philosophy of 'nature', and 'practical philosophy', the philosophy of 'morals' (20:195). As I noted above, Kant had already made such a division in the 'Preface' to the *Grundlegung zur Metaphysik der Sitten*. According to the division presented there, the philosophy of nature ('physics') takes as its 'determinate object' the totality of 'what is [was ist]', and determines the universal and necessary laws of 'all that occurs [geschieht]' (4:387). Practical philosophy ('ethics'), by contrast, has *freedom* as its object, and determines the laws of 'what should be [was soll sein]', or 'all that ought to occur [geschehen soll]' (ibid.).

This way of describing things does indeed make it appear that something close to the Aristotelian principle of division is at work – namely, one which takes

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<sup>44</sup> For instance, in the (so-called) '1<sup>st</sup> Introduction' to the *Kritik der Urteilkraft* (KU), Kant defines philosophy as 'the system of rational cognition through concepts' (20:195). This is of a piece with the definition of 'pure philosophy or metaphysics' given in the 1786 *Metaphysische Anfangsgründe der Naturwissenschaft* (MAN): 'rational cognition from concepts alone' (4:469). As in the 'Methodenlehre' of the KrV, so too in these two passages (as in many others) is philosophy opposed to mathematics, on the identical basis, that rational cognition from concepts is opposed to that from the construction of concepts.

its cue from the differences in the ‘ways of being’ of the subject-matter to be dealt with in each domain: in nature we consider things which are and cannot (actually) ‘be otherwise’, whereas in morals, we take up merely what ‘should be’, but might very well (actually) ‘be otherwise’.<sup>45</sup> And the domains appear to be strictly excluded from one another. That the latter sort of being – i.e., the way of being of ‘freedom’, or the mode of being which is possible through the determination of the capacity for choice [Willkür] by pure practical reason [Wille] – is not in view in ‘nature’ is something the Antinomy of the first *Kritik* makes quite evident:

The *ought* [Sollen] expresses a species of necessity and a connection with grounds which does not occur anywhere else in the whole of nature. In nature the understanding can cognize only *what exists* [was da ist], or has been, or will be. It is impossible that something in it *ought to be* [sein soll] other than what, in all these time-relations, it in fact is; indeed, the *ought*, if one has merely the course of nature before one’s eyes, has no significance [Bedeutung] whatever. (B575)

Now, to be sure, even though it might make no sense to say that ‘what is’ *should* be otherwise, perhaps not enough has been said at this point to ascribe to Kant the claim that ‘nature’ *cannot* possibly be otherwise. There might then remain some questions as to the appropriateness of the identification of the Kantian discipline that deals with ‘nature’ with the Aristotelian region of being which exists ‘kata phusin’, or that which exists ‘ex anankes’. What *is* clear,

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<sup>45</sup> Recall for Kant that the ‘actuality’ (or ‘existence’) of the good in the world is in no way guaranteed – indeed, is entirely *contingent*: ‘the action which is morally absolutely necessary can be regarded physically as entirely contingent (i.e., what necessarily *should* happen often does not’ (KU, §76; 5:403.

however, is the fact that it is *freedom* which is responsible for the realization of what 'should be'. This is significant, since dependence upon freedom' is precisely the criterion which Kant uses to differentiate nature from *art*.

If we return to a passage from the 3<sup>rd</sup> *Kritik* already cited above (KU, §43), we find Kant explaining the difference between 'art' and 'nature' by analogy with the distinction between 'doing [Tun] (facere)' and 'acting [Handeln] or producing [Wirken] in general (agere)'; the 'product or consequence [Folge]' of the former is then aligned with 'work [Werk] (opus)', while the latter produces an 'effect [Wirkung] (effectus)' (5:303). That 'art' stands in opposition to nature is indicated by Kant's thesis that the 'product' of art ('work') is the result of 'production [Hervorbringung] through freedom [Freiheit], i.e., through a capacity for choice [Willkür] that grounds its actions [Handlungen] in reason [Vernunft]', whereas an 'effect' of something is not grounded on 'any rational consideration [Vernunftüberlegung]', but is merely a product of (its) 'nature' or 'instinct' (*ibid.*). Art too, then, is a 'product' of freedom, and so art too, like 'what should be', is a mode of being whose realization depends on a principle outside of itself.<sup>46</sup>

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<sup>46</sup> In fact, to complicate matters a bit, in one passage (KU, §65) Kant explicitly places art 'in the practical sphere' – 'Im Praktischen (nämlich der Kunst)' – on the basis that the production of art is grounded upon the sort of causal connection [Verknüpfung] that involves 'final causes [Endursachen]' (a 'nexus finalis') (5:372). But as I go on to note, the pure practical demands of the moral law govern every human volition *regardless* of its ends; hence the ground of morality makes no *essential* reference to 'final causation'.

This can be so, even if (i) 'the aim of promoting the final end of all rational beings (happiness, insofar as it is consistent with duty) is still imposed precisely by the law of duty' (KU, §91; 5:471n); and (ii) human beings, and in general every rational being has 'an *existence of which in itself* has an absolute worth, something which as *an end in itself* [Zweck an sich selbst] could be a



But despite its similarities, the production of art is distinguished from the ‘production’ of maxims in the moral-practical sphere, insofar as the former production is (or should be) guided solely by the possibility of sensing, during reflection upon the process of apprehending the putative product as object, an agreement or harmony of the imagination with the understanding achieved in such a process, and hence makes essential reference to a standard of subjective purposiveness [Zweckmäßigkeit] – that is, to an end [Zwecke]. The latter practical ‘products’ – maxims – instead are (or should be) guided by the unconditional obligation of willing in accordance with the moral law, something which binds maxims and determines their moral worth, regardless of any possible ‘end’ involved. As Kant writes in the *GMS*, ‘the purposes [Absichten] we may have for our actions, and their effects as ends [Wirkungen, als Zwecke] and incentives of the will, can give actions no unconditional and moral worth’ (4:400).<sup>47</sup>

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ground [Grund] of determinate laws; then in it, and in it alone, would lie the ground [Grund] of a possible categorical imperative, that is, of a practical law’ (*GMS*, 4:428).

<sup>47</sup> A sentence before reads: ‘an action from duty has its moral worth *not in the purpose* [Absicht] to be attained by it but in the maxim in accordance with which it is decided upon, and therefore does not depend upon the realization of the object of the action but merely upon the principle of volition in accordance with which the action is done *without regard* [unangesehen] [my ital.] for any object of the faculty of desire’ (4:399-400).

Cf., *KU*, §91: ‘The final end, the promotion of which is imposed on us by the moral law, is not the ground of duty; for this lies in the *moral law*, which, as a formal practical principle, *guides* [leitet] us categorically, regardless of the object of the faculty of desire (the matter of the will), hence *regardless of any end* [irgend eines Zwecks]’ (5:471n; my ital.). Cf., also *GMS* 4:415.

§6 Now, things will get even more complex if we bring into view one of the main theses of the third *Kritik*, namely that there is a discipline which considers 'nature' itself 'as *art* [Kunst]' (KU 1<sup>st</sup> Intro., 20:204), rather than 'mechanically, as mere [bloße] nature' (20:218).<sup>48</sup> Fortunately, we need not arrive here at a complete understanding of this discipline; rather, it will be enough if we have demonstrated that, in general, Kant's threefold division (physics, ethics, art) bears more than a superficial similarity to Aristotle's own – in number, content, and, at least apparently, in the principles of its division.

But similarity, of course, is not identity, and I want to return our focus in this section to a decisive *difference* between Kant and Aristotle, a difference that concerns the fundamental nature of the principle of the disciplinary division. For, as I noted above, Aristotle seems to derive the differences between natural, practical, and productive philosophy from the different possible manners or *ways of being*. By contrast, however, and strictly in line with his 'Copernican turn' and with the fundamental theses of *transcendental idealism*, Kant derives and organizes the different disciplines on the basis of the different *mental capacities* that humans possess. As is evident from the exposition in the KU's 1<sup>st</sup> Introduction, the

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<sup>48</sup> However, for Kant, this 'reflective' discipline cannot belong to the theoretical philosophy of nature, since the latter provides a 'nomothetic' of nature, while the former provides a 'technique' of nature (20:215); a nomothetic provides 'knowledge of nature by an objective law', whereas a 'technique' is a 'heuristic principle' (20:205). Nor could such a reflective discipline be considered as a component of practical philosophy, since it can arrive at only 'heautonomous' laws which are in some sense 'merely subjectively valid', whereas the practical-moral laws of freedom are expressions of 'autonomous' legislation which are valid 'objectively' (20:225).

character of each of the three domains is essentially determined by a ‘faculty of the mind [Vermögen des Gemüts]’, whose ‘activity’ is governed by principles, which in turn, necessarily and universally circumscribe and structure the *products* of this activity. Rather than being independently self-sufficient ways of being, the ‘natural’, the ‘ethical’, and the ‘artistic’ are, for Kant, labels that refer to the three sorts of results of the rule-governed processes that collectively constitute the human mind – respectively, the faculty of *cognition* [Erkenntnis], the faculty of *desire* [Begehrung], the faculty of the *feeling* [Gefühl] of pleasure and displeasure.

Kant also contends that, in turn, ‘[t]he faculty of *cognition* always lies at the ground [liegt zum Grunde] of the exercise [Ausübung] of any of the [mental capacities]’ (KU, 1<sup>st</sup> Intro; 20:245). This is, in effect, the truth that Kant sees in Rationalism in general, and is of a piece with the foundational claim in his moral philosophy that it is our ‘higher’ capacity for reasoning which confers on us our fundamental dignity and worth. As we shall see below, it is also this thesis which underwrites Kant’s claim that *logic*, as the science which analyzes the ‘higher’ cognitive faculty, can provide the ‘guiding thread’ in philosophical inquiry in general.

Kant holds that the exercises of the cognitive faculty itself can be divided into three sorts: the capacity for *understanding*, the *power of judging*, and the capacity for *reasoning* – each of which Kant frequently nominalizes (i.e., ‘*der Verstand*’, ‘*die Urteilskraft*’, ‘*die Vernunft*’). In addition, each of these sorts of cognitional activity

is correlated with one of the generic mental capacities, as that specific element of the faculty of cognition which 'lies at the ground of its exercise'. Collectively, this understanding of the disciplinary division is summarized in the table which Kant provides in the course of an 'encyclopaedic introduction' of the 'Critical' system (1<sup>st</sup> Intro, KU; 20:246):

Table 1.1: Encyclopaedic Introduction to Philosophy

Faculties of the mind	Higher cognitive faculties	Apriori principles	Products
Cognition	Understanding [Verstand]	Lawfulness [Gesetzmäßigkeit]	Nature
Feeling of pleasure and displeasure	Power of Judgment [Urteilkraft]	Purposiveness [Zweckmäßigkeit]	Art [Kunst]
Desire	Reason [Vernunft]	Obligation [Verbindlichkeit], or Purposiveness that is at the same time Law	Morals [Sitten]

Kant's comment on this table are instructive:

Thus *nature* grounds [gründet] its lawfulness on apriori principles of the understanding as a faculty of cognition; *art* is guided [richtet sich] apriori in its purposiveness in accordance with the power of judgment in relation to the feeling of pleasure and displeasure; finally *morals* (as product of freedom) stand under [stehen unter] the idea of a form of purposiveness that is qualified for universal law, as a determining ground [Bestimmungsgrund] of reason with regard to the faculty of desire. (ibid.)

As we see, in each case, the principles which govern the exercises of the mental capacities are, on the one hand, *grounded in* the nature of the correlated 'higher

cognitive capacities', and on the other, *that which grounds* the difference between nature, art, and morals, since they are 'products' of these capacities in the first place.

Yet it is worth noting that the table has no entry for a 'product' of *formal philosophy*, or logic. With this, let us return once again to the main line of the present chapter, to the question of the classification of logic within Kant's architectonic. We began this digression into an investigation of the Aristotelian classificatory scheme with the intention of using it as a guide in the explication of a possible location for logic within a system of disciplines. I suggested that we turn to the Aristotelian tradition, in particular, not only because it is one of the prevailing traditions in history of philosophy of logic, but also because I suggested that Kant's own classificatory scheme shares more than a passing resemblance with Aristotle's own. And at this point, hopefully enough has been said, both to confer some legitimacy upon, and provide this motivation for, the process.<sup>49</sup>

In the previous sections, however, we have begun (in a preliminary fashion) to identify the points at which Kant's engagement with this traditional classification-scheme is at the same time a *transformation* of its organizing principles – unsurprisingly, a transformation in part effected in accordance with the general

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<sup>49</sup> If we were to accept the suggestion made by Adamson (*A Short History of Logic*, noted above) that Aristotelian logic is the science of thinking [*noesis*], then the two will, of course, be even closer. Incidentally, Kant himself makes use of the Greek term in his introduction of the division of Aesthetic from Logic in the first *Kritik*; this division follows 'die Eintheilung der Erkenntniß in *aistheta kai noeta*' (A21n).

tenor of transcendental idealism. But, given what has been said thus far, we might infer that – despite whatever modifications may be introduced by transcendental idealism, and despite our awareness of his distancing of logic from art in particular – Kant could still uphold the general structural constraints of the tradition, and choose to locate logic either among those theoretical disciplines which deal nature, or those practical disciplines which deal with ethics, or perhaps identify logic with metaphysics.

Yet this would be to underestimate just how radical a transformation is instituted by Kant's relocation of the foundational principle for the division of disciplines out from anything in possible ways of *being*, placing them now into the capacities of the *mind* itself. The full effect of the thesis of transcendental idealism can be felt once we recognize that it is precisely the identification of the mind as the ground of disciplinary divisions which allows Kant to *deny* that the traditional threefold division is sufficient to capture 'disciplines involving thinking'. In fact, this thesis allows Kant to introduce *an entirely different kind of division* into the mix – namely, the division between *formal and material* disciplines.

The result of this division – something which appears, for instance, in precisely those passages from the GMS and the 1<sup>st</sup> Introduction to the KU under discussion above<sup>50</sup> – is to place *all of the Aristotelian disciplines* under the heading of

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<sup>50</sup> I.e., GMS 4:387, and KU 1<sup>st</sup> intro, 20:195. Cf., also, Dohna-Wundlacken Logik, 24:699; among other places.

‘material’ disciplines (‘material philosophy’), leaving *logic* as the sole discipline under the heading of ‘formal philosophy’. Hence, not only (as we have seen) does Kant distinguish logic from art, *Kant consistently distinguishes logic from both (material) theoretical and practical philosophy.*

§7 Now, a more thorough discussion of the nature of this difference, an analysis of Kant’s principled argument for the possibility of such a division between ‘material’ and ‘formal’ philosophy – in short, a full explication of what Kant intends to assert by claiming that logic alone is *formal* – is something which will have to wait till the next chapter (II). Nevertheless, at this point we have already gotten some sense as to what this distinction will involve, and are in a position to appreciate the following gloss Kant gives on the distinction in the *Grundlegung*: while ‘material’ philosophy ‘has to do with determinate objects [mit bestimmten Gegenstände] and the laws to which they are subject’, ‘formal’ philosophy is ‘occupied only with the form of the understanding and of reason itself and with the universal rules for thinking in general, without distinction of objects’ (GMS 4:387).<sup>51</sup> To put this point another way, whereas ‘material’

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<sup>51</sup> Cf., KU 1<sup>st</sup> intro: the ‘formal’ part of philosophy as a system ‘concerns merely the form of thinking in a system of rules’, while the ‘material’ or ‘real’ part ‘takes under consideration the objects [Gegenstände] which are thought about’ (20:195). Without being able to go into its significance, let me simply register the similarity between ‘logic’ and the ‘technique of nature’, which, we are told, ‘does not, *any more than logic*, contain cognition of objects [Objecte] and their constitution’ (KU 1<sup>st</sup> intro 20:204; my ital.). Furthermore, and again, arguably like logic, such a technique does not ‘provide concepts...nor ideas...of any object [Gegenstand] at all’, since it considers merely the activity of ‘subsuming under concepts given [gegeben] from elsewhere’



philosophy consists of disciplines which deal with the rational cognition of nature and morals (respectively) ‘through concepts alone’,<sup>52</sup> logic (as philosophy) is a discipline which deals in rational cognition through concepts of *the form of the higher faculty of cognition itself*.

With this in mind, let’s return to the principles behind the table from the KU presented above, and draw from it two important inferences. First, we have already cited Kant’s claim that ‘[t]he faculty of cognition always lies at the ground [liegt zum Grunde] of the exercise [Ausübung] of any of the [mental capacities]’ (KU, 1<sup>st</sup> Intro; 20:245). We also argued that it is precisely the principles of the faculty of cognition which guide the exercises of the mental capacities. As a consequence, a discipline whose subject-matter is precisely the faculty of cognition *itself* – the forms in which it can be exercised, and the principles which govern its execution – would be a discipline whose results provide the architectural blueprint, for the entirety of the Critical system as it is represented on this table. Once we recognize that this discipline is nothing other than *logic*

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(20:202). These facts make it tempting to bring logic and the ‘technique of nature’ into closer parallel than one might have originally suspected. I will touch upon this similarity in Chapter II, when we consider more carefully what is involved in the detachment of logic from objects.

<sup>52</sup> It is admittedly difficult to see how this can be true, if at the same time ‘material philosophy’ is to yield *synthetic* a priori principles (about nature and morals). See below, Chapter V, §38, for a discussion of the manner in which ‘analysis’ and ‘synthesis’ is expressed in judgments.

*itself*, then we can see why it becomes hard to overstate the significance of the role that Kant ascribes to logic for the organization of his entire Critical programme.<sup>53</sup>

We are now prepared for a second inference: if logic, insofar as it deals with the form of cognition as such, contains the grounding principles for disciplinary classification, and if, in turn, these principles have been relocated ‘into the mind’, then the subject-matter of logic too must be essentially located ‘in the mind’. But then, insofar as logic itself is the rational cognition of this subject-matter – that is, the cognition of the very faculty of cognition itself – then such logical ‘cognition’ represents a form of mental *self-cognition*, a discipline in which the mind deals with nothing other than *itself*. And if we now introduce the fact that Kant takes the three ‘higher faculties of cognition’ (understanding, power of judgment, and reason, as ‘powers of the mind’) to be ‘comprehended under the broad designation of *understanding in general*’ (B169), we can now see that there is some justice to Jäsche’s characterization of logic as ‘the *self-cognition* [Selbsterkenntniß] of the understanding and reason’ (9:14; my ital.).

Both this last conclusion (the reflexive nature of logic’s findings) and the previous one (the function of logic as Critical blueprint) makes explicit theses contained implicitly in the definition of logic with which we began this chapter, insofar as it declares logic to be the science of rules of *understanding in general* (B76).

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<sup>53</sup> For now we might just mention the decisive imprint of the categories as logical forms of thinking upon the structure of the doctrines (not to mention upon the sequence of their exposition) contained in each of Kant’s major works (especially the three *Kritiken*, but also the two works in ‘metaphysics’ (of nature, of morals)).

Moreover, the claim that logic is reflexive provides a bit more substance to the precise sense in which logic is a *formal* discipline, by giving us a fairly straightforward way to draw a sharper contrast between logic and other ‘material’ disciplines: in logic the capacity for rational cognition does not deal with determinate *objects*, nor with the interaction between the ‘higher’ capacities and whatever other capacities our mind contains, but rather solely with *itself* – that is, with the purely ‘rational’ capacities of the mind involved in cognition.

In Chapter **VI** we will return to the question of the problematic nature of the ‘self’ that is involved in logical ‘self-cognition. Yet rather than pursue these conclusions here, for now it is enough to focus upon the more general and relatively simple point, that Kant clearly differentiates logic, not just from art, but also from both physics and ethics. It is important that we keep in mind this simple thesis, since, in addition to the (already noted) tendency to ascribe to Kant an understanding of logic as an ‘art’, there has also been a general temptation – despite Kant’s fairly explicit statement to the contrary – to construe logic as either a branch of theoretical or practical philosophy.<sup>54</sup> What could motivate such a classification? Some possible reasons for either classification have already

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<sup>54</sup> The temptation towards the practical is fostered by several passages from the transcripts of Kant’s logic lectures (including Jäsche’s text), where logic is said to be concerned with how the understanding ‘*ought to* [sollen]’ proceed in thinking. Many interpreters have succumbed – unfortunately, in my view – to such a temptation. I argue against such a reading, and try to discharge the task of providing an alternate interpretation of these difficult passages in Chapter **VI**. The temptation toward the theoretical (especially, metaphysical) is fostered by the tendency to read back into Kant various post-Fregean commitments concerning the ontological significance of logical categories; I argue against such tendency in Chapter **II**.

emerged in the above discussion of Aristotle (§2); let us see how this temptation might be developed from within Kant's own scheme.

As we have seen, theoretical philosophy is occupied with the rational cognition of the world of *nature*, which refers to the totality of 'what is [was ist]', of 'all that occurs [geschieht]', while practical philosophy is occupied with the world of *freedom*, which refers to the totality of 'what should be [was soll sein]', to 'all that ought to occur [geschehen soll]' (cf., GMS, Preface). Of course, there is a sense in which the 'being' of these objects, their structure, and the very essence of these 'worlds' are all constituted by the cognitive capacities. But it will be useful to bracket this for the moment, and to add that, at various places, Kant identifies the 'highest concept' of each of these scientific domains as: 'object in general' and 'free act in general', respectively.<sup>55</sup>

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<sup>55</sup> In a footnote to his Introduction to the *Metaphysik der Sitten* (MS), Kant criticizes 'teachers of ontology' who 'begin with the concepts of something [Etwas] and nothing [Nichts], without being aware that these are already members of a division for which the concept divided is missing' – namely, the concept of 'an object in general [Gegenstand überhaupt]' (6:218n). This reiterates what is found at the end of the *Transcendental Analytic* (Amphiboly), where Kant had already picked out the highest concept of 'transcendental philosophy' as 'the concept of an object in general [Gegenstand überhaupt] (taken problematically, leaving undecided whether it is something [Etwas] or nothing [Nichts])' (B346).

In MS, though, given the topic at hand, Kant also turns to the question of the 'highest concept' of the system of practical metaphysics. As we would suspect, Kant is similarly dissatisfied with any attempt to take any division – including that into 'right [Recht] and wrong [Unrecht] (aut fas aut nefas)' – as the highest practical concept, for Kant holds that all divisions are grounded upon a still 'higher' concept (i.e., that which is so divided). Here, 'right' and 'wrong' divide the truly highest concept of 'the act of free choice in general [Act der freien Willkür überhaupt]' (6:218n). I take up the hierarchical picture of conceptuality that this suggests in Chapter IV, and focus specifically upon the idea of a 'division' of a concept in Chapter V.

Now, if we were to be justified in classifying logic under either branch of material philosophy, we should be able to characterize its subject-matter – ‘understanding überhaupt’ – by one or the other ‘highest concept’. Is such characterization possible? Can we construe the ‘understanding in general’ as either an ‘object’ or an ‘act of free choice’? To be sure, it is hard to conceive of *anything* which is in *no* sense an ‘object’ (i.e., less than ‘nihil negativum’, to take a phrase from the Amphiboly (cf., B348)); Kant himself admits in the Second Analogy that ‘one can, to be sure, call *everything*...an object [Object]’ (B234; my ital.). Moreover, in his lectures, Kant himself seems happy to call the understanding (or reason) the ‘object’ of logical inquiry.<sup>56</sup> Furthermore, considering the understanding as the ‘faculty for thinking’ (B75), it would seem that there is no obvious barrier to viewing ‘thoughts’ (either as thinkable ‘contents’ or as ‘acts’ of thinking) as ‘objects’ for further (reflective) thoughts.<sup>57</sup>

On the other hand, perhaps ‘acts’ are not appropriately thought of as a kind of ‘object’ after all. That is, it seems just as straightforward that thinking is something that we *do*. Indeed, as was apparent from several of the passages we

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<sup>56</sup> Cf., JL, Intro, §I: logic ‘has reason as its object [Object]’, and ‘is thus a self-cognition of the understanding and of reason’ (9:14); cf., *Dohna-Wundlacken Logik* (24:792).

<sup>57</sup> David Bell has argued (‘Thoughts’, *Notre Dame Journal of Formal Logic*, 28.1 (1987), 38) that accounting for the possibility of such ‘reflexivity’ is indeed a *necessary* constraint on any acceptable theory of ‘thoughts’ (or ‘judgments’; see also his ‘The Art of Judgement’, *Mind* 96.382 (1987), 222-5). Though, as Bell also notes, the possibility of reflexivity raises a (now-traditional) set of problems concerning intentional objects, referential opacity, semantics for oratio obliqua. I will attempt to reconstruct Kant’s response to the first problem in the next two chapters (**II-III**), which he discusses under the rubric of the ‘objective Realität’ of representations.

have already discussed, Kant is fully willing to use the language of 'act' and 'activity' to characterize understanding and thinking. But it is important to recall that the 'highest concept' of moral philosophy is not 'act' *per se*, but more specifically 'act of *free choice*'. Does Kant, or can we, on Kant's behalf, construe thinking as this sort of act, one of free choice?

To recall the simple general point with which we began, insofar as Kant officially assigns logic a place *distinct from* both 'physics' and 'ethics', it would seem that he would have to deny the validity of both of these suggested assimilations. But does Kant in fact do so? And if so, does he do so for more than 'merely' architectonic reasons? That is, does he hold any *substantive* doctrines about the nature of logic that would prohibit an attempt at reduction in either direction?

To begin to substantiate the reasons behind Kant's alternate classification, we should, first, consider the sense of 'object' which is at issue in theoretical philosophy – i.e., a *physical* object of *nature*. In this sense, the mind itself, and with it, its capacities (understanding, reason), becomes a highly 'problematic' object, as both the Paralogism and the 'paradox' of inner sense in the first *Kritik* are meant to show.<sup>58</sup> This is due to the fact that both the understanding and thinking itself, as we are told repeatedly, are characterized by 'spontaneity' (B74-5; B93; A128;

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<sup>58</sup> The Paralogism is contained in the Dialectic, while the 'paradox' is discussed in §6 of the Aesthetic and §§24-25 of the Analytic.

B130; B150; etc.). Yet it is the moral of the Antinomy (B570f) that no object ‘in’ nature falls under that description.

Secondly, I think it can be demonstrated that the relevant sense of ‘activity’ at issue in the science of logic should not be assimilated to ‘acts of free choice’, this despite the fact that such activity is, as we have just noted, ‘spontaneous’.<sup>59</sup> As I will argue in more detail in Chapter VI, Kant intends the term ‘spontaneity’ to pick out solely the fact that the understanding in general operates in the absence of external determination, and so is meant contrast this property of the understanding with a passive capacity which could only be determined through external means. It does not, however, refer to some ‘positive’ or ‘free’ determination of the understanding through *volition*. In a way, this should be unsurprising, because ‘Verstand’ and ‘Willkür’ (or, according to some early uses, ‘Wille’) are *separate* faculties. Moreover, though, like sensibility, the capacity for choice can work in tandem with the understanding, logic simply does not take this possible relationship, or any of its conditions, into account.<sup>60</sup> The *Wiener Logik*

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<sup>59</sup> And: despite the fact that its ‘object’ of inquiry is the ‘faculty’ or ‘capacity’ of understanding; the appropriate interpretation of Kant’s use of ‘act’- and ‘activity’-language in relation to cognitive ‘powers’ and ‘capacities’ is taken up below.

<sup>60</sup> Things are more complex when we consider ‘reason’ in its *practical* guise, which *is* identified as ‘Wille’. Still, I think there is a manner of approaching reason too, which apprehends its merely logical structure, or what the second *Kritik* calls ‘the condition [Bedingung] on having reason at all’, ‘that which is required for the possibility of any use of reason as such [überhaupt]’, which is contrasted with the conditions of reason’s ‘extension’ (KpV 5:120). In other words, and to allude to the distinctions presented on the Table above, reason can be considered in abstraction from its role as the ground for the direction of the capacity of desire [Begehrungsvermögen], indeed in abstraction from its directedness toward any object outside of (or other than) itself.

transcript makes this point nicely: 'in logic one must think as if one had no will [Wille], otherwise it would become a practical science; thus we have the science of thinking [Denken], and not of willing [Wollen]' (24:903).<sup>61</sup>

I will not pretend that these few comments are completely decisive, and, what is more, I am aware of a particularly strong tendency (and possibly growing stronger) among recent interpreters of Kant to fall prey especially to the second temptation.<sup>62</sup> As I see it, much of this approach takes its cue from Kant's doctrine of the 'primacy of the practical'. Now, by denying that logic is a practical science, or that thinking is essentially an exercise of a practical capacity, I do not mean to be denying that, in some sense, Kant does think there is something 'primary' about the practical dimension of our 'higher' capacities. Yet as I will argue in more detail in Chapter VI, this 'primacy' does not *reduce* logic to a practical science, nor does it render impossible a separate analysis of 'Verstand überhaupt', one which considers our higher cognitive capacities in *isolation* from any concern for its involvement in practical science.

I have said little so far about the possibility that Kant might identify logic with the third branch of Aristotelian science – namely, *metaphysics*. I will show in the following Chapter (II) that it is essential to Kant's critique of traditional

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<sup>61</sup> This will become an important point, when we try to settle Kant's views on the possibility of viewing logic as 'normative'; again, see Chapter VI.

<sup>62</sup> Again, I have in mind interpreters like Korsgaard; see her *Sources of Normativity* (Cambridge: Cambridge, 1996).



metaphysics that logic and metaphysics be kept strictly apart. In this Kant departs from Wolff, who, as we saw above (§3), thinks that logic draws its very principles from ontology.<sup>63</sup> Kant departs from Wolff as well by rejecting Wolff's claim that logic must draw any of its principles from *psychology*, yet another 'discipline' with problematic standing in previous architectonics. Kant's 'anti-psychologism', like all of the issues broached in this section will be treated more fully in later chapters.

For now, I will simply reassert the simple thesis, that, because Kant claims explicitly that (a) logic does not deal with 'objects' at all, and because Kant (b) takes logic to have no positive, 'practical' part (or at least, not one which would be other than 'dialectical'), and because Kant claims (c) logic is not an instrument or an art, then we must conclude that, for Kant, it is not possible to classify logic as either (a-1\*) metaphysics (either as a science of objects 'in general', or of that special 'metaphysical' entity, the 'soul') or (a-2\*) as a science of the 'objects of nature', or (b\*) a science which guides our volitional activity, or (c\*) a science which tells us how to 'make' things. Logic is a branch of neither theoretical (nor psychological), nor metaphysical, nor practical, nor aesthetic (productive)

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<sup>63</sup> This is emphasized by Trendelenburg (*Logische Untersuchungen* I.II.1) by way of pointing out how Kant is the first to separate logic from ontology: 'Christian Wolff (*Disc. Prael.* §88) holds the view that the grounds of logic stem from ontology and psychology. It is first in Kant's critical philosophy, in which the distinction between matter and form is held to throughout, that *formal* logic is sharply delineated' (15).

philosophy, but is instead a science of an altogether different sort; logic is a *formal* science.

#### D. Logic as a Systematic Science

§8 Logic belongs to the formal ‘part’ of philosophy, insofar as it presents the rational cognition of the understanding in general, and brackets all questions concerning the relation between this capacity and cognition of any (other) determinate ‘object’. To put this thought another way, logic is the science which treats of the understanding in general, considered ‘in isolation’ from the mental capacity by which we can be ‘given’ objects (i.e., ‘sensibility’), but also that by which we can try to ‘bring about’ the existence of objects (i.e., the ‘will’). As Jäsche’s text has it, in logic ‘we segregate [absondern] the understanding from the other powers of the mind and contemplate [betrachten] what it does by itself [was er für sich allein tut]’ (JL §II, 9:18). Because of this segregation and abstraction, the subject-matter of logic becomes available for investigation independently of any particular experience – that is, *apriori* – and, in this way, logic, like philosophy in general, has its ‘subject-matter’ given to it, at first ‘confusedly’, and proceeds to identify its basic elements and principles by way of analysis.<sup>64</sup>

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<sup>64</sup> Hence Kant satisfies Heidegger’s threefold delimitation of the ‘principle’ of any research program (Sach-feld, Sach-hinsicht, Sach-behandlung), which, in turn, is grounded more generally in the threefold hermeneutical structure of understanding anything at all (Vorhabe, Vorsicht, Vorgriff). See his *Geschichte des Zeitsbegriff*, §8, §31d. (In the case of Kantian logic, the ‘Feld’ is thought itself, the ‘Hinsicht’ is *apriori*, and the ‘Behandlung’ is analytical.)

To be more precise, Kant recognizes at least two different ‘regards’ in which the understanding can be treated by logic: we can either consider the understanding ‘*in concreto*, namely under the contingent conditions of the subject, which can hinder or promote its use, and which can all be given only empirically’ (B78-9), or we can ‘abstract [abstrahiren] from all empirical conditions under which our understanding is exercised [ausgeübt]’ (B77). A science which treats of the understanding in the former regard is called *applied* [angewandte] logic, which contrasts with *pure* [reine] logic, the science which takes up the understanding considered in the latter regard. Because of the nature of its abstraction, pure logic is also said to treat of its subject-matter entirely *apriori*: pure logic ‘is a proven doctrine, and everything in it must be completely apriori’ (B78). In effect, then, insofar as we have hitherto been concerned with logic as a purely formal discipline, and so with thinking and understanding considered completely non-‘materially’, we have been using ‘logic’ as shorthand for *pure logic*. I will continue this shorthand in what follows.<sup>65</sup>

Now, given the widespread currency that the terms ‘analytic’ and ‘apriori’ have enjoyed since Kant’s day, we again are faced with the potential for misunderstanding, especially concerning the former. It should at least be evident from the foregoing discussion (§4) that ‘analytic’ here is meant to characterize a

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<sup>65</sup> A further division of logic – that between ‘general [allgemeine]’ and ‘special [besondere]’ logic – will be discussed at length in the next chapter (II).

method of science, and not, say, a type of judgment (or 'truth'). And it is worth emphasizing that this characterization in no way implies that Kant's logic deals *only* with 'analytic' judgments or truths, though many of his readers have mistakenly drawn this conclusion.<sup>66</sup>

A similar potential for misunderstanding accrues to the terms Kant uses to describe the particular regard in which pure logic views its subject-matter. To consider the understanding 'apriori' has not been explicated as: to consider the understanding in *absolute independence* from experience, but rather: 'in abstraction from' experience. Though this point cannot be developed at the moment, I think it would have to be here (if anywhere) that we would have the beginnings of Kant's response to well-known problems raised about the possibility of 'access' to apriori subject-matter. Perhaps it is by 'seeing' something concrete 'abstractly' –

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<sup>66</sup> Klaus Reich and H.J. Paton have done perhaps the most to help eliminate this misunderstanding from the popular consciousness. In his *The Completeness of Kant's Table of Judgments* ((Berlin, 1932/48); English translation (Stanford: Stanford, 1992)), Reich argues at length against Hermann Cohen, Alois Riehl, Adolf Trendelenburg, Emil Lask, and Friedrich Ueberweg; see 10-19. In his *Kant's Metaphysic of Experience* (New York: Macmillan, 1936), Paton's targets are Edward Caird, H.A. Pritchard, and Norman Kemp Smith (see 213n5). I agree entirely with Paton's summary of the main point (ch.X, §6): 'Kant never varies in his assertion that Formal Logic is concerned with the form of thought in general (B79), and gives us the universal and necessary rules of the understanding (B83-4). The form of thought is for Kant primarily the form of judgment, and the list of forms of judgment gives us the logical forms *in all possible judgments* (B105). As we have seen, he regards the list as necessarily complete. In spite of this, it is repeated from commentator to commentator, especially in this country, that Formal Logic gives us the forms of analytic judgments only, and not the forms of synthetic judgment. I can find no evidence that Kant ever held such a belief' (213).

that is, seeing it in a new ‘way’ – that we come to apprehend its logical content. (I will return to this question in the final Chapter.)<sup>67</sup>

Putting these issues to one side for now, though, we must instead raise a pair of different, more pressing, considerations, considerations which Kant himself is directly concerned about, if logic is truly to be counted as a *science* at all. For logic to attain the status of ‘science’, two further conditions must be met. First, it is not sufficient that logic identify (through analysis) the ‘elements’ of the understanding, since this alone would be to arrive at merely an ‘aggregate’ of those elements. To be a science, according to Kant, it is necessary that logic unite these elements under one *idea*, one which provides a ‘principle’ through which we can recognize these elements as belonging to the same subject-matter, and which allows for the organization of the doctrines into a *system* (B89; B860). This brings us to the second necessary condition: one must be able to demonstrate, on the basis of the ‘idea’ of this system, that a *complete* and exhaustive determination of the subject-matter of logic has been achieved, that ‘a place for each [element] and the completeness of all of them together’ has been determined (B92).

Now, it is often thought that Kant takes logic to have already achieved the status of a science since (roughly) the time of Aristotle. And, to be sure (as we

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<sup>67</sup> I will also take up Kant’s persistent cautions against building too much into the ‘power’ of abstraction in Chapter IV. In Chapter VI, I class the problem of ‘access’ under a problematic entitled ‘Benacerraf’s dilemma’ (following, among others, Hale and Wright, ‘Benacerraf’s Dilemma Revisited’, *European Journal of Philosophy*, 10.1 (2002), 101-29), a generalized form of which is also known as the ‘Integration Challenge’ (due to Peacocke, *Being Known* (Oxford: Oxford, 1999), ch.1).

have already seen in our 'Introduction'), Kant does suggest that logic is 'to all appearances' a 'finished and complete' discipline (Bviii), in that it 'exhaustively presents and strictly proves' its subject-matter as a 'science' (Bix). This suggestion must be interpreted with care, however, especially in light of the novelty of Kant's answer to the question of the 'idea' or 'principle' around which Kant organizes the science of logic – namely, Kant's claim that the capacity under investigation in logic (*Verstand*) can be defined as a capacity for *judging*. But if this estimation is correct – if Kant's identification of *the* 'idea' for this science is innovative – then it becomes hard to see how logic could have fully 'achieved' scientific status, in the strict *systematic* sense, prior to this essential contribution by Kant himself. For without the particular 'idea' of judging, logical doctrine would either merely subsist as a collection of cognitions assembled 'rhapsodically' in 'aggregate' – the result of 'a haphazard search', 'rounded up' as they were 'stumbled upon' (B106) – or would be wrongly organized around a false principle.<sup>68</sup>

Yet on top of this requirement, which comes from the essence of science in general, there is the further 'internal' requirement which comes from the specific nature of the subject-matter itself. It is Kant's contention that our capacity for understanding 'is a unity that subsists on its own [für sich selbst]' and 'is sufficient by itself'; hence any science which investigates its activity must mirror

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<sup>68</sup> I thank Karolina Hübner for bringing out the fact that this alternate possibility (i.e., mistakenly opting for a unity based on a 'false' principle, rather than being stuck with merely aggregative unity) is open as a description of pre- or non-Kantian approaches.

this unity and ‘constitute a system that is to be grasped and determined under one idea’ (B89-90). (Systematicity is thus demanded from both the top-down and bottom-up.)<sup>69</sup>

Let us now turn directly to *judgment*, Kant’s novel candidate for the principle which will allow for the exhaustive division and systematic organization of the elements of ‘understanding in general’ (as the collection of the higher faculties of cognition), and so allows logic to enjoy the status of a science. Kant tells us explicitly that the ‘common [gemeinschaftlichen] principle’ which generates such a systematic division is the construal of the understanding as essentially the *faculty for judging* [urteilen] (B106): ‘we can trace all actions [Handlungen] of the understanding back to judgments, so that the *understanding* in general can be represented as a *faculty for judging*’ (B94). In the *Prolegomena* (§39), we find the following account of Kant’s search for this ‘principle...whereby the understanding could be fully surveyed and all of its functions, from which its pure concepts arise, determined exhaustively and with precision’:

In order, however, to discover such a principle, I cast about for an act [Handlung] of the understanding that *contains all the rest* [alle übrige enthält] and that differentiates itself only through various modifications or moments in order to bring the multiplicity of representation under the unity of thinking in general; and there I found that this act of the understanding consists in *judging* [Urteilen]. (4:323; my ital.)

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<sup>69</sup> Kant claims that ‘logic itself is a system’ in the *Dohna-Wundlacken Logik* (24:697).

With *judging*, then, we have arrived at Kant's 'principle' for logic as a systematic science. As a consequence, whatever other 'elements' belong to the understanding, whatever elementary modes of activity the understanding is capable of, or whatever 'products' result from the analysis of this activity, we should expect from Kant both a way to weave these elements into systematic unity and a demonstration of the completeness of this analysis *on the basis of this idea alone*.<sup>70</sup> Kant implies as much, alluding to the idea that the idea of the act of judging 'contains' all of its other acts – *analytically*, so to speak. We might say, then, that logical investigation thus consists in the analysis of the already given 'concept' of our capacity for judgment.<sup>71</sup>

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<sup>70</sup> There is a question as to whether Kant thinks that we *must* begin with judging. That is, while this is *one* possible route to a complete science of logic, we don't get an explicit argument to the effect that it is the *only*, hence necessary, route. And while his sense of the dependence of a 'Begriffslehre' upon an 'Urteilslehre' is evident, it is less clear that Kant has a principled argument against opposing positions attempts – à la Brandom, for example, which begin with inference, and use our explanation and analysis of this 'basic activity' to generate ('deduce') definitions of the other elements of understanding. This particular line of questioning is muddled somewhat by the fact that Kant appears to elide the distinction between judging and inferring at various points in his work; cf., Kant's 1762 *Die falsche Spitzfindigkeit der vier syllogistischen Figuren*, where an inference [Schluß] is defined as a *species* of judgment: 'Ein jedes Urtheil durch ein mittelbares Merkmal ist ein Vernunftschluß' (2:48). I discuss Kant's doctrine of inference in chapter V.

<sup>71</sup> This construal fits well with Kant's claim that logic represents the science in which we become 'conscious' of the 'content' of the notions implicit in 'thinking' and 'understanding' themselves. Cf., *Jäsche Logik*, §I: 'The exercise [Ausübung] of our powers [Kräfte] also takes place according to certain rules that we follow, *unconscious* [unbewußt] of them at first, until we gradually arrive at cognition of them through experiments [Versuche] and lengthy use [Gebrauch] of our powers, indeed, until we finally become so familiar with them that it costs us much effort to think them *in abstracto*' (9:11). Cf., *Dobna-Wundlacken Logik*: 'Every man observes [beobachtet] the rules before he can put them into formulas. Gradually, however, he attends to what he does [tut]' (24:791).



This stands in contrast with the tradition of Kant's day, in which the relative priority was placed, *not* on judgment, but rather on something called 'simple apprehension'. The traditional way of organizing the science of logic begins with non- or sub-judgmental 'acts' (*operationes mentis*) and attempts to 'build up' from these to an account of judgments and inferences. As a consequence, the act of *apprehensio simplex* is (implicitly or explicitly) meant to be intelligible as an act independently of the contributions it makes to either the acts of *judicium* or *ratiocinium*, but not vice versa. The act of simple apprehension – and with it, its product, an 'idea' – is thus meant to function as the foundational concept in the explanation of the nature of the intellect as a whole.<sup>72</sup>

Such a basic threefold classification of mental activity (minus 'method') goes back some ways.<sup>73</sup> Kant himself is clearly aware that, in deploying these

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<sup>72</sup> Cf., the Port-Royal *Logique*: 'As we are not able to have any acquaintance [connaissance] of that which is outside of us, except through the mediation of ideas which are in us, the reflections that one is able to make concerning our ideas are possibly that which is the most important in logic, since it is the foundation [fondement] of all the rest' (33). A straightforward account of this traditional priority is given by McCall, *Basic Logic*: 'Obviously, before we can think 'Some rose is red', we must know the *meaning* of 'rose' and the meaning of 'red'. Judgment, too, therefore, implies a simpler and more fundamental act of the mind, and this act of the mind we called *conception*, or *simple apprehension*. It is by means of what this act produces, a *concept* or *simple apprehension*, that I know the meaning of 'rose', 'red' (xxv). It is worth noting that a central thesis of the tradition which stems from Brentano is the rejection of Kant's prioritization of judgment, and the restoration of simple (or in Husserl, 'pre-predicative') apprehension to the foundational role it enjoyed in the pre-Kantian tradition.

<sup>73</sup> For instance, in his commentary of Aristotle's *Posterior Analytics*, Aquinas distinguishes the following 'three acts of the reason' [actus rationis sunt tres]: the action which 'conceives what a thing is [concipit quid est res]', the 'operation [operatio] of combining [compositio] or dividing [divisio], in which the true or the false are for the first time present', and the operation through which we 'advance [discurrere] from one thing to another in such a way that through what is known one comes to a knowledge [deveniat in cognitionem] of what is unknown' (I.1.4).

classifications, he is participating in a long tradition; for instance, the *Wiener Logik* reports his response, on behalf of the ‘ancients’, to the question, ‘Quot sunt operationes mentis?’, as ‘apprehensio simplex, iudicium, et ratiocinium’ (24:904).<sup>74</sup> In fact, Kant’s own lectures on logic follow this traditional progression and not only separate off (even if somewhat artificially, as we shall see) but likewise begin with, the doctrine of ‘concepts’, only afterward moving to judgments. And as we indicated above (Introduction, §II), this three-fold progression is mirrored in the development of each *Kritik*, since Kant self-consciously intends this structure to be derived directly from the ‘scientific’ divisions of the higher cognitive capacity provided by logic.

Yet, though it is clear that Kant upholds both the traditional division of the ‘elements’ of logic, and the traditional way of ‘ordering’ these elements in the exposition or organization of logic as a science, it is equally clear that this does not reflect or correspond to any commitment on Kant’s behalf to the philosophical priority of simple apprehension or concepts. Kant’s opposition to any implied priority which might be read into this progression is evident in his claim that ‘the understanding can make *no other use* of...concepts than that of *judging* by means of them’ (B93; my ital.). Thus while Kant agrees that concepts play *a* role in judgments, and so agrees that an account of concepts will be an

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<sup>74</sup> Cf., also R1705 [late 1770’s]: ‘Alte Eintheilung. Apprehensio simplex, Iudicium et ratiocinatio’ (16:88).

essential component of any account of judgment, he also contends that judging is in fact the *only* place that concepts play a role in the activity of understanding.<sup>75</sup> Hence one will not be able to give an adequate account of concepts themselves, without referring to their role in judgments, and so an account of judgment will thus be in turn an equally *essential* component of any account of concepts. This centralization of judgment represents Kant's radical reconception of the relations of dependence that obtain among the traditional elements in logic; accordingly, it has been put forward as one of Kant's 'cardinal innovations'.<sup>76</sup>

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<sup>75</sup> Thus I think Robert Pippin is exactly right when he claims (in *Kant's Theory of Form*) that a concept 'cannot be understood apart from its potential role in judgment; as if, for example, we could understand it by itself, by understanding 'the property' to which it referred'; instead, 'concepts should *only* be understood in terms of their role in judgment' (97; my ital.). Compare as well Bennett, *Kant's Dialectic*, §8: 'in certain ways judgments are more basic than concepts, and sentences more basic than words. This is a point which Kant got absolutely right, not as a consciously held article of doctrine, but as an automatic by-product of his basic theory of the understanding. [...] Kant's theory explains what concepts are by explaining how they are employed in judgments' (23). Less enthusiastic is R.P. Wolff, *Kant's Theory of Mental Activity* (Cambridge: Harvard, 1963). Wolff admits that 'one of the most important results of the Analytic is the recognition that the act of judgment is fundamental to cognition, so that concepts can only be defined by reference to judgments, rather than the other way around', but laments that '[n]evertheless, Kant goes right on using the old system of organization, with very unfortunate consequences for the clarity of the Metaphysical Deduction and other passages' (42).

<sup>76</sup> Cf., Brandom, *Making It Explicit*: 'One of [Kant's] cardinal innovations is the claim that the fundamental unit of awareness or cognition, the minimum graspable, is the *judgment*. [...] Thus for Kant, any discussion of content must start with the contents of judgments, since anything else only has content insofar as it contributes to the contents of judgments' (79-80); cf., his *Articulating Reasons*, 160. To the extent that this is correct, and to the extent that the centrality of judgment is made explicit already in Kant's 1762 essay on *die Falsche Spitzfindigkeit*, then it surely overstates matters to say – as Paul Guyer does, in his *Kant* (London: Routledge, 2006) – that 'the essay on syllogisms foretold little of Kant's future philosophy' (22). Cf., *Falsche Spitzfindigkeit*: 'daß Verstand und Vernunft, d.i. das Vermögen, deutlich zu erkennen und dasjenige, Vernunftschlüsse zu machen, keine verschiedene Grundfähigkeiten seien. Beide bestehen im Vermögen zu urtheilen; wenn man aber mittelbar urtheilt, so schließt man. [...] die obere Erkenntnißkraft schlechterdings nur *auf dem Vermögen zu urtheilen beruhe*' (2:59; my ital.).

§9 Now, Kant does recognize another mode of activity of ‘understanding in general’ – namely, *inferring* – and so we will need to sort out how both concepts and inferences are to be distinguished from, and yet are nevertheless to be related to, judgments. These will be the topics of Chapters IV and V, respectively. For now, we can limit our treatment of the three modes of understanding to their mere identification and enumeration. Even this step is instructive, however, if only for the following terminological reason: in Kant’s lexicon, as we have already noted, the term ‘understanding in general’ itself can be used as a ‘broad designation’ which encompasses, along with the power of judgment [Urteilkraft], two other ‘higher faculties of cognition’, namely the capacity of reason [Vernunft], and the understanding [Verstand] (in its specific sense) (B169).<sup>77</sup>

In keeping with the traditional classification scheme, to each of these three ‘powers of mind’, Kant takes there to correspond particular ‘functions’ – a technical term whose meaning will be explained below (cf., §10). The understanding’s functions are concepts [Begriffe]; the functions of the power of judgment are judgments [Urteile]; and reason’s functions are inferences [Schlüsse]

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<sup>77</sup> Cf., *Anthropologie*, §40: ‘The word ‘understanding’ is also taken in a particular sense, namely when it is subordinated to the understanding in its general sense, as a member of the division with two others, and in which case the higher cognitive capacity (*materialiter*, i.e., treated not solely for itself, but rather in relation to cognition of objects) consists in the understanding, the power of judgment, and reason’ (7:196-7). See the *Metaphysik Mrongovius* as well: ‘All thinking is threefold: (1) through concepts, and the faculty for this is called understanding, (2) through composition of concepts, i.e., through judgments, i.e., through the power of judgment, (3) through derivation of a concept from another by inferences, i.e., by reason’ (29:888-9). Cf., *Metaphysik Pölitz*, ‘Vom obern Erkenntnißvermögen’.

(B169). An alternative name for ‘understanding’ in its restricted sense is ‘the faculty of rules [Regeln]’, while reason is also called the faculty of ‘principles’ (B356). We can also note two terms which Kant uses to cover the activity of the understanding ‘in general’: ‘thinking [denken]’ and ‘cognizing [erkennen]’, though we must also note that these last two are not synonymous (cf., Bxxvi&n; B146; B165) – even if in the ‘Leitfaden’, Kant appears to define ‘thinking’ as ‘cognition through concepts [Denken ist das Erkenntniß durch Begriffe]’ (B94). For now, it is enough to point out that Kant takes all ‘higher’ acts of cognition to be *ipso facto* acts of thinking, whereas he denies that all acts of thinking are acts of cognition. Importantly, the possibility of making good on such a distinction is, in fact, what underwrites much of Kant’s practical philosophy. (I discuss this distinction in more detail below in Chapters **II** and **III**.)

Finally, we should make mention of an additional ‘function’ of the understanding, one we have already seen ‘in action’ above – namely, the capacity to produce a plan for the analysis and systematic organization of a set of concepts, judgments, and inferences into a scientific ‘whole’. Kant’s title for this ‘mode’ (act) of understanding is ‘method [Methode]’. The resulting fourfold expository division of logic’s subject-matter – concept, judgment, inference, method – continues a tradition at least as old as the (1662-83) Arnaud-Nicole *Logique* of Port-Royal, whose text is organized around parts entitled: ‘Concevoir’,

'Jugement', 'Raisonnement', 'Méthode'.<sup>78</sup> As was touched upon above, Kant actually divides the structure of the 'Logic' of the first *Kritik* itself according to this scheme: Analytic of Concepts, Analytic of Principles (of Judgment), Dialectic of Inferences, Doctrine of Method.<sup>79</sup>

As the first two *Kritiken* make manifest, Kant consistently separates 'method' from the (proper) 'elements' of a science.<sup>80</sup> The notes from his logic lectures indicate that he takes this separation to be no less applicable in the specific case of the science of logic itself. The reason for this separation seems to be that, while the (other) 'elements' yield the 'material' or 'content' of the science, the method, on the other hand, is what immanently governs the whole process of systematizing these elements. 'Method' is what guides the theorist of the science

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<sup>78</sup> The authors state that the 'art of logic' consists in 'the reflections that men have made about the four principle operations of their mind [operations de leur esprit], conceiving, judging, reasoning, and ordering [concevoir, juger, raisonner, et ordonner]', and suggest that the last can also be called 'méthode' (*Art de penser*, Introduction).

<sup>79</sup> For reasons such as these, Giorgio Tonelli (both in his essay 'Kant's *Critique of Pure Reason* within the Tradition of Modern Logic', *International Kant-Congress*, 1974, and in the posthumously published monograph of the same name; Hildesheim: Olms, 1994) argues that the *Critique* itself just *is* 'a treatise on logic' (1,4), and that transcendental philosophy as a whole is the 'special' logic (80f). While this would support his thesis that the *Critique* represents 'the major precedent to Hegel's analogous endeavor' (10), the inclusion of the Aesthetic within the *Critique* means that it cannot be *solely* a treatise on logic, and, furthermore, entails that Kant cannot attribute to the Logic the self-sufficiency that motivated many of Kant's successors – especially Hegel, but also the neo-Kantians (e.g., Cohen and Natorp). On this point (as on much else), I would agree with Heidegger, who is concerned to *save* Kant (cf., his 1927-8 *Phänomenologische Interpretation*, 77f).

<sup>80</sup> Though this might not now be surprising, let me note that Kant maintains that there can be no 'method' for the third *Kritik* of 'aesthetic judgment'. Cf., §60: 'the division of a critique into a doctrine of elements and a doctrine of method that precedes the science cannot be applied to the critique of taste, because *there cannot be any science of the beautiful!*' (5:354-5; my ital.).

as she puts this material (e.g., the collection of definitions and principles) into a systematic ‘form’ (cf., JL §§94-6).<sup>81</sup>

From a different point of view, however – namely, from the point of view of *our* investigation – this systematizing act itself is something which surely must also be attributed to the ‘understanding in general’, and so ‘method’ (as a ‘function’ of bringing the many ‘elements’ of a science under one systematic ‘idea’) must itself be counted as an ‘element’ of exposition *within* logic. The reason for this is clear: as a full account of ‘understanding’ as such, logic must say something about this ‘highest-order’ mode of (scientific) understanding in general. Thus in the special case in which it is scientific understanding itself that is *both* prosecuting the investigation *and* the ‘subject-matter’ to be investigated, ‘method’ is at once ‘element’ and ‘function of unity’ of those elements, both part of the ‘material’ under investigation, and the ‘formal determination’ (B736) which guides the construction of a system out of this material.<sup>82</sup>

Before we move on, let me follow up the recent reference to the ‘method’ of other sciences. So far, given our interest in logic specifically, we have been

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<sup>81</sup> Though I will not deal with this at the moment, it should be noted that there is some question as to whether the activity oriented or governed by the principles of method is itself ‘productive’ in the aesthetic/technical sense. In several places Kant speaks of the ‘art’ of system-building (B860), and even notes that the ‘doctrine of method’ in logic has been construed as a ‘practical logic’ of sorts (B736).

<sup>82</sup> After introducing the same ‘scheme’ for the division of logic – ‘perception’ or ‘conception’, ‘judgment’, ‘argumentation’ or ‘reasoning’, and ‘disposition’ or ‘method’ – Isaac Watts, in his *Logick, or the Right Use of Reason* (1724; citations from the 1726 2<sup>nd</sup> ed.), construes this predicament in a similar fashion: ‘This very description of the four operations of the mind and their effects in this order [i.e., Watts’ book itself], is an instance or example of method’ (6).

focusing mainly upon the understanding in general (or ‘as such’ [überhaupt]). It is at least possible, however, that we might wish to inquire after more particular or more determinate ‘forms’ of understanding or thinking. For example, we can imagine an inquiry which would aim to disclose the basic forms of understanding which are basic for, and unique to, a given ‘material’ (theoretical or practical) science. In fact, Kant does hold that each of these sciences has its own proper ‘method’, and hence its own ‘idea’ which governs its systematic organization. In this sense we can even speak of the ‘logic’ of this or that science. When we use the term in this way, we pick out what Kant calls a ‘particular’ or *special* [besondere] logic, which consists in ‘the rules for correctly thinking about a certain kind of object [Gegenstand]’, and which can, in turn, be called ‘the organon of this or that science’ (B76).

This science, though, stands in strict contrast to *general* [allgemeine] logic, which is not restricted to the exposition of the rules governing understanding’s activity in relation to a ‘certain kind of object’, but rather concerns the ‘rules without regard to the difference of the objects [Gegenstände] to which it may be directed [gerichtet auf]’ (B76). As we saw above (§4), it is precisely for this reason that general logic cannot be deployed as an organon, but must instead be used solely as a canon for thinking.<sup>83</sup> It should be evident that, insofar as it is this

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<sup>83</sup> The Dohna-Wundlacken Logik reports that the ‘Methodenlehre’ is also called the ‘practical’ part of a science, but quickly points out that ‘there really is no practical logic, however’, since ‘it is not an organon, but a canon’ (24:779), the implication being that the doctrine of method in



description of general logic which matches up quite closely with the principle that is used to institute the separation of the ‘formal’ part of philosophy from its ‘material’ parts (cf, §7), we have, in effect, been taking ‘logic’ thus far to mean simply ‘general logic’. If we combine this with the earlier bit of shorthand (§8), then we can say that, unless otherwise noted, ‘logic’ has referred, and will continue to refer, to what Kant calls a ‘*general*, but *pure* logic’ (B77).

§10 Picking up once more, then, the task of the identification of the ‘elements’ of logic, can we say something about the central notion of a ‘function [Funktion]’, and how each ‘element’ is explicated in relation to its functions? The centrality of this notion is evident in the following series of claims about logic’s elements: that ‘all judgments are functions’ (B94), that ‘concepts rest on functions’ (B93), and that inferences too can be classified on the basis of a ‘table of functions’ (B356; cf., B169). What is it, precisely, that the various modes of ‘activity’ of the understanding share in common, such that they can all be understood through reference to the notion of ‘function’?

In general, a ‘function’, Kant tells us, is ‘the unity [Einheit] of the action [Handlung] of ordering different representations under a common

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special (material) science could correctly be called an ‘organon’ (hence, a ‘besondere Logik’) for that science.

We can also mention the case of a general yet *applied* logic, which Kant suggests is ‘neither a canon of the understanding in general nor an organon of particular sciences, but merely a cathartic of the common understanding’ (B77-8).

[gemeinschaftlichen] one' (B93). In some sense, then, each of the acts of the understanding in general can be thought of on the model of a 'unity' which arises through (or circumscribes) the act, where the act itself is that through which some manifold of representations is 'ordered' under a 'common' one.

The parenthetical disjunction in the last sentence seems necessary at this point because we don't know enough yet to decide if the 'unity' that Kant takes to characterize a function is one which belong to the *act* (as a process) or to the *product* (or result) of the act.<sup>84</sup> But before we go any further, I would like to head off a possible, and pernicious, misunderstanding of Kant's language of 'act' and 'action' in the context of logic. In several of the passages quoted thus far, we have seen that Kant is quite willing to use this language [e.g., *Handlung*; *actus*] to characterize the 'affairs [Geschäfte]' of the understanding (i.e., acts of 'thinking' in general) (B84). Still, even though, out of context, this might lead one to think that the understanding itself should be analyzed as if it were an 'agent', we must be careful not to saddle this language with baggage more properly stowed in other disciplines – especially those concepts attendant upon moral or technical-productive agency (see above, §5, §7).

This caution does not, of course, constitute a positive account of what 'act' does mean for Kant in this context. For this we will have to wait until a later

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<sup>84</sup> For a useful discussion of this ambiguity in the tradition of judgment-based logics, see Michael Kremer's 'Judgment and Truth in Frege', *Journal of the History of Philosophy* (Oct. 2000), esp., 560f.

section. In any case, this caveat should be kept in mind as we continue in our preliminary exposition of the key notion of a ‘function’, explained above as ‘the unity of an act’, especially as we introduce one other related term of art that Kant uses to characterize the ‘understanding in general’, one that is closely connected to ‘function’, ‘act’, and ‘spontaneity’: namely, *synthesis*. Kant defines ‘synthesis in the most general sense [allgemeinsten Bedeutung]’ as ‘the action [Handlung] of putting different representations together with each other and comprehending [begreifen] their manifoldness in one cognition’ (B103). The parallels between this definition of ‘synthesis’ and that given for ‘function’ are straightforward, yet there is one important distinction to be marked. A synthesis is an *act*, whereas a function is the *unity* of an act. This way of interpreting the distinction is vindicated in §10 of the B-Deduction, where Kant identifies a ‘function’ which ‘gives unity’ to a ‘synthesis’ (B104-5). Synthesis, then, is *an act which can be unified by functions*. And, as one final piece of terminological correlation, in §15 of the B-Deduction, Kant tells us that *combination* [Verbindung; conjunctio] is another name for the ‘action of the understanding’ which is designated by the ‘general title *synthesis*’ (B129-30). By substitution, then combination, too, is an act – an ‘actus’ of the ‘self-activity [Selbsttätigkeit]’ of the subject [Subject] (B130) – which can be unified by way of functions.

With these terms in place, we can now appreciate Kant’s exposition of the essence, so to speak, of the understanding: ‘thinking [denken], taken in itself [für

sich], is merely the *logical function*, and hence the sheer spontaneity of the combination [Verbindung] of the manifold' (B428; my ital.).<sup>85</sup> The essence of thinking is spontaneous, synthetic-combinatory activity which is given unity by a logical function.

Can we now derive from this generic interpretation of 'thinking as such', an explanation for each of the 'modes' of thinking, each of the 'elements' of the activity of the understanding (i.e., concepts, judgments, inferences, method), on this same model of synthesis and function? Moreover, can we do so in such a way that is sensitive to the aforementioned 'priority' accorded to *judgment*?

To start with, we can recall that concepts are said to *rest on* functions, where as judgments are said to *be* functions (B93). This distinction fits well with Kant's claim that 'the understanding can make no other use of these concepts than that of judging by means of them' (B93), since the 'being' of concepts, so far as the understanding is concerned, rests on their possible involvement in specific functions (namely, those of judgment). Similarly, this distinction fits well with another of Kant's claims, that it is of the essence of a concept that it be a 'predicate for a possible judgment' (B94). Moreover, we can look ahead slightly to our more substantial discussion of judgments (cf., Chapter **III**), and note that, from a logical point of view, the basic 'material' involved in judgments consists in

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<sup>85</sup> The sentence ends: '...of a merely possible intuition'. I omit it from the current discussion, since we have not yet introduced the notions of 'intuition', 'receptivity', or the 'discursivity' of thought.

*concepts* (B322). This implies that, as far as logic is concerned, the unity instituted by a judgment qua function is a unity instituted among or between concepts.<sup>86</sup>

All of this is complicated, however, by Kant's well-known claim that there are several species of 'concepts', including those which Kant calls *pure* concepts. Yet a pure concept is actually a general expression of the 'function that gives unity to the different representations *in a judgment*' (B104-5). This would appear to entail that the logical function responsible for bringing judgmental unity to concepts as (logical) 'subjects' and 'predicates' is *itself called a 'concept'*, albeit a special ('pure') one. Pure concepts could then be characterized as those functions which guide the synthetic activity of the understanding into the unity of a judgment. It is hard, however, to see how such a unifying function itself could also *be* a predicate of a possible judgment, which seems to be at least a *prima facie* requirement on 'concepthood' as such.

Note that I am not claiming that a pure concept is *only* a function which institutes the unity of a judgment, but that a pure concept can be considered *as* a function of judgment. I am, however, claiming the converse, that a function of judgment (or judgment with respect to its unifying function) *is nothing other than* a pure concept, considered from a certain point of view. I think Kant is quite clear

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<sup>86</sup> As the contrast with 'material' would suggest, the 'unity [Einheit]' or 'combination [Verbindung]' of concepts in judgment is called the *form* of the judgment (*Wiener Logik*, 24:928-9), and is represented (in part) by the 'copula' (B322). The relationship between 'form' and 'function' is somewhat obscure, and is touched upon by Longuenesse (*Kant and the Capacity to Judge*, 3n2, 78n10), by way of brief discussion of the lengthier treatment by Michael Wolff (*Vollständigkeit*, ch.1). (The example also covers over the fact that the 'material' of hypothetical and disjunctive judgments is in fact *other judgments* (cf., *Wiener Logik*, 24:934).)

on this point in §10 of the KrV, and supporting argument will be given in later chapters.<sup>87</sup>

I also postpone for a later chapter (IV) the task of working out the precise relation between, on the one hand, pure ‘concepts’ as functions of judgmental unity, and on the other, those other ‘concepts’ which are *among* the ‘different representations’ that are ‘given unity’ (e.g., as ‘predicates’). In the meantime, I suggest that we conclude the present chapter by introducing those particular functions which Kant has in mind as the distinctly *logical* ones, as well as turning briefly to Kant’s infamous thesis that he has identified a *complete* list of the most basic ‘functions of unity in judgments’, which he can ‘exhaustively exhibit [vollständig darstellen]’ on the Table (B94) which he then provides in §9 of the ‘Leitfaden’.

The Table organizes these functions – alternately called the functions ‘of the understanding in judgment’ and functions ‘of thinking’ – under four ‘titles’ [Titel], each of which ‘contains under itself three moments’ (B95), though Kant subsequently gives reasons for restricting the label of truly *formal*-logical functions to the first two moments under each title. We will discuss the reasons for this restriction in each case, when we treat of each ‘title’ in subsequent chapters. For now I will simply put the third moment in brackets, to mark their special status.

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<sup>87</sup> In recent writings (e.g., his Woodbridge lectures), McDowell has made much of this point. Though I agree on its pivotal status within the Deduction, I think his interpretation is flawed in several respects, especially concerning the nature of the ‘spontaneity’ (and with it, the ‘activity’) that is at issue in such functional unification. (See below, Chapter VI.)

**Table 1.2: The Logical Functions of Understanding in Judging**

Quantity	Quality	Relation	Modality
Universal	Affirmative	Categorical	Problematic
Particular	Negative	Hypothetical	Assertoric
{Singular}	{Infinite}	{Disjunctive}	{Apodictic}

Now, Kant tells us later that ‘the understanding is *completely exhausted* [völlig erschöpft] and its capacity *entirely measured* by these functions’ – these are the ‘logical functions in *all* possible judgments’ (B105; my ital.).<sup>88</sup> Such claims are repeated (among other places) in Kant’s logic lectures: ‘*All* actions [Handlungen] of the understanding that appear in judgment reduce to four, and *all* judgments are considered according to these’ (*Wiener Logik* 24:929; my ital.). In essence, then, Kant’s claim is that the basic unity of any and every judgment can be articulated according to one of the two functions (‘Moments’) in each of the four aspects (‘Titles’), and, conversely, that nothing which cannot be so articulated will count as possessing the unity of a judgment. Indeed, Kant states quite clearly in the *Prolegomena* that ‘these form a logical system’ and that ‘no others are possible’ (§23, 4:306).

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<sup>88</sup> Guyer/Wood translate this as ‘functions of all...’, but the German is ‘Functionen in allen...’.

We can see why Kant feels compelled to make such claims to exhaustiveness, completeness, and uniqueness – meeting such conditions is obviously necessary, given his understanding of what it takes for logic (or anything else) to count as a ‘science’ (cf, §8). Yet despite their necessity, these claims are understandably quite provocative to modern ears, and have come in for quite severe criticism over the years, especially with the rise of Frege-*Principia Mathematica*-inspired versions of truth-functional and quantificational analyses of ‘judgments’.<sup>89</sup>

We will examine the relation between Kant’s ‘functions’ and more modern ones, as well as the significance of each of the logical functions themselves, in later Chapters in some detail. For now, however, we need to derive one further, arguably even more striking, consequence of the completeness-claims, or rather these claims coupled with the thesis that the priority of judgment is the principle around which the systematic science of logic must be organized. It would seem to follow from these two doctrines that the table ‘exhausts’, not just the functions of the understanding *in judgment*, but, in some sense, the functions of the understanding *as such*. For *all* other ‘acts’ must be able to be ‘traced back’ to

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<sup>89</sup> I put ‘judgments’ in quotes since the item under analysis in logic is typically distinguished from ‘judgment’ (in some senses of this term), and then construed as ‘proposition’ (Russell) or ‘sentence’ (Quine). The relation of Kant’s conception of ‘judgment’ and contemporary doctrines of ‘propositions’ and ‘sentences’, as well as Kant’s understanding of the relation between language and thought, will be discussed Chapters II and III.



judgment, and so must bear a fairly direct relation to one of these functions of judgment.<sup>90</sup>

Whether – and if so, how – this can be so, is yet another story which must wait to be told. What cannot wait, however, is the introduction of one final, but absolutely crucial, distinction, one which we have been dancing around since early on: the distinction between the *form* and *content* of an act of the understanding. A sentence before the presentation of the Table of Functions (in §9), we are told that ‘if we abstract [abstrahiren] from all content [Inhalt] of a judgment in general’ we can find the ‘function of thinking’ in what we are then attending to, or in what is left over, after such abstraction (B95). This residue, so to speak, in our attention is what Kant calls the ‘mere form of the understanding’ in the judgment (ibid.).

In fact, Kant puts this distinction to use in the very definition of ‘general logic’: it ‘abstracts from all content [Inhalt] of the cognition of the understanding...and has to do with nothing but the mere form of thinking’ (B78). This language of ‘content’ provides a useful supplement to what we have already

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<sup>90</sup> In his recent work, *The Table of Judgments* (originally 1991, trans. E. Watkins (Atascadero, CA: Ridgeview, 1995), Reinhard Brandt has argued as much, claiming that ‘the table of judgments [in §9], with its four headings, actually formulates the essential elements of the doctrine of concepts, judgments, inferences, and method’ (7; cf., 92-3, 121). Brandt criticizes Walter Bröcker on the grounds that he ‘is not able to explain that *all* acts of the understanding are unified in the table of judgments and thus that it covers all of formal logic. Apparently, [Bröcker] does not recognize this as one of the *Critique of Pure Reason’s* intentions’ (9). While I have difficulties with some of the ways Brandt develops this thesis, I think there is something deeply correct in this thought, though the complete vindication will only be possible once we have Kant’s full doctrines in view.

recorded (§9) is involved in the definition of ‘general logic’ – namely, that it considers the activity of the understanding in general, without ‘regard to the difference of the objects [Gegenstände] to which it may be directed [gerichtet auf]’ (B76); indeed, the omitted part of the quote immediately above (i.e., from B78) conjoins the abstraction from ‘content’ with the abstraction ‘from the difference of its objects’. It also points us, once again, to the peculiar characteristic of logic as a discipline – its *formality*.

The task of the next chapter will take up this language of ‘form’ – both as used here, to contrast with ‘content’, and as it is deployed in the distinction between ‘formal’ and ‘material’ philosophy – for, as I will argue presently, teasing out what Kant means by the claim that logic is formal will amount to arriving at the absolute center of his conception of logic as a whole.

## CHAPTER II

### The Formality of Logic

#### A. General and Transcendental Logic

§11 In the last chapter we introduced and highlighted Kant's characterization of logic as a branch of 'formal', rather than material, philosophy, and we gave an initial indication of the principle of this division: formal philosophy consists in the sort of rational cognition of the 'higher' cognitive faculties as such, cognition which can be obtained through the analysis of these faculties considered in abstraction from both the different sorts of objects to which they may be directed, and the other mental capacities to which they may be connected. In addition to this general characterization of the discipline of logic, at the close of the chapter (§10), we also introduced the notion of the *form of thinking*, along with its partner-notion, the 'content' of thinking, both of which are deployed by Kant in one of his more well-known specifications of the field of formal (pure general) logical research: 'general logic abstracts...from all content [Inhalt] of cognition,

i.e. [d.i.], from *any relation of it to the object* [Beziehung auf das Object], and considers [betrachtet] only...the form of thinking in general' (B79; my ital).<sup>1</sup>

It appears quite clear (from the 'd.i.') that Kant means to explicate the relevant notion of the 'content' of a cognition by way of the notion of the 'relation [Beziehung]' of a cognition 'to an object'.<sup>2</sup> Now, we might well wonder what might remain of a Kantian 'cognition', once its relation to an object has been bracketed, since the very definition of a cognition that Kant gives in the so-called 'Stufenleiter' passage is as nothing other than an '*objective* perception' – i.e., as a representation that is accompanied by consciousness and is 'directed toward [bezieht sich auf]' an object (B376). Similarly, the very idea of something's being an 'object', at least in the context of transcendental idealism, seems to depend for its intelligibility on this thing being the 'product' (in some sense) of a cognitive synthesis: an object, for Kant, is 'that in the concept of which the manifold of a given intuition is *united* [vereinigt]' (KrV §17, B137).<sup>3</sup> It might seem impossible,

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<sup>1</sup> Recall Kant's distinctions between pure and applied logics (introduced in §8), and general and special logics (introduced in §9). I discuss the pure/applied contrast in Chapter VI, and return to the general/special contrast below (§12).

<sup>2</sup> There are, we shall see, other notions of 'content [Inhalt]' operative *within* the context of formal logic – namely, what I will call the 'containment-content', or the *intension*, of a concept. See Chapter IV, C.

<sup>3</sup> This conception of an 'object' is emblematic of what might be called Kant's *internalization* of the objects of cognition to the sphere of cognition itself. Cf., Longuenesse, *Kant and the Capacity to Judge*. 'what is original to Kant's position is the thesis that neither the concepts, nor the object =  $x$  to which they are related, are independent of the act of judging, or prior to it' (108); 'the object now considered is *internal to (mental) representation itself*' (20n9). As we shall see in Chapter III, this feature of Kant's views – and the problem of separating the 'object' from the 'cognition' to establish the obtaining of a very particular relation, namely that of *agreement* – has caused some to take him to reject all correspondence theories of truth, despite textual evidence to the

then, to factor out the ‘object’ to which a given cognition is ‘related’, from the cognitive (conceptual) ‘unification’ which, in a certain sense, first makes the object possible, and would seem itself to be nothing other than a perception that is ‘related to an object’.<sup>4</sup>

Nevertheless, Kant clearly thinks such an abstraction is not only possible, but has been achieved within the science of formal logic (albeit, not with sufficient self-consciousness of its achievement). And what is more, Kant’s language here would seem to imply that the abstraction involved in formal logic is actually more severe than might have been surmised from the initial description of the formality of logic given in the previous chapter (§§9-10). There we saw Kant claim that formal logic ‘concerns these rules [of the understanding] without regard to *the difference* [Verschiedenheit] of the objects to which it may be directed

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contrary. For a particularly striking exchange on this regard, see Franz Brentano’s pointed criticisms of Wilhelm Windelband’s ‘non-correspondence’ interpretation of Kant in §§17-23 of Brentano’s 1882 lecture, ‘Über den Begriff der Wahrheit’, reprinted in *Wahrheit und Evidenz*, ed. O. Kraus (Leipzig: Meiner, 1930). Windelband’s interpretation is given in his 1881 lecture on Kant, reprinted in *Präludien* (Tübingen: Mohr, 1884), 112-45.

<sup>4</sup> There is a further question about the precise nature of the ‘object’ at issue – whether it is best represented by a singular term (as an Aristotelian primary substance) or by way of a ‘that’-clause (as a state of affairs). In his *Kant’s Criticism of Metaphysics* (Edinburgh: Edinburgh, 1975), W.H. Walsh argues that most often Kant means it to cover both: ‘By ‘objects’ in this connection [i.e., with the categories] Kant means things that can be met with in experience. [...] But ‘object’ and ‘thing’ alike mislead us here if we take them as standing for substances or continuants. When Kant speaks of ‘the thought of an object in general’ he has in mind the thought of an *objective order* or an *objective world* rather than of the general form of experienced subjects of predicates. He is talking about existents in a loose sense of the word, one in which it can cover states of affairs as well as substances’ (§8, 40-41). Compare as well, Jonathan Bennett, *Kant’s Analytic*: “Kant...speak[s] of ‘the concept of an object’ when he means ‘the concept of an objective state of affairs’...” (§53, 220; cf., §32). I take up this question below in **III**, when I discuss Kant’s doctrine of truth, though the topic surely deserves much more attention than it deserves.

[auf...gerichtet]' (B76; my ital.). Now, in B79, we find him claiming that logic must not merely consider the acts of the understanding in abstraction from differences among its possible objects, but rather must abstract from *everything* that is involved in being *related* to objects *at all*, if it is to arrive at the form of thinking. Indeed, this second demand has the clear appearance of being much more restrictive.

Yet most interpreters do not seem to recognize that Kant offers these two diverging characterizations of the level of abstraction which is necessary for the apprehension of the form of thought. Instead, it is typical for readers to assimilate all of Kant's characterizations of the formality of logic to the B76 formulation, to that which is gained once we 'abstract from the differences in objects'. By contrast, the burden of the present chapter will be to demonstrate that, once we draw out the characterization at B79, it will become evident that this passage does in fact indicate a more restrictive understanding of 'formality'. Moreover, I will show as well that, not only does this more restrictive understanding lie at the heart of Kant's conception of logic, but also that this restrictive conception of the formality of logic in turn lies at the heart of much else – of Kant's *Erkenntnistheorie*, and of his concept of philosophy as such (as 'apriori rational cognition from concepts').

First, however, let me say more about the differences between the levels of abstraction involved in the above pair of formulations. In the first version (B76),

it can seem as though, in being asked to consider thinking in abstraction from all of the possible differences in the objects toward which it might be directed, we are to then leave open whether or not we are to take into account features which would identify thinking as the sort of thing which is directed, ‘in general’, toward objects. In other words, it would not seem to be against the spirit of this first formulation to take logic to be concerned with those features which characterize thought, no matter what its object may be. For short, we can refer to this (paraphrasing Gilbert Ryle) as the *object-neutral* interpretation of the formality of logic, and with it, of the idea of a ‘form’ of thinking.<sup>5</sup>

By contrast, the second formulation (at B79) appears to make the further demand that, if we are to reach the ‘form’ of thinking, we are to consider thinking in a manner that *does* bracket the fact that thought is the kind of thing which can be directed toward (or ‘related to’) objects in general. In turn, logic, on this interpretation, would be the discipline which considers, not what pertains to thinking qua *object-related* in general, but rather what pertains to thinking *as such*, whether or not it has, or even could have, a relation to any object whatsoever. To have a convenient label, for now let us refer to this more restrictive interpretation

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<sup>5</sup> Ryle’s own term is ‘topic-neutral’: cf., ‘Formal and Informal Logic’, in his *Dilemmas* (Cambridge: Cambridge, 1954), 115f. In his ‘Functions of thought and the synthesis of intuitions’ (in *Cambridge Companion to Kant*, ed. Paul Guyer (Cambridge: Cambridge, 1992), 101-122), J. Michael Young uses Ryle’s phrase to describe Kantian formal logic: ‘Kant’s view [is] that logic is topic-neutral’ (109); in his *Kant and the Foundations of Analytic Philosophy* (Oxford: Oxford, 2001), Robert Hanna, too, opts for this description: ‘Since by virtue of its maximal generality its laws comprehend every possible object of thought, general logic is itself ‘topic-neutral’ (74).

as the *non-intentional* interpretation of ‘form of thinking’, since, in essence, what is being abstracted from is the capacity for thought to bear a ‘relation to an object’.<sup>6</sup> Conversely, we can rephrase our description of the object-neutral interpretation by distinguishing it as one which retains a place for the intentional character of thought *within* formal logic.

It is safe to say that most recent interpreters take the object-neutral characterization of the ‘form of thinking’ to be a sufficient indication – some appear to take it as exhaustive – of Kant’s views.<sup>7</sup> One of the more influential presentations of this viewpoint can be found in H.J. Paton’s 1936 *Kant’s Metaphysic of Experience*. At the time he was writing, Paton finds it to be ‘a very common mistake’ to see Kant as proposing the non-intentional view of the form of thought – or in Paton’s words, ‘to say that for Kant logic treats thought as if thought had no object’ (I.191n1).<sup>8</sup> Against this, Paton contends that ‘[w]hat Kant

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<sup>6</sup> The ‘intentional character’ of thought will be explored in more detail below (cf., **II, C**) under the Scholastic rubric of ‘objective reality’ or ‘esse objectivum’. For a well-known discussion of the connections between this set of terms, see a footnote to the famous passage from Brentano’s 1874 *Psychologie vom empirischen Standpunkt*, II.1.§5, which remarks that ‘what the Scholastics of the middle ages called the *intentional* (or mental) in-existence of an object [Gegenstand]’ is also picked out by the Scholastics through the expression ‘to exist as an object (objectively) in something [gegenstandlich (objektive) in etwas sein]’ (German, 124/English, 88).

<sup>7</sup> See, in addition to those cited above and below, Friedrich Ueberweg, 1871 *System of Logic* (3<sup>rd</sup> ed.) §28: Kant ‘defines’ ‘general formal logic’ as ‘the rational science of the necessary laws of thought, not with respect to particular [besondere] objects, but *all objects in general* [alle Gegenstände überhaupt]’ (55; my ital.). This repeats *verbatim* the formulation from the *Jäsche Logik* cited below.

<sup>8</sup> Though Paton claims this interpretation to be ‘very common’, he gives no actual references to anyone who upholds this reading. Paton’s own summary gloss on the formality of logic is as follows: ‘because logic is formal, it ignores all differences in the objects of thought, and the laws which it sets forth must hold whatever be the nature of the objects thought’ (I.191).



says, when he is speaking carefully, is that it ignores *differences* in objects’, and proceeds to cite, in addition to B76, the following passage from Jäsche’s text which supports this interpretation: ‘if we now put aside all cognition that we have to borrow from *objects* and merely reflect on the use just of the understanding, we discover those of its rules which are necessary without qualification, for every purpose and without regard to any particular objects of thought’ (JL Intro §I, 9:12). To this we can add – though, surprisingly, Paton himself does not – another statement from this section of Jäsche’s text: logic is ‘a science apriori of the necessary laws of thought, not in regard to particular objects [besondere Gegenstände], however, but *to all objects in general* [Gegenstände überhaupt]’ (9:16; my ital.).<sup>9</sup>

Despite this seemingly definitive statement from Jäsche, not everyone agrees with Paton. For one thing, as we have noted above (cf., Introduction, §III), it has been argued by many that Jäsche’s text is unreliable in general, and wherever it departs from, or adds to, Kant’s published material, its claims must be discounted, or at least flagged as not necessarily Kant’s own. This guideline for interpretive procedure seems, on the whole, correct, and the fact that, so far as I am aware, there is no additional place where Kant states directly that logic treats of ‘all objects in general’, means we must treat this particular statement with

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<sup>9</sup> I take it that this is the passage to which Kemp Smith is referring (in his 1918 *Commentary*) when he writes that ‘[g]eneral logic involves, it is true, the idea of reference to objects’, and then cites JL Intro §I; though Kemp Smith adds ‘the possibility of such reference is not itself investigated’ (171).

caution. Indeed, Jäsche's text did not deter a whole generation of critics of Kant (in the middle of the 19<sup>th</sup> century) from taking Kant to be putting forward the more restrictive position – something they viewed as a kind of 'formalismus'.<sup>10</sup>

By contrast, we can produce several texts (in addition to the passage above (i.e., B79)) that give support to the more restrictive, non-intentional position. Consider, for instance, the following passage from the B-edition Preface to the first *Kritik*:

[T]he advantage that has made it so successful logic has solely its own limitation to thank, since it is thereby justified in *abstracting* – is indeed obliged [verbunden] to abstract – *from all objects* [Objecten] of *cognition* and all the distinctions between them; and in logic, therefore, the understanding has to do with *nothing further than itself and its own form* [sich selbst und seiner Form]. How much more difficult, naturally, must it be for reason to enter upon the secure path of a science if it does not have to deal [schaffen] *merely with itself* [mit sich selbst], but has to deal *with objects as well* [auch mit Objecten]. (Bix; my ital.)

The distinction between the 'subject-matter' of logic and that of other sciences is here drawn precisely on the basis of the fact that in logic the understanding (reason) is concerned solely with itself *as opposed to* being concerned with objects

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<sup>10</sup> Cf., Trendelenburg, *Logische Untersuchungen*, I.II.1: 'Die formale Logik will die Formen des Denkens an und für sich begreifen, ohne auf den Inhalt zu sehen, an dem diese Formen erscheinen. Sie will den Begriff, das Urtheil, den Schluss allein aus der auf sich bezogenen Thätigkeit des Denken verstehen. In dieser Ansicht, wie sie bei Kant hervortritt, wird Denken und Gegenstand von einander getrennt...' (16). Cf., as well, Ueberweg, *System der Logik*. For a brief summary, see Benno Erdmann's 1880 review of M. Steckelmacher in the *Göttingische gelehrte Anzeigen*, esp. 619ff., for Erdmann's discussion of Steckelmacher's claim that 'die Behauptung, die Trendelenburg und Ueberweg ihrer Kritik zum Grund legen, daß die Logik nach Kants Meinung auch vollständig aus sich selbst begreiflich oder verständlich sei', is 'irrhümlich' (620).

as well. The following 1780's Reflexionen on metaphysics captures this thesis nicely and succinctly: 'Logik handelt vom Denken ohne object' (R5665; 18:323).<sup>11</sup> Hence, Kant's text are at least as suggestive, if not more so, of the non-intentional reading.

To be sure, the non-intentional way of reading these passages can naturally lead to the question we broached in the previous chapter (§7), of whether or not the capacity for understanding (or reason) *itself* (as the 'topic' of logic) is correctly described as an 'object'. But putting this question to the side for the moment, what I want to show now is that the non-intentional reading should be favored on grounds stronger than those provided by mere proof-texting. For I think there are actually clear and substantial 'doctrinal' reasons which count against the object-neutral interpretation, in favor of the non-intentional reading. Most importantly, I shall now argue that *only* the non-intentional reading provides us with a principled, coherent way to draw one of the most central distinctions in Kant's project – the distinction between two ways of considering the *categories* or

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<sup>11</sup> For some additional textual support, we can look to the 1790 polemic against Eberhard, where Kant writes that 'logical principles (which abstract completely from everything concerning the possibility of the object), merely concern itself with the formal conditions of judgment' (8:193). For example, Kant claims that the Principle of Contradiction 'is valid for thought in general, *without regard to any object* [ohne Rücksicht auf ein Object]' (8:195; my ital.). This echoes the earlier discussion of the Principle of Contradiction in the KrV's 'Analytic of Principles': 'Whatever the content of our cognition may be, and however it may be related to the object [sich auf das Object beziehen], the general though to be sure only negative condition of all of our judgments whatsoever is that they do not contradict themselves; otherwise these judgments *in themselves* [an sich selbst] (even *without regard to the object* [ohne Rücksicht aufs Object]) are nothing [nichts]' (B189; my ital.). Note that even in Introduction to the *Jäsche Logik* we find the following passage: 'Die allgemeine Logik...von *allen Objecten* abstrahirt' (9:17; my ital.).

*pure concepts* of the understanding. For, as we shall see below, Kant argues throughout the Critical period that we can view these concepts: first, as logical functions which produce the unity coordinate with conceiving, judging, and inferring (i.e., the unity of *thinking as such*), and second, as synthetic procedures which unify a given manifold, and produce the unity of *thinking of an object überhaupt*.<sup>12</sup>

§12 We have already seen (in the previous chapter, §10) that Kant takes the pure concepts to be expressions of those (logical) functions which bring unity to a judgment. However, these very same concepts are also ‘explained’ as ‘concepts of an object in general [Gegenstand überhaupt]’ (B128), for, as Kant writes in a well-known passage from §10 of the B-Deduction,

the same understanding...indeed by means of the very same actions [Handlungen] through which it brings the logical form of a judgment into concepts..., also brings a *transcendental content* [Inhalt] into its representations..., *on account of which* they are called pure concepts of the understanding that pertain to objects [Objecte] a priori. (B105; my ital.)

And significantly, Kant goes on to claim in this passage that the identification and systematic analysis of the process of bringing a ‘transcendental content’ into the

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<sup>12</sup> A preliminary, but particularly aptly-phrased, textual ground for the importance of this distinction in defining ‘general’ logic can be found in *Reflexion* 1624 [1780’s]: ‘Logic, defined as the general doctrine of understanding [Verstandeslehre], could still however appear as well to contain the understanding’s *pure concepts of objects (categories)*; it would therefore not abstract from all content of thinking. Hence the definition of logic as a science that contains merely the *formal rules of thinking* is better’ (16:42; my ital.).

representations of the understanding (i.e., the pure concepts) is something that takes us *beyond* the purview of general logic: it is something ‘which general logic can never achieve [leisten]’ (B105).

Exactly here, then, we have the beginnings of a concrete reason for taking the more restrictive, non-intentional interpretation of the formality of logic quite seriously. For Kant claims quite clearly in this passage that pure general logic, on its own, simply does not contain the resources necessary for considering the acts of the understanding as acts which ‘pertain to [gehen auf] objects’. Rather, in order to ‘achieve’ a connection between the ‘forms of thought’ in view in general logic and ‘objects in general’, Kant states that it will be necessary to introduce a ‘transcendental content’ into those ‘forms’.

As a consequence, the investigation of the resulting subject-matter (form-*plus*-transcendental-content) could only be possible for a science ‘in which one did not abstract from *all* content [Inhalt] of cognition’ (my ital.), and which ‘contained merely the rules of the pure thinking of an object [Gegenstand]’ (B80). Kant is happy to call this science too a ‘logic’, since it is a ‘science of pure understanding’ – namely, one ‘by means of which we think objects completely apriori’, which deals with ‘concepts that may be related to objects [beziehen auf Gegenstände] apriori...as acts [Handlungen] of pure thinking’ (B81). This logic, however, cannot be identified with formal (pure *general*) logic, since it *does* concern itself

with a particular kind of ‘content’, namely, a ‘transcendental’ content. Kant’s name for this science, accordingly, is *transcendental* logic.

Note that *this* science – the science of transcendental logic – *is* correctly characterized as being ‘object-neutral’ (in Ryle’s sense), though it is still, to be sure, concerned with the generic conditions for the intentionality of thinking, as it contains the principles for ‘pure thought *about* objects *in general*’. In fact, I suggest that we must go further and say that, for Kant, it is precisely transcendental logic which functions as the bridgehead between the formal and the material parts of philosophy, such that transcendental logic provides the general form of an ‘object of thought’ – and so provides the general form of the subject-matter of material philosophy *as such*, and thus the general form for each of its specific branches. Of course, this generic form would need to become ‘concretized’ in different ways, precisely according to the differences in ‘objects’ at issue in the various parts of material philosophy. We should expect, that is, that transcendental logic will give us the ‘form’ for the ‘objects’ under investigation in the theoretical philosophy of nature as well as those at issue in the practical philosophy of ethics.<sup>13</sup>

But now recall, first, that difference in *objects* (or disciplinary subject-matter) is cashed out by Kant in terms of difference in the *mental capacity* which is

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<sup>13</sup> To this it would be nice to add: the objects at issue in the analysis of aesthetic and teleological judgments – though, with the qualification that it may be incorrect to say there is a (strictly speaking) *material* (rather than ‘reflective’) ‘science’ of beautiful or sublime or purposive ‘objects’ (rather than a science of *judgments* of beauty or purpose or sublimity). (I hope to explore the precise disciplinary status (‘formal?’ ‘material?’) of the subject-matter at issue in the third *Kritik* in future work.)

responsible for the constitution of objects, and that the operation of each mental capacity is grounded in a correlative (‘higher’) *rational* faculty (cf., §6 above). Hence, to put matters a bit more precisely, the generic form of the subject-matter of material philosophy (or of an ‘object as such’) will need to become concretized according to the differences in the mental capacities with which the higher cognitive capacity will be cooperating in a given discipline. That is, we should expect that it will be the generic principles of transcendental logic – as principles governing the relation of the higher cognitive faculty ‘in general’ [Verstand überhaupt] to ‘objects in general [Gegenstände überhaupt]’ – that will serve as the ‘guide’ or ‘clue’ for the derivation of the specific principles governing the sort of (natural, practical, beautiful, sublime, etc.) objects which are at issue in each branch of philosophy.

And this is precisely what we find in each case. First, the generic forms through which our higher-cognitive activity bears a relation to objects – i.e., the pure concepts – are considered in relation to the mental capacity for *receptivity* of objects in the experience of nature, and then in relation to the capacity for *desire* for objects in the moral domain, and finally, in relation to the capacity for *pleasure* in the reflective (aesthetic and teleological) domains. Second, this correlation of the pure concepts with the relevant mental capacities yields ‘principles’ for the

application of these forms of specifically object-directed thought to the deliverances of receptivity, desire, and pleasure, respectively.<sup>14</sup>

We can get an initial sense of how this procedure will go in each case by considering the following passages from the *Kritik der praktischen Vernunft*, in the section of the Analytic entitled (appropriately) ‘On the concept of an object [Gegenstand] of pure practical reason’. There Kant contrasts, on the one hand, a ‘determination’ of the pure concepts of the understanding ‘with a view to a theoretical use of the understanding, in order to bring apriori the manifold of (sensible) *intuition* under one consciousness’, with one which intends ‘to subject apriori the manifold of *desires* to the unity of consciousness of a practical reason commanding in the moral law, or of a pure will’ (5:65).<sup>15</sup> Moreover, the pure concepts play the guiding role in the derivation of the basic principles governing the cooperative exercise of cognitive faculty with mental capacity: in the one case, the principles of *nature* are derived through reflection upon the determination of the pure concepts by the pure form of sensibility as such (‘the form of intuition (space and time)’), while in the other, the principles of *morals* are derived from

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<sup>14</sup> It is arguable that in the ‘reflective’ case, however, only the (pure general) *logical* forms are present as ‘guides’, since (as is discussed in a subsequent footnote), this science is not ‘object’-directed.

<sup>15</sup> Note in each case the categories preserve their role as unifying functions, and in particular, their role as instituting unities of *consciousness*, though the given material which they unify – and so too the objects toward which the resultant synthesis is directed – clearly differ. The connection between the pure concepts and consciousness will be explored below in our discussion of ‘intentionality’ and ‘objective reality’, and more so, in the next chapter (III), where it is argued that Kant takes the unity of consciousness (more specifically, ‘apperception’) to yield the fundamental ‘formal’ feature of judgment as such.



reflection upon the determination of the pure concepts by the pure form of desire as such ('the form of a pure will') (5:65-6).<sup>16</sup> And something similar will occur in the reflective sphere, where the pure concepts – though considered as merely logical functions – are determined by a pure (reflective) form of pleasure.<sup>17</sup>

Yet what is crucial and must not be covered over is that the plurality of possible determinations of the pure concepts with respect to specific types of 'material' (by way of their being brought into co-operation with specific mental capacities) is just that – *a determination* of the pure concepts. By implication, the pure concepts *as such* – that is, the pure concepts considered prior to, or in

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<sup>16</sup> For some justification for aligning 'die Form eines reinen Willens' with the pure form of desire, compare Kant's explication of the will in the KU: 'The will, as the faculty of desire... [Der Wille, als Begehrungsvermögen]' (Intro, §I; 5:172); 'The faculty of desire [Begehrungsvermögen], insofar as it is determinable only through concepts, i.e., to act in accordance with the representation of an end, would be the will [der Wille]' (§10, 5:220).

<sup>17</sup> Consider the footnote to §1 of the Analytic of the Beautiful in the *Kritik der Urteilskraft*, where Kant describes how one must proceed in the philosophical analysis of aesthetic judgments: 'In seeking the moments to which this power of judgment attends in its reflection, I have been guided by the logical functions for judging (for a relation to the understanding is always contained even in the judgment of taste)' (5:203n). The pure form of pleasure relevant to aesthetic judgment is then displayed through the four 'moments' of the Analytic.

To repeat the qualification from the previous notes, it is somewhat misleading to say that the pure concepts are here at work as determinative of thoughts of *objects*, rather than as determinative solely of the expressions of *subjective* harmony. That is to say, there is a real question, however, about whether or not the pure concepts *qua* categories (i.e., *qua* concepts of *objects*) are at work at all within the Analytic of the Beautiful, since these Moments are qualified throughout as non-objective. Cf., §1: 'in order to decide whether or not something is beautiful, we do not relate [beziehen] the representation...to the object [auf das Object], but rather relate it...to the subject (5:203). Note that in the footnote to §1, Kant himself says he is guided, not by the categories, but by the *logical functions in judgment*. (I would like to thank Hannah Ginsborg and Stephen Engstrom for conversations in which they emphasized subtleties such as these, which need to be kept in mind when attempting these sorts of 'architectonic' correlations of the KU's theses.)

abstraction from, their having been provided with a specific sort of ‘manifold’<sup>18</sup> – themselves remain *determinable* with respect to types of object or material, and contain within themselves the bare notion of an ‘object in general’. Hence the science which limited itself to the investigation of these concepts as such – that is, transcendental *logic* in what may be called a ‘strict’ sense of the term – would likewise not be able of its own accord to yield *material* rational cognition of any sort (i.e., neither practical nor theoretical). Rather, it would be limited to the generic expression of the intellectual ‘acts’ of synthesis which mental states must have undergone in order to correctly be ascribed the property of ‘object-directedness’, leaving it open whether further non-intellectual conditions must also be met, in the cooperative exercise of additional mental capacities.

Let me emphasize the qualification ‘in a strict sense’ that I made to the definition of transcendental logic in the preceding paragraph. Such emphasis is necessary because there is an obvious sense in which the portion of the first *Kritik* that is entitled ‘Transcendental Logic’ deals with much more than transcendental logic in this strict sense. The latter is a science that analyzes *only* the *intellectual* aspect of object-directed mental states, and would seem to be the science that Kant has in mind in the following passage: ‘in a transcendental logic we *isolate* the understanding...and elevate from our cognition merely the part of our thought

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<sup>18</sup> This, I take it, is what is (or should be) meant by the now-common phrase, the ‘unschematized categories’.

that has its origin [Ursprung] *solely* [lediglich] in the understanding' (B87; my ital.). Nevertheless, crucial parts of the 'Transcendental Logic' – most notably, the Schematism and the Principles (not to mention the second half of the B-Deduction) – make essential use of the formal conditions of sensibility (especially time), which is, of course, to make use of a 'part' of cognition that clearly 'has its origin' (at least in part) *outside* of the understanding. What are we to make of these apparently diverging senses of the label?

This problematic was grasped perhaps most clearly by Heidegger, in his 1927-8 lecture course, *Phänomenologische Interpretation von Kants Kritik der reinen Vernunft*.<sup>19</sup> Heidegger raises this issue by questioning why the Schematism (and *a fortiori* the Principles) is placed *within* the division entitled 'Transcendental Logic', rather than accorded a separate location within the first *Kritik*.<sup>20</sup> Heidegger's conclusion (in §13) is striking:

That in the transcendental *logic* Kant undertakes not only the analysis of pure thinking, as the second element of knowledge, but also the problem of the unification of the two fundamental sources in the entirety of the enactment [Vollzug] of knowledge – this

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<sup>19</sup> Vol. 25 of Klostermann's 'Gesamtausgabe'; English trs. P. Emad, K. Maly (Bloomington: Indiana, 1997).

<sup>20</sup> Cf.: 'What the transcendental aesthetic deals with is not simply turned off [ausgeschaltet] in transcendental logic – which *does* actually happen to transcendental logic in the transcendental aesthetic. Rather, the transcendental logic takes up what the transcendental aesthetic deals with as necessary foundation and a central clue [Leitfaden]. [...] The time which is interpreted in the transcendental aesthetic in a preliminary fashion functions in the all the crucial sections of the transcendental logic – and indeed as something fundamental' (79).

misled Kant-interpretation all along and allowed it to bypass crucial problems. (168)<sup>21</sup>

Let us take just one example of a crucial problem which would be obscured. Suppose one fails to see that, prior (or at least parallel) to the project of explaining the very possibility of, and then achieving the realization of, synthetic a priori cognition of nature (i.e., the task of the KrV's 'Transcendental Logic'), Kant also means to isolate and identify the pure forms of thought of an object *as such*, independently of any further specification which might be made on the type or domain of objects to which the higher cognitive faculties might be directed. Then, as Charles Parsons, Stephan Körner, and (especially) Karl Ameriks have both repeatedly insisted, the very possibility of truly *philosophical* cognition (i.e., a priori rational cognition through concepts) in the *moral* domain will be rendered unintelligible, since there will be no clear set of concepts or principles available from the side of the higher cognitive faculties which could then provide the necessary, and necessarily independent, *rational* guidance in moral inquiry.<sup>22</sup>

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<sup>21</sup> Cf. Heidegger (op.cit.), also from §13: 'Although from the analytic of principles onward pure intuition of time and thinking's possible *unification* with time becomes a problem, this theme remains within the transcendental *logic*. The fact that this second book appears within the transcendental logic itself covers over the beginning of a *new* problematic' (167).

<sup>22</sup> See Ameriks, *Kant's Theory of Mind* (originally 1982), 2<sup>nd</sup> ed. (Oxford: Oxford, 2000): 'the categories have a meaning that is non-temporal (B305). This is, of course, not a new or incidental doctrine for Kant. It is merely a reflection of his theory of the logical forms of judgment, a theory that he takes to be the key to his entire (theoretical) philosophy' (268); cf., also, 82n99. See more recently, Ameriks, *Interpreting Kant's Critiques* (Oxford: Oxford, 2003), 28, 32. See also, Parsons, 'Kant's Philosophy of Arithmetic' (originally 1969), reprinted with additions in his *Mathematics in Philosophy* (Ithaca: Cornell, 1983): 'if he could not trust logic in this realm [beyond appearances], Kant's metaphysics of morals would not be able to get off the ground' (117). Note, however, that even Ameriks and Parsons are not yet precise enough,

To summarize, then: I would argue that we should view much of the portion of the first *Kritik* that bears the title ‘Transcendental Logic’ as not a transcendental logic in a strict sense (since the understanding is not considered *in full isolation*). Instead, it should be considered as, if not the full-fledged manifestation of the theoretical philosophy of nature, then at least one of the ‘special [besondere]’ logics Kant mentions in his initial division of ‘logic in general’. For the portion of the *Kritik* labeled ‘Transcendental Logic’ functions as a ‘logic of the particular [besondere] use of the understanding’ insofar as it ‘contains the rules for correctly thinking about a certain kind of objects [eine gewisse Art von Gegenständen]’ (B76): objects of *nature*, or what is the same thing, objects of *possible experience*.<sup>23</sup>

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insofar as they appear to equate the logical forms of thinking with the pure (‘unschematized’) concepts, whereas Kant clearly distinguishes these two as well. (Also, as I hope to show in what follows, I think one must go further than Ameriks, and argue that the doctrine of the formality of logic is central, not only to Kant’s theoretical philosophy, but to his philosophy *überhaupt*.) In this respect, Körner’s remarks are more careful; see his *Kant* (London: Penguin, 1955): “To the critical philosophy as a whole the distinction between schematized and unschematized Categories is fundamental. [...] [Moral freedom] he conceives as a kind of causality which falls outside the order of fact, especially scientific fact. If the only possible causality were the schematized Category, according to which every event is causally determined, there would be no room for moral freedom’ (§4.1, 74-5).

For an example of an interpretation of Kant which covers over the middle, unschematized ‘layer’ of analysis of the pure concepts, see Michael Friedman’s *A Parting of the Ways* (Chicago: Open Court, 2000): ‘what Kant calls the pure logical forms of judgment only become categories in virtue of the transcendental schematism of the understanding – that is, when the pure forms of thought are given a determinate spatio-temporal content in relation to the pure forms of sensible intuition’ (27; cf., 91)

<sup>23</sup> Kant himself draws something close to this division in the ‘Preface’ to his 1786 *Metaphysische Anfangsgründe der Naturwissenschaft*. There Kant introduces a distinction between a ‘transcendental’ and a ‘special [besondere]’ part of the metaphysics of nature. The transcendental part ‘treats the laws that make possible the concept of a nature in general [überhaupt], even without relation to any determinate object of experience’ (4:469), whereas the other part – ‘not a

Aside from Heidegger's remarks, the need for such precision with respect to the term 'transcendental logic' has, to my knowledge, gone unnoticed among commentators. But it is essential that we make this sort of distinction, especially if we wish to grasp what exactly is being asserted by the claim (which several have made) that transcendental logic is a special logic. For instance, Michael Wolff (in his *Vollständigkeit der kantischen Urteilstafel*), provides a chart (204) in which 'transzendente Logik' falls *under* 'besondere', along with other 'special logics' vaguely entitled 'sonstige'. If we take this as a label for the section of the KrV, then one must agree with the classification. However, if we take this term in what I have been calling its *strict sense* – as a name for the analysis of the understanding *in isolation from* all other mental capacities, with an eye toward the determination of the intellectual conditions for object-directed thought as such – then this table is misleading. Wolff himself says little about what he is referring to by this label.

Something similar must be said about John MacFarlane's claims in his recent essay, 'Frege, Kant, and the Logic of Logicism'.<sup>24</sup> Here MacFarlane puts

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general [allgemeine], but rather a special [besondere] metaphysical natural science' – 'concerns itself with a particular [besondere] nature of this or that kind of things' (4:470). The special logic consists in the transcendental principles being 'applied [angewandt] to the two species [Gattungen] of objects of our senses', namely, 'corporeal' and 'thinking nature' (4:470). Yet to be precise, the 'transcendental' part here is one step more concrete than the 'strict' transcendental logic I have sketched above, insofar as it has limited the relevant 'application' of the categories to the domain of nature rather than of freedom.

<sup>24</sup> *Philosophical Review*, 111.1 (January 2002); reprinted in *Gottlob Frege: Critical Assessments* (London: Routledge, 2005). Citations are to the *Philosophical Review* pagination.

forward a view similar to Paton's about general logic, one that is based largely upon the same passages that Paton cites from Jäsche's text:

Kant seems to regard the restriction of transcendental logic to objects capable of being given in human sensibility as a *domain restriction*, like the restriction of geometry to spatial objects. Thus, for instance, he says that transcendental logic represents the object 'as an object of the mere understanding,' while general logic 'deals with all objects in general' (JL, 9:15). And in R1628 (at 16:44.1–8), Kant uses 'objects of experience' as an example of a particular domain of objects that would require special rules (presumably, those of transcendental logic) – as opposed to the 'rules of thinking *überhaupt*' contained in general logic. These passages imply that transcendental logic is a special logic, in Kant's sense. Still, I am not aware of any passage in which Kant explicitly *says* this. (48n35)<sup>25</sup>

Now, as should be evident from the foregoing, I think we cannot remain satisfied (as MacFarlane does) with Jäsche's 'object-neutral' gloss on formal logic. But more to the present point, I think there is very clear reason why MacFarlane cannot find a passage in which Kant does say that transcendental logic *as such* is a special logic – namely, because the general/transcendental distinction is *orthogonal* to the general/special distinction. Special logics take their cue from a particular domain of objects, marked out by a specific mental capacity (i.e., one which furnishes a manifold of material). Transcendental logic *as such* concerns the

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<sup>25</sup> A similar suggestion is also made by Giorgio Tonelli, in his classic work, *Kant's Critique of Pure Reason within the Tradition of Modern Logic* (Zürich: Georg Olms, 1994): 'It is my contention that transcendental logic in particular, and the critique of pure reason in general, belong to the class of special logic. More precisely, they are a special logic for metaphysics' (81). As I say in the next note, I think the last qualification must be made even stronger – it is *because* they constitute the beginnings of a metaphysics of nature, that the relevant portions of the first *Kritik* constitute a special logic.

generic notion of object-relatedness *as such*.<sup>26</sup> Because of this, all of the different types of ‘objects’ mentioned in the Reflexion cited by MacFarlane (R1628, from 1780’s) – i.e., objects of inner and outer experience, and those of pure reason (e.g., ‘Tugend’) – would each be taken up in ‘special’ logics, *all* of which would in turn *presuppose* transcendental logic in the ‘strict’ sense, since they would all take for granted the very (intellectual) conditions which first make possible ‘object-directed’ mental states as such.

Things would be different if MacFarlane’s claims were clearly restricted to ‘Transcendental Logic’ as a section of the first *Kritik*, which one might infer from his reference to Kant’s ‘restriction of transcendental logic to objects capable of being given in human sensibility’. As I have suggested, however, this is not a restriction *intrinsic* to transcendental logic *as such*, or in a ‘strict sense’, but rather one imposed upon transcendental logic by one of the central tasks of the first *Kritik*: that of deriving the apriori principles of the philosophy of nature, imposed

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<sup>26</sup> What is striking in this regard is that, in the only passage I have found in which Kant comes closest to calling ‘transcendental logic’ a ‘special’ logic – a passage from his 1784-5 lectures on metaphysics (*Metaphysik Volckmann*) – it is transcendental philosophy as ‘ontology’ that is first called a ‘special’ [besondere] logic: ‘With respect to the pure use of the understanding, a special [besondere] logic will be necessary’, but even here ‘not objects [Objecte], but rather our understanding itself will be considered’ (28:363). Kant goes on to claim that transcendental philosophy can be called ‘transcendental logic’ because of this fact, that like general logic, we are abstracting from any actual object and considering cognitive capacities; by implication, then, transcendental logic *considered as ontology* might be called a ‘special logic’. But, in the interpretive schema I have been suggesting, this is one level more concrete than transcendental logic in the ‘strict sense’, for ontology consists in the application of transcendental-logical concepts and principles to the specifically *theoretical* domain.



because of *theoretical* philosophy's restriction to the domain of objects given in sensibility (i.e., spatio-temporal sense-experience).

## B. Logical Form as the Syntax of Thought

§13 In these last sections, I have started to build the case in favor of the *non-intentional* interpretation of general-logical 'form', based on the fact that it gives us a fairly straightforward way of accounting for the distinction between the two ways of viewing 'pure concepts', and consequently, a way of accounting for the distinction between a general and transcendental logic. Moreover, I have presented (what is to my knowledge) a novel interpretation of transcendental logic *as such*, one which allows us to keep track of Kant's commitment to what we might call the multiple 'materializability'<sup>27</sup> of the generic 'pure' forms of thinking about an object, and one which stands at a higher level of generality than much of what is contained in the first *Kritik's* 'Transcendental Logic'.<sup>28</sup> But most if not all of the details of this story remain in the dark. Little has been said about any particular 'form of thought *as such*', or 'form of thought about an object *in general*',

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<sup>27</sup> A better phrase might be multiple 'realizability', in order to capture Kant's willingness to talk of, e.g., a distinctly practical form of 'Realität' – though this term has long been co-opted by philosophers of mind.

<sup>28</sup> To make explicit a point alluded to above, on my reading, most of the Metaphysical Deduction and the first half of the B-Deduction belongs to transcendental logic in the 'strict' sense. (This is signaled by Kant's claim (in §16) that its initial conclusions can be derived 'analytically' from the very concept of a discursive understanding as such (B153). By contrast, in the transition to the second half (§21), Kant claims we will now have to make explicit reference to the 'way in which the empirical intuition is given in sensibility' (B144))

or ‘form of thought about an object *of such and such sort*’. Perhaps most importantly, little has been said about what it could mean – either in general, or for Kant himself – to claim that the forms of thought in view in general logic are themselves considered in such a way as to *avoid* reference to the fact that they can be ‘forms’ of something which might otherwise bear intentional relations.

To begin to make headway on these questions, I want to introduce a now-familiar distinction – namely, the distinction between the *syntactic* and the *semantic* dimensions of a language. The idea of connecting logic with syntactic analysis is most typically associated with Rudolf Carnap’s 1934 *Logische Syntax der Sprache*, though the distinction between syntactic and semantic analysis of language is given its perhaps most well-known formulation in Charles Morris’s 1938 *Foundations of the Theory of Signs*.<sup>29</sup> In §5 of this work, Morris describes logical syntax as follows:

Logical syntax deliberately neglects what has here been called the semantical and the pragmatical dimensions of semiosis to concentrate upon the logico-grammatical structure of language, i.e., upon the syntactical dimension of semiosis. In this type of consideration a ‘language’...becomes any set of things related in accordance with two classes of rules: *formation rules*, which determine permissible independent combinations of members of the set (such combinations being called sentences), and *transformation rules*, which determine the sentences which can be obtained from other sentences. These may be brought together

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<sup>29</sup> Vol. 1, no. 2 of the *Fundamentals of Unified Science* (Chicago: Chicago, 1938); the publication series belongs to the *International Encyclopedia of Unified Science*, one of whose editors was, of course, Carnap himself.

under the term ‘*syntactical rule*’. Syntactics is, then, the consideration of signs and sign combinations in so far as they are subject to syntactical rules. It is not interested in the individual properties of the sign vehicles or in any of their relations except syntactical ones, i.e., relations determined by syntactical rules. (14)<sup>30</sup>

Those other properties and relations which are to be neglected in syntactic analysis include, first, ‘the relations of signs to the objects to which the signs are applicable’, or what Morris calls ‘the semantical dimension’, and second, ‘the relation of signs to interpreters’, which Morris calls ‘the pragmatical dimension’ (§3, 6).

While it continues to be common within logic to neglect the ‘pragmatical dimension’ of the subject-matter of logic,<sup>31</sup> the syntactic/semantic distinction is typically introduced in the course of the initial exposition of a deductive system. Deductive systems are constructed through ‘purely’ syntactical specifications, in that they are composed by giving, first, a finite list of (sensible) signs, and second, a set of rules which identify (recursively) which of the possible compositions built up out of these signs are ‘acceptable’ formations (i.e., the ‘well-formed formulae’, or ‘wff’s’) – these are the ‘formation’ rules – and, finally, a set of rules which identify which formations can be written (spoken, ‘produced’) after others – these are the ‘transformation’ rules.

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<sup>30</sup> The division of syntactical rules into ‘formation’ and ‘transformation’ rules is Carnap’s from *Logische Syntax der Sprache*.

<sup>31</sup> Though more recently Robert Brandom has attempted to give a *pragmatic* foundation for both semantics and syntax, and with it, for logic as a whole. See his *Making It Explicit* (Cambridge: Harvard, 1994), *passim*, and his ‘Semantic Inferentialism and Logical Expressivism’ in his *Articulating Reasons* (Cambridge: Harvard, 2000).

It is usually emphasized that, as no ‘interpretation’ or ‘meaning’ has been given to any of the (simple or composite) signs or to the transformation-rules, a deductive system can in this way be constructed or specified through *purely* syntactic means – that is, with reference *solely* to the properties of the signs and sign-sequences. The upshot of such a claim is that, even when we produce an ‘acceptable’ sign-formation, or manipulate the signs ‘in accordance with’ the transformation rules, there is a straightforward sense in which we have as of yet no reason to take these well-formed formulae or our ‘correct’ manipulation of them to *represent* or *refer to* (or correspond to) anything, not even (reflexively) the signs themselves. Rather, the formations, and our transformations of them, are, in the relevant sense, *non-intentional*.<sup>32</sup>

This ‘relevant’ sense is brought out further when we contrast our systematic engagement with these signs, on the one hand, with our engagement with the sign-formations in ordinary language – say, those found in a newspaper. The sign-formations present in a news headline are ‘intentional’ in that they (purport to) present us with objects beyond themselves, or at least that we *take*

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<sup>32</sup> Of course, we can *intend* to form or manipulate. And our thinking and acting surely has certain signs and formations as their *intended* objects. But the signs themselves do not possess – nor have we conferred upon them – additional ‘intentionality’. It might be argued, however, that just by placing the signs in the context of the system, we confer on them at least that much significance (i.e., as being of the right sort to belong to a system), such that there is now at least this sort of ‘sense’ associated with the signs. That is, we now treat these mere ‘marks’ (inscriptions, vocables, etc.) as signs in this particular deductive system. This would be to broaden the notion of meaning to include a kind of contextual significance, rather than restrict it to the typical explicitly denotational or referential ‘meaning’ that is at issue when we give a (model-theoretic) ‘semantics’ for a deductive system.

*them* to present us with additional objects and states of affairs. By contrast, though, to be sure, the signs in a given system *are* objects in their own right, we do not take them to *present* further objects.

We can get a general sense of what is at issue in restricting an inquiry to the syntactical dimension, by considering the following passage from §09 of Alonzo Church's *Introduction to Mathematical Logic*:<sup>33</sup>

Let us imagine the users of a formalized language, say a written language, engaged in writing down well-formed formulas of the language, and in assembling sequences of formulas which constitute changes of immediate inferences, or, in particular, proofs. And let us imagine an observer of this activity who not only does not understand the language but refuses to believe that it is a language, i.e., that the formulas have any meanings. He recognizes, let us say, the syntactical criteria by which formulas are accepted as well-formed, and those by which sequences of well-formed formulas are accepted as immediate inferences or as proofs; but he supposes that this activity is merely a game – analogous to a game of chess, or better, to a chess problem or a game of solitaire at cards – the point of the game being to discover unexpected theorems or ingenious chains of inferences, and to solve puzzles as to whether and how some given formula can be proved or can be inferred from other given formulas.

To this observer the symbols can have only such meanings as is given to them by the rules of the game – only such meaning as belongs, for example, to the various pieces at chess. A formula is for him like a position on a chess-board, significant only as a step in the game, which leads in accordance with the rules to various other steps. All of those things about the language which can be said to and understood by such an observer while he continues to regard the use of the language as merely a game constitute the (theoretical) *syntax* of the language. But those things which are intelligible only through an understanding that the well-formed formulas have

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<sup>33</sup> Princeton: Princeton, 1958.

meaning in the proper sense, e.g., that certain of them express propositions or that they denote or have values in certain ways, belong to the *semantics* of the language. (64; my ital.)

According to a fairly common picture of formal languages, it is only by being given an interpretation – which consists (roughly) in the systematic correlation of the signs and their formations with objects from some domain and with the relations which obtain among these objects – that the sign-strings of a deductive system come to possess an *intentional* content. That is, in addition to *being* objects available for the senses, signs are then also able to *present* (or stand for) those (other) objects with which they have been coordinated.

Now, things get more complex if we bring into view those signs in a typical deductive system which are identified as functioning as the so-called ‘logical constants’, for it might seem as if there is no clear ‘object’ for these signs to present.<sup>34</sup> Yet it has become customary to suggest that such constants acquire a contextual (or rather, ‘proof-theoretic’) significance by the syntactic rules themselves, i.e., one that is conferred upon them simply by their involvement in the formation and transformation rules. We might call this the ‘syntactic’ meaning of the logical constants, which would consist in their role in, e.g., expressing which transformations are acceptable from a given sign-string.<sup>35</sup> Accordingly, the

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<sup>34</sup> Wittgenstein calls this point his ‘fundamental thought’ in the *Tractatus*: ‘Mein Grundgedanke ist, daß die ‘logischen Konstanten’ nicht vertreten’ (§4.0312).

<sup>35</sup> The possibility that the ‘meaning’ of the logical constants could be *exhausted* by syntactical rules – particularly by transformation rules in which they participate, rules for their ‘introduction’ and ‘elimination’ in lines of a deduction – was suggested both by the ‘sequent calculus’ of the

signs designated as logical constants might then be said to ‘present’ or ‘stand for’ the possibility of rule-governed transformation, even prior to a specific assignment of any of the signs to any particular domain of ‘objects’.<sup>36</sup>

To be sure, this contextual, syntactical ‘meaning’ of the logical constants is typically complemented by a semantical ‘meaning’ when an ‘interpretation’ of the signs in the deductive system is provided, relative to a domain of objects and object-relations. For example, in the case of the ‘propositional’ connectives (‘&’, ‘~’), the semantical meaning is usually provided by so-called ‘truth-tables’, in which these constants are systematically assigned to represent functions from (sets of) truth-values to (sets of) truth-values. But note that this is a *supplement* to the meaning of ‘&’ and ‘~’ that is specifiable with reference to the deductive system considered purely ‘syntactically’. I will call the type of ‘meaning’ assigned to the logical constants by their role in the transformation-rules a *syntactic*

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German logician Gerhard Gentzen and by the development of a natural-deductive method by Frederick Fitch. The syntactical account of logical constants became the subject of a famous dispute in the pages of *Analysis* between Arthur Prior (‘The Runabout Inference-ticket’, 1960) and Nuel Belnap (‘Tonk, Plonk, and Plink’, 1962).

<sup>36</sup> Cf., *Tractatus* §6.126: ‘Whether a *Satz* belongs to logic can be calculated [berechnen] by calculating the logical properties of the *symbol*. And this we do when we ‘prove’ a logical *Satz*. For, without troubling ourselves with a sense [Sinn] or a reference [Bedeutung], we construct a logical *Satz* out of another one according to mere ‘sign-rules’ [Zeichenregeln]’ (my ital.). For the development of a proof-theoretic account of the ‘meaning’ of the logical constants which draws inspiration from this quote from the *Tractatus*, see Ian Hacking, ‘What is Logic?’, *Journal of Philosophy* 76.6 (June, 1979), 285-319. According to Hacking, the way of thinking he finds in the *Tractatus* ‘makes the existence of theorems in logic look like a by-product of the rules that convey the use of the logical constants. It guards against the supposition that theorems represent constraints on how the world must be. The only constraints arise from the system for forming complex sentences. [...] [T]heorems and contradictions are only limiting cases that arise from the rules for the notation itself’ (317).

significance, and the type of ‘meaning’ which results from the assignment of the logical constants to relations expressed by the truth-tables a *semantic* significance.

It is important to emphasize that the syntactic type of meaning accrues to *every* sign(-string) in the system. For one thing, every sign(-string) has a minimal syntactic ‘meaning’ (in the above sense), defined by the sign’s possible role in acceptable transformations – or, at the very least, as having the meaning: ‘ $x$  is (not) a logical constant’. And we can go even further along this line, since it is a short step to seeing the *formation* rules themselves as conferring a certain amount of syntactic meaning upon the signs, insofar as they institute a division among the set of signs according to which of them can, and which cannot function in specific ‘places’ in a sign-formation (‘ $a$ ’ is the sort of sign that can be written after ‘ $F$ ’). But this is just to repeat that the syntax itself, prior to the provision of a semantics, is sufficient to provide each sign with a certain – however minimal, still recognizable – ‘meaning’ or ‘significance’, as its rules ascribe to each sign determinate formational and transformational properties, properties determined contextually from the sign’s role in the sign-system as a whole. It is this ‘significance’ that we ‘see’ *in* the sign, that we take this ‘mark’ *as* of the sort that can be, e.g., put on either side of ‘&’.<sup>37</sup>

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<sup>37</sup> The point here is akin to one made by Michael Dummett in his *The Logical Basis of Metaphysics* (Cambridge: Harvard, 1991): ‘It is a mistake to suppose that, before any genuinely semantic notions have been introduced, only a proof-theoretic characterization of valid inferences is possible. On the contrary, the use of schematic letters depends, for its intelligibility, upon a conception of a particular interpretation of those schematic letters and, more particularly,



Secondly, if we assume the possibility of an independent formulation of a syntactically determinate sign-system, then space opens up for the further possibility that these rules could then be accorded a sort of ‘legislative’ *priority* over any future ‘semantics’ which might be provided for the system. This priority would consist in taking the syntactical rules, on their own, to be sufficient to rule out certain formations as absolutely unacceptable (i.e, unacceptable *regardless* of any and every possible semantic ‘interpretations’ of these formations). In such a case, accordance with syntactic rules would then function as the *conditio sine qua non* for the possible ascription of semantic meaning to this sign-system.

We would then of course be moved to ask on what grounds syntax could possibly be accorded such a priority. But rather than trying to motivate this as a position in its own right, let me now bracket this question of justification for the moment, and instead use this scenario to introduce the position that I wish to ascribe to Kant.

§14 The last case mentioned in the previous section – i.e., the case of a syntactically determinate sign-system in which signs come to possess a minimal

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upon that of an actual sentence’s being an instance of a formula. Hence it lies ready to hand to employ a presemantic notion of an interpretation, that of *an interpretation by replacing* the schematic letters by actual expressions of suitable restricted types...’ (23). By ‘presemantic’, Dummett means ‘pre-model-theoretic’. This is similar to the sort of significance that we ‘see’ in a sign when we take it to be something which marks a place for replacement by a particular sub-set of other signs (of a certain ‘type’), though I do not mean to imply that any step ‘beyond’ mere syntax (to ‘actual’ expressions) is involved.

syntactic ‘meaning’ through their function in a deductive system, in which this meaning is accessible independently of semantic considerations, and in which the syntactic rules are given unconditional authority over all possible future semantic interpretations – is (roughly) what I think Kant has in mind by positing a science which would provide a ‘system’ of *general-logical* forms of thought as such. By contrast, I will argue that *transcendental logic as such* (in the ‘strict’ sense) represents a science which attempts to discern the most general conditions which must be met if these forms (*qua* pure ‘syntax’) are to become ‘determined’ in such a way so that we can take them to represent determinate objects *at all* (that is, so that we can give them any sort of ‘semantic’ interpretation) – though in abstraction from any particular ‘kind’ of object. As Kant himself writes, one of the main tasks of ‘our power [Kraft] of cognition’ is that of ‘*spelling out* [buchstabiren] appearances according to a synthetic unity in order to be able to *read them as experience*’ (B371; my ital.) – i.e., in order to ‘take’ them as presentations of objects, as objective perceptions. In the *Prolegomena* (§30), Kant tells us that it is the pure concepts themselves which ‘serve [dienen]’ to do such ‘spelling out’ (4:312).<sup>38</sup> This, I would argue, is the central significance of Kant’s claim that transcendental logic provides an analysis of ‘thought of an object in general’.<sup>39</sup>

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<sup>38</sup> For a reading of Kant which draws out this metaphor of the need to ‘read’ appearances as being *of* objects, see Gerold Prauss, *Erscheinung bei Kant* (Berlin: de Gruyter, 1971), especially §3. (I thank Thomas Land for directing me to Prauss’s work.)

<sup>39</sup> It could be argued, then, that Kant has a proto-*schematic* picture of pure general logic, in the sense outlined by Warren Goldfarb in his ‘Frege’s Conception of Logic’, *Future Pasts* (Oxford:

Before getting into the details of this interpretation, however, I want to put it to two uses. First, I want to use this analogy to state, in a new yet perspicuous fashion, Kant's relation to the Rationalist tradition. On the one hand, we can say that Kant's continuing *agreement* with Rationalism consists in the fact that he takes there to be an aspect of thinking which is available for analysis a priori – namely, the formal syntax of thought. On the other hand, we can say that Kant's main *break* with Rationalism on this front consists in the fact that no determinate semantics can be derived from reflection upon this formal syntax alone.

In fact, in relation to the last point, I think we must see Kant as making an even stronger claim. As I will argue especially in the later sections of this chapter, even transcendental logic *as such* cannot be sufficient to give a complete account of the general conditions for a semantics for thinking, since this science cannot *of itself* fully succeed in presenting the conditions for object-representation in general. Any such account would have to take into consideration the further extra-intellectual conditions that must be met if thought is to become 'related to an object'. Bringing these into view requires that we become engaged in specific 'special', though still pure, logics (such as the 'Transcendental (Speculative) Logic'

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Oxford, 2001): 'Schemata do not state anything and so are neither true nor false, but they can be interpreted: a universe of discourse is assigned to the quantifiers, predicate letters are replaced by predicates or assigned extensions...over the universe, sentence letters can be replaced by sentences or assigned truth-values' (26). Kant's notion of 'form' is quite close to Goldfarb's notion of 'schema' (and Quine's, whose notion Goldfarb means to be elucidating), just as the idea of providing an interpretation for a schema is quite close to what Kant has in mind by 'introducing transcendental content' into a form.

of the first *Kritik*), which only become possible once we fix the domain of object-types (by fixing which specific mental capacity will be cooperating with the understanding). It is only at the level of these ‘special’ logics that we can secure an adequate semantic analysis of thinking, and with it, the conditions for the possibility of cognitive reference to determinate objects. Said another way, it is only at this level that we can secure what Kant calls the *objective reality* of the categories.

Which brings me to a second use for this analogy: to furnish a challenge to contemporary philosophers of logic. Kant’s commitment to an essential link between our sensibility and our commerce with objects is a commitment that can seem quite foreign to the conception of formal logic that has prevailed in most of the English-speaking world since the middle decades of the 20<sup>th</sup> century. This is because, since the revolutions initiated by the work of Gottlob Frege, it has been common to take the concept of an object (and with it, the distinction between objects and concepts) to be *itself* a formal-logical concept, and so to take the form of thought about objects to fall *within* the province of formal logic itself.

This is exemplified by the further fact that, since at least the ascendancy of Quine’s writings within the ‘analytic’ tradition, most logic textbooks have taken for granted that ‘formal logic’ just means, in the first instance, a first-order predicate logic. This logic consists in schematic expressions for predicates that have one or n-places ‘open’ (e.g., (...) is F, (...) is G, (...) is H to (...), and so on).

Each of these places can be filled by either a name ( $a, b, \dots$ ) of an individual, or a variable ( $x, y$ , and so on) which – on the usual interpretation – ranges over a non-empty domain of individuals, to produce either ‘closed’ sentences or judgments (e.g.,  $a$  is F) or ‘open’ ones (e.g.,  $x$  is G), depending on whether there is a variable which has not yet been ‘bound’ to any particular part of the domain. The ‘binding’ of a variable is something which occurs by prefixing an open sentence with either a universal quantifier ( $\forall x$ ; which makes the resulting sentence read: ‘For every individual in the domain, when their name is substituted for  $x$  in the following expression (e.g.,  $x$  is F), it forms a true sentence’) or an existential quantifier ( $\exists x$ ; ‘There is at least one individual in the domain, such that, when its name is substituted for  $x$  in the following expression (e.g.,  $x$  is F), it forms a true sentence’). Each quantifier specifies ‘how many’ of the individuals in the domain the relevant predicate(s) is being said to characterize or be true of, and in this way, binding predicates by quantifiers produce ‘closed sentences’ (e.g.,  $\exists x (x \text{ is } G)$ ). Furthermore, new sentences can also be formed out of other (closed or open) sentences by connecting them with the usual propositional operators (not, and, or, if...then). Finally, identity ( $=$ ) is introduced as a special two-place predicate with a fixed signification, which we can understand, for the sake of the discussion which follows, as: ‘... is the name of the same individual as ...’.<sup>40</sup>

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<sup>40</sup> This is, of course, to construe identity as a relation between *names*, rather than simply between *objects* named. I take this route because it allows for a more natural connection with

The basic or ‘atomic’ form of a sentence in such a logic is roughly ‘ $Fx$ ’, where the two basic components are a predicate and that which fills its argument-places. Such a logic is called ‘first-order’ because its variables range over a ‘first-order’ domain that can consist entirely of individuals. This is in contrast to the domains required for ‘higher-order’ logics, which introduce variables that purport to range over, for instance, the ‘entities’ that the predicate-letters themselves stand for (e.g.,  $\exists F$ ), or even over ‘entities’ corresponding to the propositional operators or the quantifiers themselves.<sup>41</sup> Neither the ‘ $x$ ’s (variables) nor the ‘ $a$ ’s (singular terms) in our first-order logic can ever be taken to stand for things besides objects (i.e., predicates, etc.), and so a sentence is always essentially a relation between a predicate and some (set of) object(s).

In this sense, then – i.e., in its use of ‘singular’ terms, in its understanding of the nature of the argument-places inscribed within predicate-expressions, and in its conception of the universe of quantification – the now-common conception of formal logic takes itself to deal with the basic form of representation of objects. Yet as we have seen, Kant contends that it is only by reflection upon the forms of sensible *intuition* that we will be able to establish the fundamental forms of the

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Kant’s discussion of the identity of *representations* of objects. This is the route taken by Frege in his *Begriffsschrift* §8: ‘Identity of content [Inhaltsgleichheit] is distinguished from the conditional and from negation as it is related to [bezieht auf] to names, not to contents’ (13).

<sup>41</sup> These last two sorts of quantification are explored in particular by the ‘Lwów-Warsaw’ school of Polish logic, in the ‘protothetic’ of Leśniewski. See J. Łukasiewicz, ‘On variable functors of propositional arguments’, *Proceedings of the Royal Irish Academy*, 54A.2 (1951); cf., A. Prior, *Formal Logic*, 2<sup>nd</sup> ed. (Oxford: Clarendon, 1962), I.3.4, 65f.

representation of objects. In the first *Kritik*, for example, Kant claims that ‘one must either abstract from any object [von allem Gegenstande] (in logic), or else, if one assumes an object, then one must think it under conditions of sensible intuition’ (B335). Insofar as logic *isolates* our capacity for thinking from every other capacity – including our capacity for sensing – then it will not have at its disposal the resources necessary to pick out those features of our mental life which characterize thought *of objects*. This is of a piece with Kant’s insistence in the first *Kritik* that ‘one must not mix up [vermischen] [the] roles’ of understanding and sensibility, but ‘rather one has great cause to separate [absondern] them carefully from each other and distinguish [unterscheiden] them’ (B75-6).<sup>42</sup>

For Kant, then, if any science is to deal with objects – is to have a legitimate claim to be ‘true’ of objects – then, because of the makeup of our mind (i.e., its finitude), such a science simply must bring into view the conditions on our being given these objects. But as we have seen above, this science would turn out to be a *transcendental* science, insofar as it means to take up the conditions of thought’s being ‘about’ objects. Hence, in addition to reflection upon the forms of thought, this science would have to incorporate various demands that are made

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<sup>42</sup> As is well-known, Leibniz is charged with just such a ‘mix-up’ in the ‘Amphiboly’ section of first *Critique*: there Kant writes that Leibniz ‘intellectualized’ our sensory appearances, instead of ‘seeking two entirely different sources of representation in the understanding and sensibility’ (B327).

by our sensibility, and so would have to make explicit reference to at least temporal and possibly spatial relations as well.<sup>43</sup>

And it is here that we can form an initial challenge on behalf of Kant's position, in the form of a dilemma: either (a) first-order logic is purely *formal*, but then it cannot be said (on its own) to represent a science of thought *of objects*, or (b), if it wants to retain its claim to articulate the concept of an object of thought, then first-order logic must (implicitly) incorporate features of our sensibility, in which case it would become a *transcendental* logic. Such incorporation might very well occur at the level of semantics, by building spatio-temporal constraints into the specification of the sense of 'existence' required to belong to the domain for quantification,<sup>44</sup> or at least by loosening the constraint that all singular terms refer.<sup>45</sup> Those wishing to take the first option might hope to find a route to a

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<sup>43</sup> I leave the necessity of space as somewhat indeterminate, since Kant typically limits his reference to *time* as the fundamental and uniform formal-sensible condition upon the totality of representations. See for example B177 and B194. There is reason to think, however, that the Refutation of Idealism implies that spatial reference will be equally necessary.

<sup>44</sup> This is done, for example, by Neil Wilson, 'Space, Time, and Individuals', *Journal of Philosophy*, 52.22 (Oct. 1955), 589-98; cf., as well his critical remarks of the 'Berkeley-Russell-Goodman' tradition in his 'Substances without Substrata', *Review of Metaphysics*, 12 (1958), 521-539. Intuitions about the necessary role of temporality ground both Prior's construction of tense logics (cf., *Time and Modality*) and recent criticisms of contemporary logic and semantics by Sebastian Rödl (cf., *Kategorien des Zeitlichen*).

<sup>45</sup> This is required by Frege, and the consequences for the interpretation of 'existence' within first-order logic are set out in a particularly striking fashion by Russell, in his *Introduction to Mathematical Philosophy* (ch. XV): 'though it is correct to say 'men exist', it is incorrect, or rather *meaningless*, to a given  $x$  who happens to be a man. Generally, 'terms satisfying  $\phi x$  exist' means ' $\phi x$  is sometimes true'; but ' $a$  exists' (where  $a$  is a term satisfying  $\phi x$ ) is a mere noise or shape, *devoid of significance*' (165; my ital.). For some discussion of this treatment of the representation of existence in first-order logic, along with related issues concerning the interpretation of the 'significance' of the identity-sign within such a logic, see C.F.J. Williams, *What is Identity?* (Oxford:



more ‘formal’ conception of first-order logic by way of a ‘substitutional’ interpretation of the quantifiers, or (again) by developing a ‘free’ logic.<sup>46</sup> Yet if it fails to be – or to become – ‘transcendental’, then the contemporary understanding of first-order logic would represent, in Kant’s eyes, a variant of (amphibolous) *transcendental realism*, in which the conditions for thinking *alone* are taken to be sufficient for the determination of the conditions of things ‘in themselves’.<sup>47</sup>

With these last two points, however, we have stepped too far ahead of ourselves, and should back up a bit, to address concerns one might have about the even *prima facie* plausibility of the construal of Kant’s formal logic as

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Clarendon, 1989), especially ch. V, §§1-6, as well as Williams’s *What is Existence?* (Oxford: Clarendon, 1981), ch. III, §§8-10.

<sup>46</sup> For the claim that free logic is the logic of transcendental idealism, while classical logic is the logic appropriate to transcendental realism, see Ermanno Bencivenga, ‘Free from what?’, *Erkenntnis*, 33.1 (July 1990), 9-21. In his ‘Plea for Substitutional Quantification’, *Journal of Philosophy* 68.8 (April 1971), Charles Parsons notes that ‘in a language in which the [possibility of non-referring singular terms] arises, the substitutional quantifier would not express existence but something closer to Meinong’s ‘being an object’ (233); ‘substitutional quantification gives rise to a genuine ‘doctrine of being’ to be set alongside Quine’s and others. It parallels certain idealistic theories of the existence of physical things, such as the account of perception in Husserl’s *Ideen*’ (234-5).

<sup>47</sup> Hence it is unsurprising that Dummett’s critique of first-order logic is grounded on its failure to keep track of the limits of human capacities for recognizing (proving) truths, and so illicitly extends its concept of ‘truth’ via an unrestricted application of the principle of bivalence – that literally every proposition, whether humanly expressible or not, must (already and always) be (determinately) true or false. See Dummett’s 1973 ‘The Philosophical Basis of Intuitionistic Logic’, in his *Truth and Other Enigmas* (Cambridge: Harvard, 1978), and *The Logical Basis of Metaphysics*. In his 1912 address, ‘Intuitionism and Formalism’ (reprinted in Benacerraf and Putnam, *Philosophy of Mathematics*), Brouwer, the first ‘contemporary’ advocate of the ‘intuitionist’ position that Dummett develops, explicitly ties his critical perspective to Kant’s thesis about the limitations imposed on human reasoning by temporality (80), and claims as well that ‘in Kant we find an old form of intuitionism’ (78). For a treatment of Kant as a ‘Dummettian anti-realist’, see Carl Posy, ‘Kant’s Conceptual Semantics’, *Topoi*, 10.1 (March 1991), 67-78.

‘syntactic’. Shouldn’t this be condemned as ‘anachronistic’? Doesn’t a syntactic conception depend on distinctions that Kant couldn’t have been aware of? For what grounds do we have for attributing to Kant this ‘syntactic’ conception of the formality of general logic?<sup>48</sup> And shouldn’t the following objection arise straightaway, that Kant speaks of *thought* rather than *language*? What exactly could it mean to talk about the identification of syntactic forms of thinking? Let me turn to these concerns in the next section.

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<sup>48</sup> Arthur Melnick (*Kant’s Analogies of Experience* (Chicago: Chicago, 1973)) is one of the first to use the language of syntax: ‘The logical functions of judgment are themselves *syntactical* concepts; concepts of judgment forms rather than concepts of the objects judged about’ (39). These remarks are cited approvingly by Henry Allison, *Kant’s Transcendental Idealism*, 1<sup>st</sup> ed., 118. In his ‘Kant’s Mathematical Realism’ (*Kant’s Philosophy of Mathematics*, ed. Posy (Dordrecht: Kluwer, 1992)), Carl Posy recently assesses the allegation of ‘anachronism’ as follows: ‘clearly there is no issue here [i.e., talk of formal syntax]. That device is as benign as using English to describe Kant’s views – so long as we don’t falsely ascribe any implicit meanings or attitudes hidden in the formalism. The real question is the autonomy of logic as a topic neutral science. [...] Kant was perfectly at home with the idea of a theory of judgments which is topic neutral. The unschematized categories and his whole notion of general logic are two levels of abstraction which fit into this general way of talking. Kant wasn’t as clear on this as Russell and Hilbert, but there is no great distortion in using their devices to illuminate his thinking’ (309).

Even more recently, Robert Hanna finds it fit to use the phrase ‘Logical Syntax of the Mind’ as a title of one of the sections of his *Kant and the Foundations of Analytic Philosophy* (Oxford: Oxford, 2001), claiming that ‘the pure concepts thereby supply rules of well-formedness for all other concepts and unified concept complexes (judgments). [...] Kant’s list of logical forms operates first and foremost as an a priori normative doctrine of logical syntax’ (79-80). As I argue below, in Chapter VI, there are serious difficulties which must be faced by any interpretation which takes pure general logic to be ‘normative’ in the familiar sense, though Hanna’s fairly nuanced reading avoids many of these pitfalls. For instance, I think Hanna is exactly right that ‘putative representational contents that do not satisfy these rules, even if they seem superficially to be acceptable concepts or judgments, are ill-formed or nonsensical and hence pseudo-concepts or pseudo-judgments’ (79), though I take it that this fact does not (on the face of it) entail a normative construal of the formation rules which are being violated by such representations.

§15 For some, it might be enough to disarm the initial force of the objection to point out that there has been substantial energy recently devoted to what has come to be called the ‘Language of Thought’ hypothesis, in which it is precisely thought itself that is said to have syntactic structure.<sup>49</sup> But even among those who wish to reject this hypothesis, and so wish to deal solely with fully ‘externalized’ language, most (aside from Quine) do not thereby mean to speak of language merely in the sense of written or audible marks within space-time, but rather the abstract type-structures of which such marks are tokenings. To the extent that these structures are meant to straddle various empirical ‘languages’, they move closer to a degree of abstraction which might make a label such as ‘thought’ more appropriate.

In any case, throughout the Critical period, Kant himself makes several remarks in which he claims that thinking and language have a parallel structure.<sup>50</sup> For instance, late in his career, Kant makes the following general claim about

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<sup>49</sup> Most prominent among these proponents is, of course, Jerry Fodor. See his *The Language of Thought* (Cambridge: Harvard, 1975), *The Modularity of Mind* (Cambridge: MIT, 1983), and *Psychosemantics* (Cambridge: MIT, 1987). By this reference, however, I by no means want to ascribe to Kant either Fodor’s various ambitions for reductionism about the mental, nor his version of representationalism – though some interpreters (e.g., Patricia Kitcher, and at times, Jonathan Bennett) appear to think that this would be the most profitable way to read (or salvage) Kant’s views.

<sup>50</sup> The analogy is used by Kant much earlier – for example R1580 (1769-75): ‘Sie haben eine gelehrte Sprache nach einer Grammatic gelernt, um sie richtig zu machen. Jetzt werden sie gleichsam *die grammatic des Verstandes und Vernunft* lernen’ (16:23; my ital.). The point of the analogy, however, shifts along with his changes of doctrine concerning the nature of logic.

thought's relation to language in his 1798 *Anthropologie in pragmatischer Hinsicht*

(§39):

All language is signification of thoughts [Bezeichnung der Gedanken], and conversely the most excellent mode of the signification of thoughts is through language, this being the best means for understanding oneself and others. Thinking is *talking* with oneself [Reden mit sich selbst]..., consequently it is also an inner *listening* to oneself [sich Hören] (through the reproductive imagination). (7:192)

A similar point is surely in the background of the following claim from the 1783 *Prolegomena* (§39), which describes the manner in which the pure concepts – here identified as the general ‘forms of connection’ in cognition – are discovered:

To pick out from ordinary cognition the concepts that are not based on any particular experience and yet are present in all cognition from experience (for which they constitute as it were the mere form of connection [Form der Verknüpfung]) required no greater reflection or more insight than to cull from a language rules for the actual use of words in general, and so to compile the elements for a grammar (and in fact *both investigations are very closely related to one another*).... (4:322-3; my ital.)<sup>51</sup>

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<sup>51</sup> Compare to this the passage from the ‘Preface’ to the 1793-5 unfinished contribution to the Berlin Academy’s prize essay contest – on the ‘progress’ [Fortschritte] of metaphysics since Leibniz and Wolff – in which Kant again draws a clear analogy between ‘grammar [as] the resolution [Auflösung] of a form of thought [Sprachform] into its elementary rules’ and ‘logic [as] a resolution of the form of thought [Denkform]’ (20:260).

The full title of this essay is: *Welches sind die wirklichen Fortschritte, die die Metaphysik seit Leibnizens und Wolfs Zeiten in Deutschland gemacht hat?* The material for this essay was published only posthumously (1804) by Kant’s friend Friedrich Theodor Rink; for concerns about Rink’s editorial influence on the extant text, see Henry Allison’s ‘Editor’s introduction’ to the Cambridge Edition translation, in *Theoretical Philosophy after 1781* (Cambridge: Cambridge, 2002), 339-47.

It is clear *why* both investigations must be ‘very closely related to each other’: thought is being conceived as a sort of ‘inner language’, and language as a sort of ‘outer thinking’.

Later Kant will go further along this line, but also make the relationship more precise, as he contends not only that the investigation of grammatical forms and forms of thought are very closely related to one another, but also that the forms of thought actually *ground* the forms of language. The following Reflexion (R1620) from the 1780’s expresses this nicely:

Speaking. Thinking out loud. [...] Language is communication of thoughts. [...] A universal theory of thought is therefore possible, and a universal theory of language *follows from* [folgt aus; my ital.] this theory as well. *Grammatica universalis*. [...] This universal theory of thought is logic. (16:40)<sup>52</sup>

It is unsurprising, then, that in his 1790 polemic against Eberhard, *Über eine Entdeckung*, we find Kant chastising contemporary logicians for distinguishing a ‘proposition [Satz]’ from a ‘judgment [Urteil]’ on the grounds that the former, but not the latter, are ‘expressed in words [mit Worten ausgedrückt]’; Kant holds, by contrast, that ‘we must also *in thoughts use words* [in Gedanken der Worte bedienen;

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<sup>52</sup> For comparison, the German reads: ‘Sprechen. Laut denken. [...] Sprache ist aber Mitteilung der Gedanken. [...] Eine allgemeine Gedankenlehre ist also möglich, und aus ihr folgt auch eine allgemeine Sprachlehre. *Grammatica universalis*. [...] Diese Allgemeine Lehre des Denkens ist Logik.’

Something similar is contained in the later (‘L<sub>2</sub>’) set of the so-called *Pölitz* notes from Kant’s 1790-1 lectures on metaphysics, where Kant is reported to have drawn out this analogy even further, writing that if ‘we were to dissect [zergliedern] the transcendental concepts’ – i.e., the pure concepts – ‘then this would be a *transcendental grammar* [transscendentale Grammatik] which contains the *ground* [Grund; my ital] of human language’ (28:577).

my ital.] in judgments which we do not regard as propositions' (8:193n-4n). Such a claim is repeated throughout the logic lectures, and put well in §30 of Jäsche's *Logik*:

On the distinction between problematic and assertoric judgments rests the true distinction between judgments and *propositions* [Sätzen], which is customarily placed, wrongly, in the mere expression through words, *without which one simply could not judge at all* [my ital.]. In judgment the relation of various representations to the unity of consciousness is thought merely as problematic, but in a proposition as assertoric. (9:109)<sup>53</sup>

Hopefully enough has been said to clear certain (*prima facie*) obstacles for an interpretation that proposes to analyze the forms of thought by way of reflection upon the properties of the grammar or syntax of a system of signs (what is regularly called a 'formal' language).<sup>54</sup> But can we now provide any positive grounds for the appropriateness of this sort of analysis?

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<sup>53</sup> Cf., *Wiener Logik*: 'When the *logici* say, however, that a proposition is a judgment clothed in words, that means nothing, and this definition is worth nothing at all. For *how will they be able to think judgments without words?* [my ital.] Thus we prefer to say that a judgment considers the relation of two concepts insofar as it is problematic, while by propositions we understand an assertoric judgment' (24:934).

There are many *logici* to whom Kant might have been referring; for an example, consider Isaac Watts *Logick* (1726): 'A *proposition* is a sentence wherein two or more *ideas* or *terms* are joined or disjoined by one affirmation or negation.... In describing a *proposition* I use the word *terms* as well as *ideas*, because when mere ideas are joined in the mind without words, it is rather called a *judgment*; but when clothed with words, it is called a *proposition*, even though it be in the mind only, as well as when it is expressed by speaking or writing' (144). This view persisted after Kant; compare Richard Whately, *Elements of Logic* (1826): 'The second part of logic treats of the *proposition*; which is, *judgment expressed in words*' (II.§1, 41).

<sup>54</sup> Let me be clear: I do not want to saddle Kant with the claim that any particular *natural* language perfectly expresses thinking, or the grammar for any *natural* language would mirror the logic for thinking as such. In this regard, cf., the following 'note' to §31 of the *Jäsche Logik*: 'Since the nature of explicable propositions *depends merely on conditions of language* [my ital.], in accordance

For one, Kantian logical forms are like syntactic forms in that they are both *non-intentional* in the sense sketched above. We have already seen this, insofar as the subject-matter of general logic is the forms of thinking considered in abstraction from their involvement in a ‘relation to an object’. As a consequence, in thinking about these forms, in bringing them before the mind for consideration – that is, in the course of *logical investigation* – we are not thereby thinking about something which in turn *presents* us with an object, but thinking about something which, though an object in its own right, fails to have the appropriate properties required of anything which would put us in a relation to an object.

Secondly, Kant clearly accords to these forms what I have called an unconditional ‘legislative authority’ over any possible attempt to institute intentional relations between the forms and objects. We can infer this from the simple fact that Kant accords to pure general logic the absolute authority to separate thought as such from non-thought, and so the power to rule out certain ‘things’ as impossible to interpret as a thought *at all*, and so *a fortiori* the power to rule out certain ‘things’ as impossible to interpret as a thought *about* an (any) object.<sup>55</sup> In the first *Kritik*, Kant writes that general logic ‘contains the absolutely necessary rules of thinking, without which no use of the understanding takes

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with which one can express two judgments briefly at once, the observation that in our language there can be judgments that must be expounded belongs not to logic but to grammar’ (9:109).

<sup>55</sup> I put ‘things’ in quotes here to indicate that it is not clear that there ‘are’ any ‘things’ which contravene the rules of general logic. See below.

place' (B76). That is, if some 'thing' violates the rules set forth in general logic – such as the Principle of Contradiction [Satz des Widerspruchs] – it is ruled out as a thought. Kant states this quite clearly in *Über eine Entdeckung*: 'whatever conflicts with [nicht bestehen mit] this principle is obviously *nothing* [nichts] (*not even a thought* [gar nicht einmal ein Gedanke])' (8:195; my ital.). To repeat, thinking simply does not 'take place' except in accordance with this rule; in Kant's words, it is the 'general though to be sure only negative condition [Bedingung] of all judgments', since if they contradict themselves, 'these judgments in themselves are *nothing* [nichts]' (B189; my ital.), and 'contradiction entirely *annihilates* [vernichte] and cancels [aufhebe] them' (B190; my ital.).<sup>56</sup>

In general, then, that no thought or judgment 'can be opposed to it without annihilating itself [sich selbst zu vernichten] certainly makes this principle' – the Principle of Contradiction, in this passage, but I would argue, the point extends to the principles of general logic as a whole – 'into a *conditio sine qua non*' for thought as such (B191). There are, no doubt, other properties which typically accrue to thought – including not only the one which we have been discussing (the capacity for thought to enjoy *any* 'relation to an object'), but also more robust properties like the capacity for a thought to enjoy the relationship of *agreement* with an object; that is, the capacity for thought to be 'really' *true* (or false). But

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<sup>56</sup> These passages are discussed below, in Chapter VI, where I argue that they provide evidence against those who would wish to ascribe to Kant a 'normative' or 'imperative' understanding of the logical laws.



regardless of whatever other properties it is possible for thought to have, general logic specifies the *fundamental* conditions which must be met by something ‘as such’ (considered ‘in itself’) if it is to be counted as a thought at all. We can transpose this idea into the aforementioned language of ‘syntax’ by saying: something must conform to the syntactical specifications provided by general logic if it is to be counted as thought at all, regardless of whatever further conditions are discovered about the conditions of semantic evaluation.

Perhaps the full payoff of trying to draw out this affinity with contemporary discussions will not yet be clear. In any case, we will have to wait on a detailed elaboration of the investigation of the form of thinking as such (as an investigation of the syntax of thought) through a more concrete formulation of Kantian formal-syntactic rules, until more is said about specific ‘forms of thought’ and specific logical principles. (See below, Chapters **III-V**.) But hopefully even now it is evident that one clear virtue of deploying this alternate vocabulary is that we will then be able to put Kant’s views in dialogue with contemporary debates concerning, for example, the relative dependency of syntactic and semantic properties of a deductive system, or likewise the relative priority of semantic truth to syntactico-deductive consistency as providing a possible foundational concept

for logic, or finally, the constraints on any account of the semantic dimension of thinking.<sup>57</sup>

In the meantime, though, rather than continuing to use notions familiar from more contemporary contexts to aid in the explication of Kant's views, in the next few sections I want to say more about what is involved in the idea of the form of thinking 'as such', or 'in itself' (or 'for itself', as Kant puts it at times), using the vocabulary of Kant's own period. That is, I want to shift the language of exposition from that of contemporary logic to that of the modern period, and show now how we might render the notion of 'form of thinking' more intelligible

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<sup>57</sup> To look ahead for the moment, let me suggest here that even on the choice of the foundational semantic concept, Kant will be at odds with now-common-sense in logic, insofar as he places clear priority on the *intensional* dimension of thought, rather than its *extensional* or denotational or referential aspect, in the contemporary senses of these terms. To put it another way, Kant's logic is a logic of Fregean *Sinne*, rather than a science of *Bedeutungen*, whether these are in the first instance individual objects and their relations or 'truth-values'. Even so, as I will argue in the following chapters, Kant does not take *Sinne* to be defined solely by their connections to truth-evaluable judgments, but has a broader conception of 'intensional' content, which extends to all sorts of thinkable 'content', such as that which is involved in practical and aesthetic judgments. Furthermore, Kant will claim that there is no single semantical account which can be given for thinking, since there are at least two fundamentally distinct domains of 'objects', each of which brings with them fundamentally different conditions on being 'related' to these objects.

For a kindred exposition of some of the themes I have broached above, see Mary Tiles, in her contribution on Kant to the *Handbook of the History of Logic* (Amsterdam: Elsevier, 2004): 'In judgment aimed at objective truth we cannot think that we are just subjectively comparing our ideas. Or to put it another way, intensional relations between concepts can no longer ground the truth of our judgments. This may serve for (analytic) logical truth, but not for objective truth. One might then suppose that the shift [in object-directed judgment] is simply from an intensional to an extensional logic, treating concepts via their extensions' (108). 'And indeed this is what it became at the hands of Frege as picked up by Russell and the logical positivists, and later by those using an extensional semantics. The move to formal extensional semantics is arguably a move to what Kant called transcendental logic, although equally arguably it is not made in a way which he would have approved' (108n8). '[T]he parallel with formal semantics may enable us to see that, at least to an extent, modern logic moved in the transcendental direction, counting delimitation of domains of possible interpretation as being within its scope' (109).

by focusing in particular upon a well-known philosophical distinction from the period, one which has received more attention for its role in pre-Kantian philosophy, than for its role in Kant's own writings – though, as I will argue, the distinction is, in effect, deployed by Kant himself. This is the distinction between the *formal* and *objective reality* of thinking.<sup>58</sup>

### C. Logical Form as the ‘*realitas formalis*’ of Thought

§16 Most readers will be familiar with the Scholastic distinction between formal and objective reality [*realitas*] – or the closely related distinction between formal and objective ‘modes of being [*modi essendi*]’ – because it has been kept alive in our collective memory predominantly through Descartes’ use of it in his *Meditations*, and then again in his ‘Replies’.<sup>59</sup> Yet I think it is clear – as the author of the entry on ‘objective reality’ in the *Historisches Wörterbuch der Philosophie* claims<sup>60</sup>– that ‘the term *realitas objectiva* plays a decisive role in *both* the *Meditations* of Descartes – here as a concept opposite to ‘formal’ or ‘actual reality’ – *as well as*

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<sup>58</sup> I was first instigated to explore the possibility of interpreting Kant’s use of this notion by way of its scholastic-cartesian heritage through a conversation with Jim Conant.

<sup>59</sup> I should say that I do not mean to imply that there is ‘one’ Scholastic notion, or that Descartes simply takes over a common notion without at the same time transforming its meaning in his radically ‘subjective’ turn. For a sense of the disputes about the distinction within the period that Descartes’ usage provoked (particularly over the meaning of ‘objective’), see especially the 1<sup>st</sup> set of Objections by Johannes Caterus to Descartes’ *Meditationes*, as well as Descartes’ Replies. (My thanks to Charles Larmore for emphasizing the plurality of points of view.)

<sup>60</sup> One ‘B. Kible’; cf., Bd 8 (Basel: Schwabe, 1992); 194f.

in the works of Kant' (194; my ital.). Kible is exactly right on this point, even though there can be no doubt that the concept receives much less thematization by those interpreting Kant's works than it does by readers of Descartes.<sup>61</sup>

Even though the term continues to be linked to Descartes, it is worth taking some care in interpreting its meaning, since, as Kible notes, 'objective reality' has since then come to mean something which is nearly the opposite of the meaning to be found in both Descartes and Kant.<sup>62</sup> Additional care is required as I connect Kant's use of term with Descartes's own, since it has been claimed that the two uses are quite distinct. For instance, in a 1976 essay entitled 'Kant's Transcendental Idealism', Wilfrid Sellars cautions that the meaning given to the term 'objective reality' by Descartes should not be confused with the meaning given to this term by Kant, since, as Sellars sees it, the term 'has, of course, a quite different meaning in Kant'.<sup>63</sup> Similarly, in his essay, 'Realitas

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<sup>61</sup> For a notable exception, see Jocelyn Benoist's 'La réalité objective ou le nombre du réel', in *Descartes en Kant*, eds., Michel Fichant et Jean-Luc Marion (Paris: PUF, 2006) 179-196.

<sup>62</sup> 'Heute bezeichnet *objective Realität* die Wirklichkeit der Dinge, insofern si unabhängig von unserem Denken existieren. Der Terminus *realitas objectiva* spielt sowohl in den *Meditationes* von Descartes – hier als Gegenbegriff zu *formaler* oder *aktualer Realität* – als auch in den Werken Kants eine entscheidende Rolle, bedeutet aber jeweils etwas ganz Verschiedenes, ja geradezu Entgegengesetztes' (194).

<sup>63</sup> Sellars, 'Kant's Transcendental Idealism' (*Collections of Philosophy* 6, 1976, 165-81), at §13n4. This is despite the fact that, ten years earlier, in his 1966 John Locke Lectures (reprinted as *Science and Metaphysics: Variations on Kantian Themes* (London: Routledge, 1968)), Sellars himself points us to nothing other than the Cartesian contrast between formal and objective reality as a tool for explicating the Kantian contrast between appearances and things-in-themselves: 'At the heart of the Kantian distinction between things-in-themselves and appearances is the contrast, drawn by Descartes, but by no means original with him, between formal and (in the medieval sense) objective reality' (31). Compare also §30 of Lecture II where Sellars speaks of Kant's 'version of the Cartesian distinction between formal and objective reality' (42).

Objectiva (Descartes-Kant)',<sup>64</sup> Hans Wagner writes that, though 'everyone will be familiar with the term from his study of Kant', 'no one will wish to say that the term means the same thing in Descartes and Kant' (325).

I, for one, actually do wish to say that the term means nearly the same thing in both thinkers, and will show below that Kant's Critical deployment of the distinction – and in particular, Kant's use of the term 'objective' to pick out a way in which a representation can be considered or 'taken' – can and should be seen as a rightful philosophical inheritor of the much more familiar elaboration that this distinction finds in those well-known texts of Descartes.<sup>65</sup> Hence, in the next few sections, I will argue that Kant's use of the very term 'objective reality' is best interpreted as (more than just roughly) Cartesian. But what is more important for the purposes of this chapter will be, first, an argument that Kant makes use of this term ('objective reality') to mark precisely the contrasts we were occupied with in earlier sections – namely, those between the three levels of abstractness with which the *pure concepts* can be considered (i.e., from the point of view of general, transcendental, and pure-special (or 'Transcendental') logic). Consequently, my second argument will be that Kant's conception of the logical 'form' of thinking

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<sup>64</sup> In *Zeitschrift für philosophische Forschung*, 21.6 (July-Sept. 1963), 325-340. I am indebted to Karl Ameriks for pointing me to Wagner's work.

<sup>65</sup> At the end of §18 I turn to the lines of *historical* inheritance by which the distinction reaches Kant.

can also be usefully interpreted along the lines of the Cartesian contrast-notion of the ‘formal reality’ of thought.<sup>66</sup>

Let me make clear at the outset that I do not mean to deny that there are *some* differences between the use of these notions across the two figures. The chief cause of these differences lies in (i) the Kantian discovery or invention (depending on your point of view) of an apriori form of sensibility, (ii) the concomitant distinction in kind between sensible and intellectual contributions to the representations of objects, and (iii) the subsequent restriction of possible objects of cognitive experience to those items which conform to the demands of *both* fundamental cognitive faculties – demands which Kant takes to be demonstrably valid apriori (and which he takes to have been demonstrated in the first *Kritik*).

For a brief look at one prime example of how these foundational commitments lead Kant to diverge from Descartes, consider the case of the ‘objective reality’ of the idea of God. Descartes appears to identify ‘reality’ with ‘possible existence’, and hence ‘objective reality’ with ‘representation of a possible

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<sup>66</sup> Does this mean, by transitivity, that the contemporary syntax/semantics distinction can (or even ought to) be read back into Descartes’ distinction between formal/objective reality? I think it would instead be better to say that Kant sharpens Descartes’ distinction in the contemporary direction, by distinguishing more clearly between the semantical-referential and the causal-affective relations which connect thought with its objects. (Thus I find Coffa’s account of Kant’s views (in his *The Semantic Tradition from Kant to Carnap* (Cambridge: Cambridge, 1991)), in which Kant completely neglects the ‘semantic’ dimension to be largely unwarranted, whether we take ‘semantic’ to mean either pertaining to *Sinn* or or *Bedeutung*. (Coffa typically means the former.))

existent'. The 'objective reality' of the idea of God would thus be identified with its 'exhibition' of something that is real – since 'although perhaps one may imagine that such a being [as God] does not exist [non existere], it cannot be supposed that the idea of such a being exhibits to me *nothing* that is *real* [nihil reale mihi exhibere]' (AT VII.46; my ital.). As he writes in the 1<sup>st</sup> *Replies*: 'possible existence [possibile existentia]...belongs to all the other things of which we have a distinct idea, even to those which are put together through the fiction of the intellect [per figmentum intellectus componuntur]' (AT VII.119).<sup>67</sup>

It might seem as though already we will have found something with which Kant should disagree, insofar as he distinguishes between *real* and *logical* possibility, and so admits that we can in fact have *figmenta intellectus* which do not represent something 'real', nor something 'possibly existent':

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<sup>67</sup> It is worth noting that, like Mersenne's 2<sup>nd</sup> set of objections before him (cf., AT VII.127f), Leibniz's criticisms (in his 1684 *Meditationes de Cognitione, Veritate et Ideis*) of Descartes' version of the ontological argument are on precisely this point, that Descartes never renders the idea of God sufficiently distinct, in that he never shows that the idea of God itself is truly possible: 'we cannot safely use definitions for drawing conclusions unless we know first that they are real definitions, that is, that they include [involvere] no contradictions, because we can draw at the same time opposing conclusions from notions that include contradictions, which is absurd'; hence, 'the fact that we *think* about [cogitare de] a most perfect being is not sufficient for us to assert that we *have an idea* of it [ejus ideam habere]' (G iv.424). This is suggestive, in light of our discussion to follow, for it implies that Leibniz takes us to be able to 'think of *more* 'things' than we can 'have an idea of'. Equally striking is Descartes' reply to this objection, in the form posed by Mersenne, in which Descartes claims that by 'possible' he means 'what everyone commonly means' – namely, 'whatever does not conflict [repugnant] with our *human* concepts' (AT VII.150; my ital.). Descartes does allow, however, that there might be another sense of possibility 'on the part of *the object itself* [ex parte ipsius objecti]' (my ital.), though he immediately claims that 'unless this matches the first sort of possibility it can never be known by the human intellect' (ibid.). Yet in general, Descartes wants to assert that 'All self-contradictoriness or impossibility resides *solely in our conceiving* [in solo nostro conceptu], when we make the mistake of joining together mutually inconsistent ideas; it cannot occur in anything which is outside the intellect [in ulla re extra intellectum posita]' (AT VII.152; my ital.).

I can think whatever I like, as long as I do not contradict myself, i.e., as long as my concept is a possible *thought* [Gedanke], even if I cannot give any assurance whether an *object* [Object] in the set [Inbegriff] of all possibilities corresponds to it or not. But in order to ascribe to such a concept *objective* validity [Gültigkeit] (*real* possibility, for the first sort of possibility was merely *logical*), something more is required. (Bxxvi-n; my ital.)

There is something right to this reaction, for, in general, what criticisms Kant has of the ontological argument are directed at the idea that we have means to demonstrate the ‘possible existence’ of an object that *fails to conform* to the conditions which objects must meet if they are to be ‘given’ to our minds – if we mean to be demonstrating that this thing ‘exists’ in the same sense as that which *can* be given to our mind through our senses. For, though it is clear that Kant does not see deliverances of sensation as *sufficient* for the mind’s possession of ‘something’ which represents a *real* possibility (or contains objective reality), he nevertheless insists that possibility of the involvement of sensation with a given representation is a *necessary* condition for that representation to be said to enjoy a relation to a real object, and being sensible is in turn essentially connected to being in time: ‘*Reality* [Realität] is in the pure concept of the understanding that to which a *sensation* in general corresponds [Empfindung überhaupt correspondirt], that, therefore, the concept of which in itself indicates [anzeigt] a *being (in time)* [ein Sein (in der Zeit)]’ (B182; my ital.).



Hence if some representation purports to be ‘of’ an object whose alleged mode of being does not conform to the necessary conditions of sensibility – or put another way, if we cannot ‘take’ the representation to preset us with something that conforms to these conditions – then we cannot ascribe to this representation ‘objective reality’ (without, that is, any further information, from, say, the practical sphere). This is so, even though we can *think* the representation – i.e., accompany a representation ‘with consciousness’, with the ‘I think’.<sup>68</sup>

In other respects, however, this reaction may be judged to be somewhat premature, for Kant insists that there does remain a (‘pure’) sense to the categories of ‘possible’, ‘existence’, and ‘reality’, even if we do not ‘schematize’ them with a ‘time-determination’. In the ‘Amphiboly’, we find Kant discussing, for example, ‘realitas noumenon’ (B321), which consists in ‘mere affirmations [Bejahungen]’ (B328), or concepts ‘that contain mere affirmations’ (B339n). Perhaps we can affirm that things which are, for Kant, merely logical possibilities, and not demonstrably ‘real’ possibilities (in the schematized sense), possess at least this (unschematized) sense of ‘reality’?<sup>69</sup> (This would fit well with Kant’s description, in the Transcendental Ideal, of God as the *omnitudo realitatis*, as

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<sup>68</sup> A similar analysis could be given with respect to Kant’s criticisms in the ‘Paralogisms’ of the ascription of ‘objective reality’ to that other prime ‘idea’ at issue in the *Meditations*: the idea of the thinking subject.

<sup>69</sup> Especially as Kant elucidates this ‘unschematized’ sense of ‘reality’ as follows: ‘there is no contradiction [Widerstreit] at all in the concept of a thing if nothing negative is connected with something affirmative, and merely affirmative concepts cannot, in combination [Verbindung], effect any cancellation [Aufhebung]’ (B338).

(precisely) the ‘all of reality’ (B603-4), and as the *ens realissimum* (B604.) These sorts of things are at least – as Descartes himself suggests – not *absolutely* nothing, not an ‘Unding’, or a *nihil negativum* (B348); rather they are a kind of ‘ens’, an ‘Etwas’, even if only an *ens rationis*: ‘the object of a concept, to which no intuition that can be given corresponds, is = nothing, i.e., a concept without an object, like the *noumena*, which cannot be counted among the possibilities although they must not on that ground be put forward [ausgegeben] to be impossible (*ens rationis*)’ (B347).

I wanted to spell out the unschematized sense of ‘reality’, in order to create a possible sense in which ‘reality’ might still be used to qualify the ‘formal’ aspect of thinking itself, in light of worries which might arise from the fact that the forms of thought would seem to be *non-sensible*, and so not ‘beings in time’. In any case, these last remarks anticipate a good deal about the connections Kant wishes to draw between thought, logical forms, logical possibility, and consciousness, and so before we jump too far ahead, let’s back up a bit and begin to reconstruct what is common to both Descartes and Kant – namely the broad contours of a philosophical framework, as it descends from their respective ‘highest concepts’ (‘genera’).

To repeat what was said above, we can see that – perhaps unsurprisingly, given his high-order division of ‘res’ into ‘extensa’ and ‘cogitans’ – Descartes’ label for this highest class is ‘cogitatio’ (3<sup>rd</sup> Med, AT VII.36f; 2<sup>nd</sup> Replies, AT

VII.160; *Principia* I.9, AT XIIIa.7), which gets translated in the now-standard Cambridge edition as ‘thought’. Yet at this point, Descartes scholars have typically inserted the caveat that Descartes’ usage is, as we shall see, broader than that typically associated with the English word.<sup>70</sup> In fact, one should give a similar warning about Kant’s highest ‘genus’, ‘*Vorstellung (repraesentatio)*’, as it too might not bring with it the full semantic association-set that its English counterpart has come to possess.<sup>71</sup> (Rather, as good students of the 20<sup>th</sup>-century

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<sup>70</sup> In his recent *Descartes’s Theory of Mind* (2003), Desmond Clarke suggests that Kenny’s *Descartes* (1968) ‘sets the pattern’ for this caveat, but Kenny’s text itself refers the reader to an earlier translator’s note in the edition put out by Geach and Anscombe. They argue for the use of ‘consciousness’, or ‘being conscious’, etc. (with ‘*res cogitans*’ as ‘conscious being’). Their justification for this translation (in ‘Translator’s Note’, *Descartes: Philosophical Writings* (London: Nelson’s, 1954) runs as follows: ‘The most important problem of a Descartes translation is the rendering of the verbs *cogitare* and *pensare* and their derivatives. Since Locke, the traditional English renderings have been the verb *think* and the noun *thought*. We have decided to abandon this tradition, which seems to us to run the risk of seriously misrepresenting what Descartes says. In everyday 17<sup>th</sup> century French, *pensée* had a rather wider application than in modern French; it was then natural, as it would not now be, to call an emotion *une pensée*. Similarly, *cogitare* and its derivatives had long been used in a very wide sense in philosophical Latin; for example, *cogitationes cordium* in Aquinas covers all internal states of mind. Descartes himself defines the words as applying not only to intellectual processes but also to acts of will, passions, mental images, and even sensations. (See e.g., *Principles of Philosophy*, I.9.) [...] We have...often found it advisable to use more general terms, such as the noun and the verb *experience* and the adjective *conscious*; we have fairly consistently used *conscious being* as a rendering of *res cogitans*’ (xlvii–viii).

<sup>71</sup> L.W. Beck’s preference to render ‘*Vorstellung*’ as ‘conception’, in his translations for the *Library of Living Arts*, might be enough to give one pause, but the more significant ‘warnings’ can be found in a Translator note to Werner Pluhar’s recent translation of the KrV (Indianapolis: Hackett, 1996). There Pluhar gives a substantial, and to my mind fairly persuasive, argument for the use of ‘presentation’ as a translation of ‘*Vorstellung*’, on the grounds that ‘the traditional rendering...as ‘representation’ suggests that Kant’s theory of perception (etc.) is representational, which, however, it is not.... For one thing, *vorstellen*, in the Kantian use of the term that is relevant here, is not something that *Vorstellungen* do; it is something that *we* do. [...] Presentations, as the term is here used, are such objects of our direct awareness as sensations, intuitions, perceptions, concepts, cognitions, ideas, and schemata. See B376-7 and B179’ (22n73). Pluhar had already begun his argument for this in his (Hackett, 1983) version of the KU, and in his (Hackett, 2002) translation of the KpV he amplifies the philological grounds: ‘The traditional rendering of *Vorstellung* as ‘representation’ seems to have been prompted by Kant’s own linking of *Vorstellung* to the Latin *repraesentatio*. However, this Latin term actually

turn to hermeneutics, we should simply wait and let the meaning of each label emerge from its systematic context.) Kant gives this label – ‘Vorstellung überhaupt’ or ‘repraesentatio’ – to the broadest genus of mental items in the famous ‘Stufenleiter’ passage (B376), a label which gets translated in the now-standard Cambridge edition as ‘representation’.

What will emerge from reflection on their respective systematic contexts, I propose, is that a Kantian ‘Vorstellung’ is a very close kin (if not twin) to a Cartesian ‘cogitatio’. If this is true, then already at the root of their respective lexicons, we will have already find two terms that have roughly the same meaning, play roughly the same role within the respective philosophical systems, and share many of the same essential properties. Hopefully this affinity at the foundations will make the further closeness I’ve proposed concerning ‘realitas objectiva’ – and the subsequent correlation of ‘form of thought’ with the ‘realitas formalis’ of thought – seem more natural and plausible.

§17 Let me now lay out some basic points of continuity. First, both Descartes and Kant take their terms to be *explanatorily primitive*. Descartes lists ‘cogitatio’ among the ‘very simple notions’ [simplicissimae notiones; notions si simples] in

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means no more than a ‘making present to oneself’ – cf., German *Vergangenwärtigung* – and thus, like Kant’s *Vorstellung*, carries no implication whatsoever that perception, cognition, etc., are *representational* (9-10n64). Even though I will retain the Cambridge Edition’s rendering (as ‘representation’), I agree with Pluhar’s main points, and do not mean to suggest that Kant upholds any form of crude ‘representationalism’.

*Principia* I.10, which are so self-evident or clear [per se nota; si claire] that any logical definition (or ‘definition according to the manner of the Schools’) would only render them more obscure (AT XIIIa 8, IXb 29); he even calls them ‘primitive notions’ in a 1643 letter to Elizabeth. Similarly, in the so-called ‘Dohna-Wundlacken’ transcripts of Kant’s logic lectures (dated from the early 1790’s), Kant is reported to have claimed that ‘representation’ is ‘a fundamental concept that cannot be explained’ (24:701), a claim which is repeated in Jäsche’s *Logik* as well (9:34).

Secondly, both writers consistently refer to the items in question as being ‘in us’, in the sense of being *in the mind*. To give a representative example from the *Principia* (I.53), Descartes writes there that ‘whatever we find in the mind [in mente] is simply one of the various modes of thinking [modi cogitandi]’ (AT VIIIa.25). Similarly, Kant tells us in the Second Analogy,

[w]e have representations [Vorstellungen] in us [in uns], of which we can also become conscious [bewußt]. But let this consciousness [Bewußtsein] reach as far and be as exact and precise as one wants, still there always remain only representations, i.e., inner determinations of our mind [innere Bestimmungen unseres Gemüts].... (B242)<sup>72</sup>

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<sup>72</sup> The passage continues: ‘in this or that temporal determination’. Hence all representations are ‘in us’ at least as possible moments of *inner sense*. Cf., the A-Deduction: ‘Wherever our representations may arise, whether through the influence of external things or as the effect of inner causes, whether they have originated apriori or empirically as appearances – as modifications of the mind they nevertheless belong to inner sense’ (A99); and when we consider these modifications themselves as ‘objects’ in their own right, ‘they constitute an object that is merely in us [bloß in uns], since a mere modification of our sensibility, is not to be encountered outside us [außer uns gar nicht angetroffen] at all’ (A129).

Thirdly, both writers take these items to be in the mind as *modifications* of the mind's state, as mental events. Descartes writes in the *Principia* (I.9) about thoughts as things which 'happen [fiunt] within us', whereas Kant tends to speak of 'modifications of mind' or the 'mind's state' (A97; B376).

Fourthly, and perhaps most importantly, it becomes evident that, in practice, both writers restrict their attention to those mental items which are *available for consciousness*. This becomes evident as we work our way down Kant's 'step-ladder' (in the 'Stufenleiter' passage) to the first tier under 'representation in general'. Kant does not here state whether or not it is in principle possible for there to be a representation *without* consciousness, though the possibility would seem to be implied by the fact that 'perceptio' is clearly intended to be a further determination of the concept 'repraesentatio'. In fact, in a letter to Marcus Herz in 1789 (May 26), as well as in his *Anthropologie* (§5; 7.135-7), Kant does admit that there could be – and in fact that we might have – these sorts of representations, without our being conscious of them. However, as he puts it in his letter to Herz, 'I would not even be able to know that I have them; consequently, *for me* [für mich] they would be absolutely nothing [schlechterdings nichts]' (11:52).<sup>73</sup>

Kant, then, admits that perhaps there might be representations without *actual* consciousness, but if so – if, in the words of the A-Deduction, a

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<sup>73</sup> This letter and the *Anthropologie* are discussed in A.B. Dickerson's *Kant on Representation and Objectivity* (Cambridge: Cambridge, 2004), 86.

representation does not have a ‘relation [Verhältniß] to an *at least possible* consciousness’ – then this representation would ‘be nothing [nichts] for us, and since it has no objective reality in itself [an sich selbst] and exists [existirt] only in cognition, it would be nothing at all [überall nichts sein]’ (A120; my ital.). This is a striking statement, which surely goes beyond the phrasing in the letter to Herz, for it claims, in essence, that representations can be said to ‘exist’ *only* insofar as they might possibly participate ‘in cognition’. If we look again at the Stufenleiter, we can see that cognition is classed under ‘representation with consciousness’; hence, representations without an at least possible relation to consciousness are considered not ‘to exist’ in a fairly strong sense, namely that they are *nothing at all*. (We can also note, as foreshadowing, that Kant says here that a representation does not have ‘objective reality *in itself*’; but let us put this to one side for the moment.)

A similar point is made (though in different and slightly weaker terms) in the well-known opening sentence of §16 of the B-Deduction: ‘The *I think* must be *able* to accompany [begleiten] all my representations; for otherwise something would be represented in me that could not be thought at all, which is as much as to say that the representation would either be impossible or else at least would be nothing for me [für mich nichts sein]’ (B131-2). If we note that Kant writes later in this section that the ‘I think’ is ‘produced’ by consciousness and is ‘in’ all consciousness (B132), then we can see that that this famous sentence, too, is in

effect claiming that all representations must be able to be ‘accompanied’ by consciousness, or else they will be ‘nothing for me’.<sup>74</sup>

This last quote from §16 of the B-Deduction gives us new information about what Kant has in mind for this tier of the step-ladder, one which allows us to put a more determinate gloss on what it is for a representation to be (at least possibly) ‘with’ a consciousness – namely, it must be possible for ‘I think’ to accompany this representation. That is, such a representation must be *thinkable*. Note that here we have already moved quite close to Descartes’ language of ‘cogitatio’ (and have arrived at the German for ‘cogito’), as labels for those things ‘in us’ which can possibly be ‘something for us’.

There is good reason for this closeness of terms, for if we approach things from the other end – that is, from Descartes’ concept of ‘cogitatio’ – we will see that a distinguishing feature of all ‘thoughts’ is likewise precisely their *relation to consciousness*. Compare the definition of ‘cogitatio’ given in *Principia* I.9: ‘By the term ‘thought’, I understand everything which we are conscious of [nobis consciis] as happening within us [quae in nobis fiunt], insofar as we have

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<sup>74</sup> There isn’t here the severe denigration of representations which are in principle inaccessible to *my* or *our* form of consciousness, which might suggest these are not quite ‘nothing at all’, but this will not concern us for sometime. See below (Chapter VI), concerning what ‘content’ is available to a non-discursive understanding, such as what God’s ‘would’ be. (For now, think of Descartes’ concerns not to say anything positive or limiting about God’s capacities.)



consciousness [conscientia] of it' (AT VIII.7).<sup>75</sup> This language is also used in the passage we have already quoted from the 2<sup>nd</sup> *Replies*: thoughts 'include everything that is within us in such a way that we are *immediately* conscious [conscii] of it' (AT VII.160). In fact, on grounds such as these, Geach and Anscombe have argued that 'cogitare' and its derivatives would be best rendered by phrases involving 'consciousness' rather than 'thought'; for instance, they translate 'res cogitans' as 'conscious being'.<sup>76</sup>

We can summarize what has been proposed thus far. Both the Cartesian 'cogitatio' and the relevant sense of the Kantian 'Vorstellung' refer to items which function as explanatory primitives, which are found 'in' the mind, as modifications of the state of the mind – or in Descartes' terms, as 'modes' of 'res cogitans' – and both are essentially defined by the possibility of their availability to consciousness, if they are to be 'anything for us'.

As readers may have noticed, next to nothing has been said thus far about the possible role these mental items might play in the process of coming to know about anything *beyond* them. And yet there is a clear sense in which these items, though the 'objects' of consciousness, are mental items that both Descartes and Kant take to provide the means by which we can come to know other *non-mental*

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<sup>75</sup> The French version adds: 'que nous l'apercevons *immédiatement*' (IXb.25; my ital.), an addition which is explained in the 2<sup>nd</sup> *Replies* as ruling out 'the consequences of thought', such as 'voluntary motion' (VII.160).

<sup>76</sup> Kenny (op.cit.) argues that Descartes flips back and forth between viewing consciousness as something which *accompanies* thought and viewing consciousness as something which is *identified* with thought (or thinking) (cf., 74f). Kant's use too shifts in the same way.

objects. How do Descartes and Kant think this object-relation is supposed to be established? And will we continue to find close theoretical continuity between their respective solutions?

Close continuity, yes; though not (as we have already admitted above) identity. Yet, with this caveat in mind, we shall see that reflection on the continuities is quite instructive. Let's begin, then, with Descartes.<sup>77</sup> As many have pointed out, there are several ways in which Descartes draws out the relevant 'dual perspectives' that one might have on a 'cogitatio'. Most famously, in the 3<sup>rd</sup> *Meditation*, Descartes draws the distinction in terms of the different sorts of 'realitas' that can be ascribed to a 'cogitatio', if we consider the 'cogitatio' as to the 'form [forma]' according to which it is or involves an 'idea' – a form that the 2<sup>nd</sup> *Replies* tells us is intimately connected with, if not identical to, the involvement of consciousness with the thought. Descartes writes here that an 'idea' is 'the *form* of any given thought, immediate perception of which makes me aware [conscius] of the thought' (AT VII.160).

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<sup>77</sup> For a more thorough discussion of the historical context that links Descartes to Kant, and a thorough treatment of the central terms in our discussion, see Gabriel Nuchelmans, *Judgment and Proposition from Descartes to Kant* (Amsterdam: North Holland, 1983). This work in turn builds off of Nuchelmans' excellent earlier inquiries into ancient, medieval and humanistic theories of judgment; cf. his *Theories of the Proposition: Ancient and Medieval Conceptions of the Bearers of Truth and Falsity* (1973) and his *Late-Scholastic and Humanist Theories of the Proposition* (1980), both from North Holland. For discussion of the place of this distinction in the Scholastic and early modern context, see as well Calvin Normore 'Meaning and Objective Being: Descartes and his Sources', in *Essays on Descartes Meditations* (Berkeley: California, 1986); Norman Wells, 'Objective Reality of Ideas in Descartes, Caterus, and Suarez', *Journal of the History of Philosophy*, 28:1 (Jan. 1990); Michael Ayers, 'Ideas and Objective Being' *Cambridge History of Early Modern Philosophy* (Cambridge: Cambridge, 1998).

This is not the only form that a thought can possess, something which the 3<sup>rd</sup> *Meditation* makes clear:

Other thoughts have various additional forms [formas habent]: thus when I will, or am afraid, or affirm, or deny, there is always a particular thing which I take as the object of my thought [ut subjectum meæ cogitationis apprehendo], but my thought includes something more [aliquid etiam amplius complector] than the likeness of that thing. Some thoughts in this category are called volitions or emotions, while others are called judgments. (AT VII.37)

This passage implies that all possible forms of thought involve ‘a particular thing which I take as the object of my thought’ and include ‘the likeness of that thing’, even if some forms include something more than this. Descartes writes earlier in this *Meditation* that it is only those thoughts which are determined solely by the first sort of form – ‘only in cases’ in which ‘my thoughts are as it were the images of things [tanquam rerum imagines sunt]’ that Descartes claims ‘the term ‘idea’ is strictly appropriate – for example, when I think of a man, or a chimera, or the sky, or an angel, or God’ (AT VII.37). Hence it is precisely the same aspect of thought, its possessing the ‘form’ of an idea, that both makes it available to consciousness and which allows the thought have an ‘object’, in the sense that it includes a ‘likeness of something’.

In other words, an idea is that aspect or ‘form’ of a thought which, on the one hand, allows it to be something *in me* which is immediately available to consciousness, and on the other hand, allows it to be ‘as it were an image of

something' *beyond me*, such as a man or God.<sup>78</sup> And it is at just this point that Descartes goes on to codify this distinction by way of the key concept of our present investigation – that is, in terms of the sort of 'reality' the idea enjoys. An idea considered as a thing 'in me' has the same sort of *reality* as that substance of which it is a mode – namely *me qua* 'res cogitans'. However, an idea considered with respect to the thing of which it is an image is said to have or contain the reality that the thing itself, but only in what Descartes calls an 'objective' fashion. As he writes in the 2<sup>nd</sup> *Replies*, by the '*objective reality* of an idea', Descartes means 'the being of the thing, which is represented by an idea [entitas rei repraesentatae per ideaem], insofar as this exists in the idea [est in idea]' (AT VII.161). This language echoes what has been said in the 'Preface to the Reader', which states that an idea is 'taken objectively' when it is taken 'as the thing represented [pro re repraesentata]' by the idea considered as an 'operation of the intellect' (AT VII.8).

It is often noted that Descartes' label for an idea considered 'simply as a mode of thought' seems to vary between passages. In the 3<sup>rd</sup> *Meditation*, Descartes writes that the reality an idea has as a mode of my thinking substance is its *formal* reality (AT VII.41), yet in the 'Preface', he writes that an idea taken 'as an

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<sup>78</sup> About this passage, Nuchelmans makes the following remark (*Judgment and Proposition*): 'Since from the viewpoint of logic and epistemology an idea is interesting only in so far as it is representative by being the form of something, [Descartes] calls an idea as the form of something an idea in the purely formal sense. It should be noted that in this context the term *formalis* is not opposed to the term *obiectivus* – as it is in the pair *esse formale/esse obiective* – but rather synonymous with it' (§2.1).

operation of the intellect' is an idea taken *materially* (AT VII.8).<sup>79</sup> In any case, the gist of the distinction should be clear enough for our purposes: a thought qua idea is such that it is both *itself* something 'real' and is also able to 'represent' something *else* that is 'real', and it is in its latter capacity that the thought is said to contain the reality of this other thing 'objectively'. And it is in this last capacity that thought will be said to have 'objective reality'.<sup>80</sup>

§18 So far so good (hopefully!). Yet while this distinction, and particularly the notion of objective reality itself, has received much discussion in Descartes-scholarship, the significance of this distinction within *Kant's* work has not been

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<sup>79</sup> As Nicholas Jolley points out (*The Light of the Soul*, 13f), the label for an idea considered 'as the thing represented' also varies. In the 4<sup>th</sup> *Replies*, Descartes distinguishes the idea 'as an operation of the intellect' from the idea 'as representing something' by calling the first the idea 'taken in the *material* sense' and the latter the idea 'taken in the *formal* sense' (AT VII.232). Here 'form' might mean something like 'intentional species', whereas previously it has meant something like 'what is intrinsic'.

<sup>80</sup> It has been argued, again by Geach and Anscombe (op.cit.), but more recently by Bennett (*Learning from Six Philosophers*, (Oxford: Oxford, 2001)) that these scholasticisms should not be followed, but that something like 'inherent' or 'intrinsic' vs. 'representative' reality should take their place; Bennett, in typical brusqueness, writes that 'there is no excuse, for anyone who purports to be writing contemporary English, for rendering [formalis] it by 'formally' and *objective* by 'objectively'" (87). Desmond Clarke (op.cit.) prefers to translate this as 'intentional reality' (190f).

Clarke's suggestion ties together nicely Descartes' distinction with Brentano's more well-known discussion of intentionality. In §29 of his 1889 lecture 'Über den Begriff der Wahrheit' (in *Wahrheit und Evidenz*), Brentano himself reformulates Descartes' distinction in his own terminology: 'If I believe something, then this belief is 'formally' in me. When I later recall the belief, then, according to Descartes' way of speaking, the belief is 'objectively' in me. In each case the same individual act of belief is involved, but in the one case I act through it [ich übe ihn aus] and in the other it is only the immanent object of my activity of remembering. Similarly for every other mental function – volition, desire, aversion, and the like. With the mental act, which is given formally, something as an immanent object of the mental act is given – speaking with Descartes, *objectively* – or as we better express it, in order to avoid misunderstanding, is given *intentionally*' (18).

adequately or accurately appreciated. What I wish to show now is, first, that Kant recognizes precisely the same distinction as Descartes, and second, that, though this has been outright denied (as we saw above, by Sellars and Wagner), Kant even uses the very same term to mark the place of this distinction in his system – i.e., ‘objective reality’.

To begin to see why the dismissals of Sellars and Wagner are too quick, let’s begin by considering the following passage from the ‘Second Analogy’:

[O]ne can, to be sure, call [nennen] everything, and even every representation, insofar as one is conscious of it [sich ihrer bewußt ist], an object; only what this word is to mean in the case of appearances, not insofar as they *are* (as representations) objects [Objecte sind], but rather only insofar as they *designate* an object [ein Object bezeichnen], requires a deeper investigation. (B234-5; my ital.)

Here Kant points to two different ways of considering a representation: as an object in its own right, and as something which can ‘designate’ another object in turn. The proximity to the conceptual territory charted by Descartes’ distinction is readily apparent. It becomes more so in the terms that Kant uses, later in this Analogy, to set out this problem that ‘requires deeper investigation’:

We have representations in us [in uns], of which we can also become conscious [bewußt werden können]. But let this consciousness reach as far and be as exact and precise as one wants, still there always remain only representations, i.e., inner determinations of our mind in this or that temporal relation. Now how do we come to *posit an object* [ein Object setzen] for these representations, or ascribe to their subjective reality, as

modifications, some sort of *objective reality* [objective Realität]? Objective significance [Bedeutung] cannot consist in the relation [Beziehung] to another representation (of that which one would call the object), for that would simply raise anew the question: How does this representation in turn *go beyond itself* [geht aus sich selbst] and acquire objective significance in addition to the subjective significance that is proper to it as a determination of the state of mind? (B242; my ital.)

Now this is neither the first nor the last time in the *Kritik* that Kant uses this scholastic-cartesian term of art. There are actually (at least) some 50-odd occurrences of ‘objective reality’ throughout the work, and many more uses of synonymous phrases. (The establishment of what is perhaps the most typical alternate phrasing can be found, for example, in the ‘A-Deduction’, where Kant indicates that the phrase ‘relation to an object [Beziehung auf einen Gegenstand]’ is a suitable substitute (via ‘i.e.’ [d.i.]) for ‘objective reality’ (A108).) The same equation through ‘d.i.’ is also used in the ‘Principles’, in the clause: ‘If a cognition is to have objective reality, i.e., to be related to an object’ [Wenn eine Erkenntniß objective Realität haben, d.i. sich auf einen Gegenstand beziehen...] (B195).<sup>81</sup>

Note that this intentionality-‘marker’ (‘relation to an object’) is to be found in the ‘Stufenleiter’ passage as well. Note, in addition, that it is deployed in the course of specifying the different ways in which a *perceptio* can be ‘objective’.

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<sup>81</sup> As an indication of the persistent, ‘decisive’ importance of the current topic for Kant, we can note that this phrase is precisely that which is used in Kant’s famous February 1772 letter to Marcus Herz, the letter which many take to inaugurate and center the ‘Critical’ project – there Kant writes that the decisive moment came when he asked himself: ‘on what ground does the relation [Beziehung] rest of that which is in us, which we call a ‘Vorstellung’, to an object [auf den Gegenstand]?’ (10:130).

Note, by contrast, the phrase that is deployed to specify what it is for a *perceptio* to be ‘subjective’: it is to be ‘related to [bezieht auf] *the subject* as a modification of its state’ (my ital.). Finally, note the close connection between this last phrase and the language used in the passage from the Second Analogy to pick out the contrast-term ‘subjective reality’ (B242).

Collectively, this makes the following, preliminary correlation seem fairly straightforward: where Descartes speaks of the ‘formal’ reality of a thought, or of a thought taken ‘materially’, Kant writes of the representation considered as a modification of mind as its *subjective* reality (its reality ‘in us’, and hence as something which stands in a ‘relation to the subject’). By contrast, both Descartes and Kant use *objective reality* to pick out that aspect of a mental item which achieves a ‘relation’ to, or ‘designation of’ something, by which the representation or thought ‘goes beyond itself’, and ‘posits an object’.<sup>82</sup>

But we can draw these connections one notch tighter if we recall that there is even precedent in the Cartesian corpus for aligning ‘subjective’ and ‘formal’ reality, though not in words penned by Descartes himself. In the 5<sup>th</sup> set of Objections to the *Meditationes*, Pierre Gassendi writes that ‘it is commonly said that external things exist *subjectively* or *formally* in themselves [subjective seu formaliter in seipsis], but exist ‘objectively’ or ‘ideally’ in the intellect [objective

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<sup>82</sup> For a discussion of the role of intentionality in the Second Analogy see Derk Pereboom’s, ‘Kant on intentionality’, *Synthese*, 77.3 (December 1988) 321-352. Several of the issues which arise in Pereboom’s sketch there, especially of the motivation behind Kant’s ‘intensionalism’ (‘anti-extensionalism’), will be taken up again in the next two Chapters.



seu idealiter in intellectu]’ – and then goes on to state that the notion of ‘formal’ reality ‘applies to the idea itself not as it represents something, but as an entity in its own right [non ut repraesentans, sed ut entitas aliqua]’ (AT VII.285). (By implication, so too does the notion of ‘subjective’ reality apply to an idea as an entity itself, not to it in its representative capacity.)

And here, finally, our recontextualization of this contrastive pair of terms – objective and (subjective-)formal reality – can bear fully the fruit I projected for it at the beginning of our digression. For by focusing upon this distinction, we now find our way to a novel and yet fairly clear-cut way of interpreting the differing viewpoints occupied by the sciences of formal and transcendental logic, as follows: *Formal* logic is the science of the intellectual conditions for the *subjective-formal reality* of ‘thinking in general’ – it states the constitutive features of ‘thought in itself’, in abstraction from and without reference to the capacity for thought to ‘relate to an object’, but merely as a modification of our mind of which we are conscious. Importantly, then, it is formal (pure general) logic which provides guidance to the science of psychology as to what, among our mental episodes, can count as a ‘thought’. And most importantly, then, the sense of ‘reality’ at issue in this use of ‘formal reality’ is not to be *identified* with the ‘sensible’ component of episodes of thinking that is available to us in inner sense. On the other hand, *transcendental* logic as such can be characterized as the science of the intellectual

conditions (i.e., those arising from ‘Verstand’ rather than ‘Sinnlichkeit’) which must be met if thought is to enjoy *objective reality*.<sup>83</sup>

Now, though the catalog which records the contents of Kant’s library<sup>84</sup> shows that Kant owned three works by Descartes – Latin editions of the *Principia* and the *Meditationes*, published in 1650 at Amsterdam, and a Latin edition of the *Geometrie*, published in 1649 at Leiden – it is not essential to my argument that Kant self-consciously intended to follow Descartes in particular (or any of the other Scholastic thinker). In fact, a much more plausible line of direct influence would come from the textbooks which Kant used as the basis for his lectures on metaphysics and logic, as several of the relevant notions and distinctions show up

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<sup>83</sup> If we recall that the other main way in which Kant characterizes the ‘form’ of thought is that which pertains solely to the spontaneous ‘activity’ of the intellect, we can see that there is actual textual precedence for this identification too, in the same neighborhood of scholastic distinctions. Francisco Suárez, for instance, in his 1597 *Disputationes Metaphysicae* (translated in *Descartes’ Meditations: Background Source Materials* (Cambridge: Cambridge, 30f), defines the related distinction between ‘objective’ and ‘formal’ senses of ‘concept’ as follows: ‘A formal concept is said to be the *act itself* [actus ipsus; my ital.] ... [A]n *objective* concept is said to be the thing, or notion which is strictly and immediately known or represented by means of the formal concept. For example, when we conceive of a man, *that act which we perform in the mind* [actus...in mente effcimus; my ital.] in order to conceive of man is called a formal concept; but the man thus known and represented by that act is called the objective concept. [...] It [i.e., an objective concept] is not a concept in the sense of a form intrinsically determining a conception, but in the sense of the object and subject matter [materia] round which the formal concept is deployed, and to which the mind’s eye directly moves; in view of which it is called by some, following Averroes, the *intention formed by the intellect* [intentio intellecta], and by others the *objective relation* [ratio objectiva]’ (Disputation 2, I.§1).

<sup>84</sup> Here I rely upon *Kants Lektüre*, Elke König’s database, which in turn builds off of research done by Arthur Warda in 1922. The database can be found online at: <<http://www.manchester.edu/kant/>>.

(either explicitly or implicitly) in Alexander Baumgarten's 1757 *Metaphysica* and Georg Meier's 1752 *Auszug aus der Vernunftlehre*.<sup>85</sup>

This distinction shows up in the 'Empirical psychology' section of his *Metaphysica*, in which Baumgarten defines 'thoughts [cogitationes]' as both 'accidents of my soul' (§505) and as 'representations' (§506). The distinction is put to use, for instance, in §593, where Baumgarten defines 'dreams' [somnia] as a species of representations of the imagination (i.e., 'imaginationes somniantis'), which can be 'taken subjectively' [subjective sumpta], if we consider them as items 'in the soul' [in der Seele]. Earlier, though, in §91 and §120, Baumgarten had already pointed to an alternate way of 'taking' dreams – namely, 'objectively' ('somnia obiective sumpta'). In §91, however, he equates dreams 'taken objectively' with 'the confusion of transcendental truth with its opposite', and in §120 he states that, in this sense, dreams are 'non-beings [nonentia]'.<sup>86</sup>

Now Kant alludes explicitly to just this distinction in a footnote to one of the appendices to the *Prolegomena*.<sup>87</sup> Similarly, in his very early (1750's) Reflexion

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<sup>85</sup> This 4<sup>th</sup> edition of Baumgarten's text is reprinted across the Akademie volumes 14, 15, and 17. Meier's text is reprinted in Akademie volume 16.

<sup>86</sup> Baumgarten infers his claim in §120 that 'somnia obiective sumpta *nonens* [ist]' (my ital.), from §118, which states that 'veritas transcendentalis est absolute necessaria (§117) et nullum habet oppositum (§102, §15)'. Another use of the relevant terminology occurs in §560, where we learn that 'Motus cerebri, coexistentes animae representationibus successivis, IDEAE MATERIALES vocantur. Hinc ideae materiales sunt in corpore sentientis vel imaginantis animae'; it is this section from which Baumgarten draws the aforementioned conclusion that 'Imaginationes somniantis sunt SOMNIA SUBJECTIVE SUMPTA' (§593).

<sup>87</sup> 'When I oppose the truth of experience to dream...the point of discussion is merely the notorious *somnio obiective sumto* of the Wolfian philosophy' (4:376).

(R1676) concerning §10 of Meier's *Auszug* – in which Meier claims that a 'representation [Vorstellung; repraesentatio perceptio] stands as an image [Bild] which is drawn by the artistic craftwork of the soul, in its innermost parts' – Kant shows himself concerned again with the very same sort of distinction: 'a representation is the (internal) determination of mind, insofar as it is referred [refertur] to something different from itself (as representation). It is that determination of the soul, which is referred [sich bezieht auf] to other things' (16:76-7). The denial that either space or time has a 'reality' that is 'objective' figures as well in Kant's 1770 'Inaugural Dissertation', especially in Section III (§§13-14; 2:400f).

There are several other aspects of Kant's use of 'objective reality' that we have yet to touch upon, which will be picked up in what follows – most notably, perhaps, the connection between objective reality (and objective validity) and *truth*. In any case, for now I hope enough has been said to (at least begin to) justify the alignment of Kant's use of 'objective reality' with this older scholastic-cartesian tradition. For this alignment has also allowed us to put more substance behind the claim that general logic deals with the 'form of thinking' by cashing this out in terms of thought's 'formal reality'.<sup>88</sup> Likewise, we have construed

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<sup>88</sup> There arise here certain questions about a need for qualification on the correct notion of 'reality' at issue with respect to the formal component of thinking, especially whether or not it needs to be tied to temporality to have any sense.

transcendental logic as the science which investigates which intellectual conditions must be met for thought to come into possession of ‘objective reality’.

Yet the stress in this way of putting matters must (again) be put on ‘intellectual’, where this implies that the conditions are necessary but *insufficient* for the provision of thought with objective reality. We have already pointed to this fact above, in the course of distinguishing Kant’s views from Descartes, or from rationalism in general. Rationalism holds that reflection on the logical ‘forms of thinking’ can not only give us information about the forms of *thinking* of objects, but rather that such reflection alone is adequate for arriving at determinate information about *reality*, or real objects themselves. In Kant’s eyes, such a position ignores the fact that the understanding as such is simply not capable of *giving* objects to itself, and so ignores those independent conditions on such ‘givenness’ – most famously, in the case of objects of nature, ‘the conditions of sensible intuition, which bring with them their own distinctions’ (B326).

To close the present chapter, let me say a bit more about the nature of this interplay between the sensible conditions on cognition (as ‘objective perception’) and the functions of synthesis of the understanding.

#### D. Form, Category, Schema

§19 We have already encountered the main claim of Kant’s anti-Rationalism above, though formulated in the language of syntax. So far as *our* cognitive

capacities are concerned, ‘the understanding is not capable of intuiting anything’ (B75), because the understanding is ‘not a faculty of intuition’ (B92); ‘every, at least *human*, understanding’ is ‘not intuitive’, but rather *discursive* (B93; my ital.). It is simply a fact that ‘our spontaneity of thought’ requires that a ‘manifold’ *be presented* to the understanding *from outside*, to then be ‘gone through, taken up, and combined [verbunden] in a certain way in order for a cognition to be made out of it’ (B102). The human understanding ‘merely thinks, but does not intuit’ (B139); as Kant writes later in §21 of the ‘B-Deduction’, ‘the *entire* capacity’ of our understanding ‘consists in thinking’ (B145; my ital.).<sup>89</sup>

But a second fundamental doctrine must here be paired with the discursivity thesis – namely Kant’s thesis of the pure (apriori, universal and necessary) form of the co-operating mental capacity. The most famous ‘partner’ for our higher cognitive capacity is the pure form of receptivity, though it can equally be paired with the pure form of the capacity for desire (as we saw in Chapter I).<sup>90</sup> In any case, this second thesis – that *all* our mental capacities

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<sup>89</sup> *Why* our understanding is characterized by this ‘peculiarity’ is something for which Kant thinks no ‘further ground’ may be offered (B146). But *that* it is so characterized is a primitive principle within Kant’s system. I discuss some of the difficulties surrounding this fact – in particular, the danger of its collapsing into either a form of psychologism, or at least a brute non-Critical dogmatism – in Chapter VI.

<sup>90</sup> Things (as usual) are more complex in the relation at issue in the third *Kritik*, between the higher faculties and the capacity for the *feeling of pleasure*, since no conceptual determination can be made of the ‘pure form’ of beauty or sublimity, and since what is at issue is the internal-subjective *feeling* of harmony between the cognitive faculty and the receptive faculty, which – though it is something ‘outside’ the higher faculty itself, and something universally (intersubjectively) experientiable, given the uniformity of mental capacities across human subjects – cannot yield principles by which the higher faculty can secure a *determinate* relation *to an object*;

possess an apriori form – imposes a further demand which must be met by any claims to have achieved a determinate (real) ‘relation to an object’ through one’s representations. For not only must these claims demonstrate the accord of such representations with the intellectual conditions of object-relation, but they must also demonstrate their accord with whatever *further* conditions on object-relation are imposed by the form of the second, cooperating mental capacity.

We can see this further qualification at work most clearly in the case of claims about objects of nature.<sup>91</sup> Consider Kant’s claim in §24 of the ‘B-Deduction’: ‘the categories, as mere forms of thought, *acquire* objective reality, i.e., application to objects [Anwendung auf Gegenstände] that can be given to us’ (B150; my ital.), only by being understood as concepts of possible synthesis of some determinate given manifold; in the case at hand (regarding the application to theoretical objects), the manifold at issue is that of sensible intuition. Yet what now must be kept in mind is that the capacity for receptivity contains within itself its own (formal) conditions for the possibility of a manifold being given in an intuition. Hence the *full* ‘acquisition’ of ‘objective reality’ can only occur when and if categorial synthesis has been ‘interpreted’ in a way that determines its

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rather it can only yield principles by which the higher faculty can *reflectively* judge its relation to other mental capacities *in the subject*.

<sup>91</sup> Though I cannot go into this here, it would be in line with the interpretation I am proposing (and highly instructive in its own right) to work out the further (extra-logical) conditions which are imposed by the will, if a practical representation is to secure what Kant calls in various places *practical* [praktische] *reality*; cf., KpV, 5:48,56; KU, §88; *Fortschritte*, 20:300.

intellectual-formal properties with respect to these formal sensible conditions – i.e., with respect to spatiality, and more generally, with respect to temporality.

Kant argues that it is only when categorial synthesis has been given *time-determination*, through the *schemata*, that such synthesis can truly achieve ‘objective reality’: ‘the schemata of the concepts of the pure understanding are the true and sole conditions for providing them with a relation to objects [Beziehung auf Objecte], thus with *significance* [Bedeutung]’ (B185); ‘without schemata, therefore, the categories are only functions of the understanding for concepts, but do not represent any object [stellen keinen Gegenstand vor]’ (B187).

As a consequence, transcendental logic as such – i.e., in the ‘strict’ sense of the term (sketched above, §12), as a science which deals *solely* with the apriori intellectual conditions for ‘object-relatedness’ – *cannot of itself* provide us with determinate representations of objects, and so the syntheses that it presents, considered independently of their schemata (as transcendental logic must so consider them), do not yet enjoy ‘objective reality’. In fact, it might become hard to see how exactly the categories, as viewed in transcendental logic, could still be counted as ‘concepts of an object in general’ (B128), especially in light of claims like the following made in the ‘Schematism’:

after abstraction from every sensible condition, significance, but only a logical significance [logische Bedeutung] of the mere unity of representations, is left to the pure concepts of the understanding,



but no object [kein Gegenstand] and thus no significance is given to them that could yield a concept of an object [vom Object]. (B186)<sup>92</sup>

For doesn't it now seem as though the merely 'logical' significance accorded to the pure concepts turns out to be nothing other than the 'significance' accorded to them as formal-logical functions of unity, in abstraction from their (transcendental) concern with object-relation? But then shouldn't this force a collapse of the distinction between the formal (pure general) and transcendental logical viewpoints?

Not necessarily. Recall once again the distinction that we introduced earlier in this chapter between (a) transcendental logic *as such* and (b) 'Transcendental (Speculative) Logic' as a (*pure*) *special* logic for the domain of objects of possible experience (nature) (and as a label for a section of the first *Kritik*). Though many commentators fail to notice this,<sup>93</sup> I hope to have made it evident that Kant should be read as claiming here that both a formal-logical *and a transcendental-logical* significance is 'left' when we abstract from 'every sensible condition': namely, the formal-logical (syntactic) meaning of the pure concept considered as a form of *thought in general*, but also the transcendental-logical

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<sup>92</sup> The sense of stark contradiction might be tempered by the marginal note that Kant makes to this sentence in his copy of the A-edition, which changes 'Begriff vom Object' to 'Erkenntnis vom Object' (23:46). (Though Kant leaves it as 'Begriff' in the B-edition.)

<sup>93</sup> For some exceptions, see the works cited in previous notes (in §12) by Ameriks and Parsons, as well as J. Michael Young, who, in his 'Synthesis and the Content of Pure Concepts in Kant's First *Critique*' (*Journal of the History of Philosophy*, 32:3 (July 1994) 331-357), also draws out the threefold division of perspectives on the pure concepts (cf., op.cit., 355) which I elaborate below in correlation with the three corresponding sorts of 'logics'; Young himself does not extend the identification of these three viewpoints to Kant's theory of logic, nor to its divisions.

meaning of the pure or ‘unschematized’ category considered as a pure concept of an *object in general*.<sup>94</sup> What is lost is the significance which is accorded to the ‘schematized’ category, as it is considered as a pure concept of an *object of possible experience*.

This contention is borne out by several examples from Kant’s texts, including one presented within the ‘Schematism’ itself, concerning the category of substance. In this passage, Kant gives as an illustration of what the relevant *categorial* synthesis looks like in abstraction from its schema: ‘if one leaves out the sensible determination of persistence’ – i.e., the schema (time-determination) for the category of substance – ‘substance would signify nothing more than a something that can be thought as a subject (without being a predicate of something else)’ (B186). Now compare this with what Kant says in §14 of the first *Kritik* about the ‘significance’ of the synthetic unification according to the categorial *logical* function considered in abstraction from its determination as a category (i.e., in abstraction from the very possibility of the object-relatedness of its synthesis): ‘in regard to the merely logical use of the understanding it would *remain undetermined* which of these two concepts will be given the function of the

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<sup>94</sup> For the phrases ‘transcendental significance [Bedeutung]’ and ‘pure category’ used in this manner, see the chapter on ‘Phenomena and Noumena’: ‘Now through a pure category, in which abstraction is made from any condition of sensible intuition as the only one that is possible for us, no object is determined [wird kein Object bestimmt], rather only the thought of an object in general [Object überhaupt] is expressed [ausgedrückt] in accordance with different *modi*. [...] The pure categories, without formal conditions of sensibility, have merely transcendental significance [Bedeutung], but are not of any transcendental use’ (B304-5).

subject and which will be given that of the predicate. [...] Through the category of substance, however' – i.e., 'substance' as the 'transcendental'-determination for the categorical function – 'it *is determined* that [one of the two concept's] empirical intuition in experience must always be considered as subject, never as mere predicate' (B128-9; my ital.).<sup>95</sup>

From this passage (KrV §14) we can derive the following progression: (i) the categorical (formal-logical) *function* specifies a certain form of unification of representations (i.e., in subject-predicate form), (ii) the (transcendental-logical) *category* of substance picks out one term in the relation of an absolute subject to predicates, (iii) the (theoretical-special-logical) *schema* of persistence 'shows...what determinations the thing is to have, which is to count as such a first subject' (B186).

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<sup>95</sup> Compare as well the discussion of various categories (reality, substance, cause) and their schemata in the 'Phenomena and Noumena' chapter (B300-302). Kant returns to the category of substance in a parenthetical example contained in a footnote to the 'Preface' of the *Metaphysische Anfangsgründe der Naturwissenschaft*: "The table of categories contains all pure concepts of the understanding, just as it contains all formal actions of the understanding in judging, from which the concepts of the understanding are derived, and from which they differ only in that, through the concepts of the understanding, an object is thought as *determined* with respect to one or another function of judgment. (Thus, for example, in the categorical judgment *the stone is hard*, the stone is used as subject, and *hard* as predicate, in such a way that the understanding is still free to exchange the logical function of these concepts, and to say that something hard is a stone. By contrast, if I represent it to myself as *determined in the object* that the stone must be thought only as subject, but hardness only as predicate, in any possible determination of an object (not of mere concept), then the very same logical functions now become *pure concepts of the understanding* of objects, namely as *substance* and *accident*.)' (4:475n) Unfortunately, the note does not go on to specify the further *sensible* conditions which must be met if something is to be concretely represented as a substance, and so does not incorporate a discussion of the schema of *persistence*.

This progression is repeated again in *Prolegomena* §29, though somewhat more implicitly, and this time with respect to the sequence: the logical form of *hypothetical* ('conditional') judgment (ground-consequent), the transcendental-logical category of *cause-effect*, the speculative-logical schema of *succession* (in time). I have inserted the numerals, italics, and underlining, to help track the progression:

[i] [T]here is first given to me apriori, by means of logic: the form of a *conditioned* judgment in general, that is, the use of a given cognition as *ground* and another as *consequent*. It is, however, possible that in perception a rule of relation will be found, which says this: that a certain appearance is constantly followed by another (though not the reverse); and this is a case for me to use hypothetical judgment and, e.g., to say: If a body is illuminated by the sun for long enough, then it becomes warm. Here there is of course not yet a necessity of connection, hence not yet the concept of cause. [ii] But I continue on, and say: if the above proposition, which is merely a subjective connection of perceptions, is to be a proposition of experience, then it must be regarded as necessarily and universally valid. But a proposition of this sort would be: The sun through its light is the cause of the warmth. The foregoing empirical rule is now regarded as a law, and indeed as valid not merely of appearances, but of them on behalf of a possible experience, which requires universally and therefore necessarily valid rules. [iii] I therefore have quite good insight into the concept of cause, as a concept that necessarily belongs to the mere form of experience, and into its possibility as a synthetic unification of perceptions in a consciousness in general; but I have *no insight at all into the possibility of a thing in general as a cause*, and that indeed because the concept of cause indicates a condition that in no way attaches to things, *but only to experience*, namely, that experience can be an objectively valid cognition of appearances and their sequence in time only insofar as the antecedent appearance can be connected with the subsequent one according to the rule of hypothetical judgments. (4:312)

Of course, already in the portion of the passage that I have marked ‘[ii]’, Kant has implicitly taken the pure concept to be deployed with sensitivity to its schema, even if the nature of the schema is not introduced explicitly until [iii]. This is implicit in his characterization of the proposition at issue as an ‘Erfahrungssatz’, signaling a restrictive use of the category, even though he has yet to state that ‘I have no insight at all into the possibility of a *thing in general* as a cause’, or that ‘the concept of cause indicates a condition that in no way attaches to *things*, but only to experience’.<sup>96</sup>

§20 A ‘proposition of experience’ thus stands next to at least two other ‘unities’ which are possible products of the synthetic activity of the understanding. On the one hand, we might be presented with the sort of unity obliquely referred to by the idea that a pure concept could be applied (however much without warrant) to

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<sup>96</sup> Kant uses the distinction between unschematized and schematized categorial synthesis to mark the poverty of the ‘pure’ concepts to determine objects – and hence the grounds for Kant’s departure from the Leibniz-Wolffian position – in his dispute with Eberhard (*Über eine Entdeckung*): ‘[If] Mr. Eberhard were to remove the concept...of representations whose existence [Dasein] is determinable *in time*, and thus everything that contains the conditions of *outer* as well as *inner intuition* (for that he must do if he wants to secure the reality [Realität] of the concepts of substance and cause as pure categories, i.e., as concepts which can serve, if need be, for cognition of the super-sensible), then he is left with nothing else of the concept of substance but the notion of a something whose existence [Existenz] must be thought only as that of a subject, and not as a mere predicate of something else; of the concept of cause, however, he is left only with the concept of a relation of something to something else in existence [Dasein], whereby if I posit the first, the other is also determined and necessarily posited. Now from these two concepts he can extract absolutely no cognition of the thing so constituted, not even whether such a constitution is possible, i.e., whether there something [Etwas] could be given in which it would be found’ (8:224-5; my ital.).

any ‘thing’ at all, even ‘objects’ beyond those which might be met with in possible experience. This unity is instituted by a use of the pure concept in abstraction from its (speculative-)*schematic* time-determination. We have yet to examine this sort of unity in any detail, but (as has been noted) it is obviously crucial to Kant’s practical philosophy, and will be taken up below. On the other hand, though, we have the sort of unity, an example of which is furnished explicitly in the above passage from the *Prolegomena*, which is instituted by a synthesis guided only by a formal-logical *function*, in abstraction from its (transcendental-)*categorial* determination as something object-directed, as something laden with intentionality.

In this section of the *Prolegomena* (§29), Kant refers to the resultant merely formal-logical unity as a merely ‘subjective connection of perceptions’. This characterization makes backward reference to the earlier discussion in §18 (et seq.) of what Kant calls a ‘judgment of perception [Wahrnehmungsurteil]’ – just as the term ‘Erfahrungssatz’ harkens back to the earlier ‘Erfahrungsurteil’. In fact, it will be useful to turn briefly to this contrast, in order to further characterize the distinction between formal and categorial synthesis, before looking briefly in the other direction to the contrast between schematized and unschematized synthesis.

Now, I readily admit that (to my knowledge) every interpretation of these *Prolegomena* passages and the ‘Erfahrung-/Wahrnehmungs-urteil’ distinction has been vigorously contested, and I will not pretend to hang together all of the

various threads which are present in this portion of the text. But we can at least point out that one way in these sections which Kant marks the primary difference between the two sorts of acts of the understanding is precisely by indicating that the former acts (*Wahrnehmungen*) synthetically unify the relevant manifold only according to a formal-logical function, while the unification in the latter acts (*Erfahrungen*) occurs according to a transcendental-logical category. To use the example from the footnote in *Prolegomena* §20, in the judgment of perception: ‘If the sun shines on the stone, it becomes warm’, the unity of the judgment bears the mark of the formal-logical function of the *ground-consequent* relation (as it is a hypothetical judgment), whereas in: ‘The sun warms the stone’, which is a judgment of experience, it is ‘the understanding’s concept of cause’ (i.e., a transcendental-logical category of *cause-effect*) which effects the unity (4:301n).

Thus, if the foregoing analysis is correct, then in judgments of perception we should have concrete examples of *thinkable* representations which do not (yet) meet the necessary conditions for the representation of *an object*, despite appearances to the contrary. And this is precisely what Kant says:

judgments of perception...do not require a pure concept of the understanding, but only the logical connection of perceptions. [...] They hold only *for us*, i.e., for our subject, and *only afterwards* do we give them a new relation [Beziehung], namely, *to an object* [auf ein Object]. (4:298; my ital.)<sup>97</sup>

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<sup>97</sup> Let me suggest here as well that the *Prolegomena*’s analysis of ‘judgments of perception’ as well provides a template for making intelligible the notion that, in thinking about a representation *of* the logical forms themselves – in thinking of, say, a representation of the

In summary, then, the picture would appear to look as follows. Pure concepts considered as **(i)** unifying functions give an analysis of the pure form (or ‘formal reality’) of thinking. Thinking, however, is also distinguished by its possibility for ‘object-relatedness’ – that is, as something which can enjoy ‘objective reality’ – and so synthesis according to those same concepts can also be considered ‘objectively’, or as **(ii)** something that would lead to a determinate representation of an object. However, the forms of categorial synthesis alone (i.e., the ‘unschematized categories’) cannot specify the full conditions on what is required for a representation to enjoy ‘objective reality’, since the mere *concept* of an ‘object in general’ leaves out other conditions which must be met. For this, the categories must be given time-determinations – that is, provided with schemata **(iii)**.

Hence, while pure general logic considers thought from the point of view of **(i)**, transcendental logic *stricto sensu* operates at **(ii)**, and is thus the science which considers thought as object-related, yet in abstraction from key conditions on such relation – most importantly, the condition that the content of a representation be ‘determined’ with respect to time. Pure categorial synthesis of itself leaves unanswered the question of how a unity of representations comes to enjoy ‘objective reality’; for this, a ‘science’ which does not abstract from the

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sylogistic figures – we are likewise not thinking of something that has (as of yet, or in itself) a ‘relation to an object’.



human-specific conditions of sensibility would be necessary. Much of the ‘Transcendental Logic’ in the first *Kritik* – specifically, the second half of the B-deduction, the Schematism, and the Principles – represents a contribution to just this science, and so is intended to provide an analysis from the point of view of (iii), and thus yield a complete apriori specification of the conditions on the ‘objective reality’ of representations. The correlation between function, category, and schema is given on the following table, and two examples of such correlation, under the Title of ‘Relation’, are given on the subsequent table:

**Table 2.1: Correlation of Function, Category, Schema**

<b>Moment</b>	<b>Function</b>	<b>Category</b>	<b>Schema</b>
<i>Quantity</i>	Universal Particular {Singular}	Unity Plurality Totality	Number
<i>Quality</i>	Affirmative Negative {Infinite}	Reality Negation Limitation	(degrees of) Sensation
<i>Relation</i>	Categorical Hypothetical {Disjunctive}	Substance-Accident Cause-Effect Agent-Patient	Persistence Succession Simultaneity
<i>Modality</i>	Problematic Assertoric Apodictic	Possibility- Impossibility Existence- Nonexistence Necessity- Contingency	Being at some time Being at this time Being at all times

**Table 2.2: The Moment of ‘Relation’ in the Three ‘Logics’<sup>98</sup>**

	<b>Function</b>	<b>Category</b>	<b>Schema</b>
Unification of	Thought as such	Thought of an object as such	Thought of an object of experience
<i>1<sup>st</sup> moment</i>	Categorical	Substance-Accident	Persistence-Alteration
Product	‘ $\alpha$ is $\beta$ ’	‘ $\alpha$ is a substratum for $\beta$ ’	‘ $\alpha$ is a persisting substratum for $\beta$ ’
<i>2<sup>nd</sup> moment</i>	Hypothetical	Cause-Effect	Rule-governed Succession
Product	‘ $\beta$ is a consequence of $\alpha$ ’	‘ $\beta$ is necessarily and universally posited, if $\alpha$ is posited’	‘ $\beta$ succeeds $\alpha$ universally and necessarily’

Now, there is much that can (and should) be said about these two tables.<sup>99</sup> For the moment, however, I hope at least enough has been said to motivate the construction of such tables along the *threefold* division I have been elaborating in

<sup>98</sup> Throughout ‘ $\alpha$ ’ and ‘ $\beta$ ’ stand for concepts.

<sup>99</sup> For instance, with respect to Table 2.1’s arrangement of ‘Quantity’, it has been argued by Lorenz Krüger and Michael Frede, in their essay, ‘Über die Zuordnung der Quantitäten des Urteils und der Kategorien der Größe bei Kant’, *Kant-Studien* 61 (1970), 28-49, that Kant ought to have inverted the order of either the functions or the categories so as to align the ‘singular’ function of judgment with the category of ‘unity’, and the ‘universal’ function with the category of ‘totality’. (In §22 of *Kant’s Analytic*, Bennett simply reverses the order without much argument (77).) Kant himself however keeps this order in both editions of the first *Kritik* and in the *Prolegomena* as well, as Krüger and Frede themselves note (29). However, in several of the student transcripts of Kant’s metaphysics lectures (in the *Metaphysik Dohna-Wundlacken*, Volckmann (28:396-7), and *von Schön* (28:480)), and in a *Reflexion* on metaphysics (R4700) [1773-5], Kant does appear to reverse the order of the logical functions, as Krüger and Frede suggest he ought to have throughout. I cannot attempt to do justice to their arguments here, but will simply insist that the published texts ought to be counted as authoritative, which is why I keep here the order that Kant himself approved for publication. (Krüger and Frede also argue that Kant implicitly relies on this reversal of order in a footnote to *Prolegomena* §20 (4:302), but I think this can be given an alternate reading.)

the foregoing sections, as well as to show the usefulness of marking the distinction between formal logic and transcendental logic (in either sense) by appealing to the difference between treating thought as a *non-intentional* ‘entity’ – i.e., as not object-directed – and treating it with its full intentionality in view, as something which purports to present objects beyond itself.

Having such a distinction in hand also puts us in a position to make good sense of another way that Kant marks the difference between formal and transcendental logic – namely, in terms of *truth*. We will explore Kant’s understanding of truth, its relation to logic in general, and its relation to judgment in particular, in the next chapter.

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## CHAPTER III

### The Logical Essence of Judgment

#### A. Judgment as the ‘Locus’ of Truth

§21 In Chapter I, I drew attention to the fact that Kant’s definition of logic as ‘the science of rules for the understanding in general’ (B76) did not make reference to any of the notions which one would find in contemporary logic textbooks – noting in particular the absence of notions such as ‘validity’ or ‘truth’. I want to now give several reasons for thinking that the omission of truth in particular, from the definition of logic *as such*, might be an intentional move on Kant’s part.

According to a long-standing tradition, ‘truth’ is the relation of ‘agreement’ between a representation and its object. In the *Kritik* Kant himself appears to subscribe to just such a picture: ‘*What is truth?*’ The nominal definition of truth, namely that it is the agreement [Übereinstimmung] of cognition with its object

[mit ihrem Gegenstande], is here granted and presupposed' (B82).<sup>1</sup> But as we have seen, formal logic 'abstracts from *every* relation of [thought] to the object' (B79; my ital.). It would seem to follow that formal logic should abstract as well from the particular relation of agreement between thought and objects, and so should abstract from concern with truth as well.<sup>2</sup>

By contrast, truth might seem to be an appropriate topic of interest for transcendental logic, since this logic consists precisely in the investigation of the conditions of thought's object-relatedness, or its 'objective reality'. In fact, Kant *identifies* a thought's possession of objective reality with its possession of *transcendental* 'truth' (B269). By 'transcendental' truth, Kant means 'the general relation [allgemeine Beziehung]' of thinking 'to the entirety of all possible

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<sup>1</sup> He repeats this definition in the 'Second Analogy': 'the agreement [Übereinstimmung] of cognition with the object [Object] is truth' (B236). Cf., B196-7: 'Wahrheit (Einstimmung mit dem Object)'; B296: 'Wahrheit, d.i. der Übereinstimmung unserer Erkenntniß mit Objecten'; B670: 'Wahrheit, d.i. der Übereinstimmung unserer Begriffe mit dem Objecte'; B848: 'Wahrheit beruht auf der Übereinstimmung mit dem Objecte'. Compare Brentano's assessment in §23 of his 1889 'Über der Begriff der Wahrheit' (in *Wahrheit und Evidenz*) that there is 'no doubt! Kant, too, retained the Aristotelian determination of truth as agreement [Übereinstimmung] of judgment with actuality [Wirklichkeit].' While I don't think it is true that there can be 'no doubt' that Kant upholds a version of the correspondence theory, I do think the textual evidence does support this interpretation. Hence, I am not convinced by attempts by readers such as Kemp Smith (in his famous 1918 *Commentary*) or by Wilhelm Windelband (Brentano's target; see Windelband's 1884 *Präludien*), to argue that Kant's more considered views on truth give pride of place to a conception of 'agreement' as *coherence* among representations rather than as correspondence with an object. (Though see the discussion below concerning consistency.) Nor am I convinced by Gerold Prauss's argument, in his 'Zum Wahrheitsproblem bei Kant', in *Kant-Studien*, 60.2 (1969), 166-182, that by 'here' in B82, Kant means to restrict his acceptance of the correspondence only to the 'Introduction' to the 'Transcendental Logic', and not extend this acceptance to the first *Kritik* as a whole.

<sup>2</sup> As Kant puts it in this section, formal logic treats thought in such a way that 'abstracts from all content [Inhalt] of cognition (relation to its object [Beziehung auf ihr Object]), but truth concerns precisely this content' (B83).

experience' (B185). This sort of 'truth', Kant writes, 'precedes all *empirical* truth and makes it possible' (ibid.; my ital.).

We can rephrase what Kant has in mind as follows. The very possibility of a thought's being empirically true – i.e., of it agreeing with or corresponding to an object of experience – depends on the possibility of there being a *relation* of the thought to an object. But this is just to say that the possibility of the empirical truth of a thought would thus depend on the thought's possession of 'objective reality'. In the terminology introduced above, the possession of objective reality would thus 'precede all empirical truth' and 'make it possible' in the sense that, though not every thought which possesses objective reality is thereby empirically true, every empirically true thought must possess objective reality. Or, to use the concept just introduced, every empirically true thought must be *transcendentally* true as well (though again, not vice versa).<sup>3</sup>

Let me spell out a bit further the qualifier 'transcendental' in the phrase 'transcendental truth'. Kant defines 'transcendental' as applied to cognition in general as a modifier which signals that the cognition 'is occupied not so much with objects but rather with our mode of cognition [Erkenntnißart] of objects in

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<sup>3</sup> This is so, though, to repeat claims from the previous chapter, pure categorial 'content' alone is *insufficient* to 'make possible' the notion of 'objective reality' (or transcendental truth).

Incidentally, it must be this sense of 'truth' which Kant has in mind in the 'Preface' to the *Metaphysische Anfangsgründe der Naturwissenschaft* when he refers to 'die Bedingungen, unter denen jene Begriffe allein *objective Realität*, d.i. *Bedeutung und Wahrheit*, haben können' (4:478; my ital.).

general, insofar as this is to be possible apriori' (B25).<sup>4</sup> The 'transcendental truth' of a thought has to do, not 'so much' with the thought's relation to an object, but rather with its conformity with those general conditions for cognition of an object of experience, insofar as these are knowable apriori. Now, as we saw in the previous chapter, Kant holds that there can be no relation of representations to an object apart from these representations being determined by the understanding's activity of categorial synthesis. That is, no representations 'present an object', or have 'objective reality', unless the understanding has introduced a *transcendental* content by way of a combination of these representations guided by the apriori forms of thought about an object (B105). The force of calling that content, which the categories 'introduce', a 'transcendental' content, is of a piece with the force of calling the general relation that a thought bears to experience as such a 'transcendental' form of truth, since the presence of such categorial 'content' – i.e., that the given representation is determined so as to be intellectually fit for object-relatedness – is a necessary condition for the presence of sensible 'content' in thought. (It 'precedes and makes possible' such content.)

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<sup>4</sup> The A-edition defines 'transcendental' cognition as 'cognition that is occupied not so much with objects but rather with our apriori *concepts* of objects in general' (A11; my ital.). The extension from 'concepts' to 'modes of cognition' is perhaps to allow for the incorporation of intuitional components, which would also signal that 'Transcendental Logic' is broader than transcendental logic in a strict sense.



I have argued as well, however, that, because of the discursivity (finitude) of the intellectual faculty, categorial synthesis on its own – i.e., taking a manifold of representations which are presented to the mind to be articulated according to the categories (e.g., ‘ $\alpha$  is a substratum for  $\beta$ ’) – while necessary, is not sufficient to confer objective reality upon any given representation. For this to be achieved, the categorial synthesis itself must be able to be seen as guided by the apriori forms which characterize our ability to be *given* representations through *sensibility* – namely, the forms of temporality and spatiality (§20). Hence the ‘transcendental content’ is something which itself can ‘agree’ or fail to agree with the general conditions on cognition of objects of experience, and so can be or fail to be ‘transcendentally true’.

This is why Kant can claim that ‘Transcendental Logic’ as it is prosecuted in the first *Kritik* – and so, the pure special speculative logic of thought of objects of nature – is (in part) ‘a *logic of truth*’ (B87; my ital.). It and it alone is in a position to disclose the full set of (both sensible and intellectual) conditions with which any synthetic unity of representations (i.e., a judgment) must ‘agree’ if it is to successfully achieve a ‘general relation’ to possible experience – a relation which Kant calls the transcendental ‘truth’ of a unified manifold of representations.<sup>5</sup>

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<sup>5</sup> Drawing on the analysis from the end of the previous chapter (§20), we can say that a judgment is ‘transcendentally’ true if and only if it can be articulated according to one of the forms of schematized categorial synthesis located on the final column of Table 2.1.

I use the language of ‘agreement’ here to try to capture in what sense the possession of objective reality might itself constitute a form of ‘truth’ in the traditional sense, though it is not obvious why an agreement with *conditions* should be viewed as a sort of agreement with an *object*. Rather, the ‘agreement’ at issue here would appear to be between an *act* (of synthesis and determination) and a *rule*, in which case it might seem more appropriate to describe the relevant agreement by terms such as ‘correctness’ rather than ‘truth’. Or perhaps the set of rules for the cooperative exercise of sensible and intellectual capacities can themselves function as a kind of ‘objectivity’?

Of course, we might not be able to expect much more elucidation of truth at the transcendental level, prior to an explication of the more mundane concept of empirical truth, about which we have said very little. For one thing, we have not yet uncovered what exactly Kant means by the ‘object’ to which a thought bears a relation of agreement in empirical truth – are these ‘objects’ individuals (picked out by singular terms) or states of affairs (picked out by ‘that’-clauses), or something else altogether? Nor have we identified in what sense the thought can be said to ‘correspond’ to the object, something which might seem to be especially problematic if it is only *within* thought – i.e., in the course of categorial synthesis – that the relevant objects first ‘become possible’ (cf., §11).

But putting these worries to one side for a moment, we can see that it follows from our analysis above that, in contrast to ‘Transcendental Logic’, the

full determination of even 'transcendental' truth is not something which lies within the purview of either formal (pure general) or transcendental logic *stricto sensu*, since neither will be able to incorporate the *sensible* conditions on object-directness. Moreover, it is not possible for either logic, on its own, to provide any instances of empirical (objective) truth. This too contrasts with 'Transcendental Logic', since here Kant thinks that it is possible to demonstrate a priori that certain judgments (i.e., the 'Principles') will necessarily 'agree' with all objects of experience.

In fact, it can begin to seem as though neither of these sorts of logic can either provide any 'truths', or have anything at all determinate to say about truth. Or rather, it will only be able to provide various necessary but insufficient conditions for truth. If we wish to call agreement with these conditions itself a kind of 'truth', then we can say these logics deal with truth, though this will be only in an attenuated sense a straightforward species of truth 'in general' as a form of 'correspondence to an object'.

In any case, as we proceed, it will be useful to keep in mind this potential variability among the senses of 'truth' in Kant's usage, if only to remind ourselves of alternative glosses which might be available for claims involving this word. Yet

Kant does speak of the ‘nominal’ definition<sup>6</sup> of truth, and it is to this definition that we should now turn.

§22 The first point to note is that truth [Wahrheit], as well as its traditional opposites (illusion [Schein], error [Irrtum], falsity [Falschheit]),<sup>7</sup> is something which concerns a special sort of *relation* between an object and another thing, and so must involve both ‘terms’ of the relation. This might seem to be incredibly elementary, but it sets Kant in contrast to some of his predecessors, insofar as

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<sup>6</sup> The *Jäsche Logik* (§106) gives the following explanation of a ‘nominal definition’: ‘By mere definitions [Erklärungen] of names, or nominal definitions [Definitionen], are to be understood those that contain the meaning [Bedeutung] that one wanted arbitrarily [willkürlich] to give to a certain name, and which therefore signify [bezeichnen] only the logical essence [das logische Wesen] of their object, or which serve merely for the distinguishing [Unterscheidung] of it from other objects’ (9:143).

<sup>7</sup> I postpone for the moment discussion of the distinctions between these (and other) ‘evaluative’ terms (such as ‘correctness [Richtigkeit]’). For one thing, something’s being false does not make that thing *ipso facto* an error; cf., *Wiener Logik* (1780s): ‘A false cognition and an error are distinct. If I propound and examine a false judgment, there is not yet any error[;] error is the holding-to-be-true [Vorwahrhaltung] of falsehood’ (24:832). It is a subject whose act of *holding-true* [Fürwahrhalten] falls into ‘error’ through (i) the straightforward act of taking false judgments to be true (or vice versa), but also by (ii) committing oneself to the truth or falsity of a judgment on insufficient grounds, or (iii) falling prey to forms of ‘illusion’ of object-representation, when in fact nothing determinate has yet been represented. (And there are surely other forms of error.) I write ‘seemingly’ to leave open for the moment whether ‘correctness’ is actually dependent upon ‘truth’, or rather the more primitive of the two notions.

Finally, though I say here that falsity is an opposite of truth – cf., JL §VII: ‘Das Gegenteil von der Wahrheit ist die Falschheit’ (9:53) – I should note that I mean to leave it open exactly what kind of opposition this is, and how it would compare with the opposition between truth and non-truth. (See below.) Compare, in this regard, Prauss (op.cit.), who argues that transcendental logic is concerned to distinguish truth from non-truth, while formal logic deals with falsehood and non-falsehood, and not with truth: ‘for Kant, formal logic actually only deals with logical falsehood, that is to say, *consistency*’ (172n35; my ital.).

Kant does not take truth to be something which pertains to objects considered 'in themselves'.<sup>8</sup>

The second point to note concerns which particular items Kant takes to be involved in the generic truth-relation of 'agreement': an object *and a cognition*. Even here, however, Kant goes on to further delimit the relevant domain of 'cognition', claiming that truth and its opposites (here illusion and error) pertain only to the relation between objects and one particular species of cognition – namely, *judgment*. Kant states this quite straightforwardly in the 'Introduction' to the 'Transcendental Dialectic':

[T]ruth and illusion are not in the object, insofar as it is intuited, but in the judgment about it insofar as it is thought. Thus it is correctly said that the senses do not err; yet not because they always judge correctly, but because they do not judge at all. Hence truth, as much as error, and thus also illusion as leading to the latter, are to be found *only in judgments*, i.e., only in the relation [Verhältniß] of the object [Gegenstand] to our understanding. (B350; my ital.)<sup>9</sup>

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<sup>8</sup> This is something made explicit in §12 of the first *Kritik*, in Kant's remarks about 'the proposition, so famous among the scholastics: *quodlibet ens est unum, verum, bonum*' (B113). Kant writes that 'these supposedly transcendental predicates of *things*' (i.e., 'entia') are rather 'nothing other than logical requisites [Erfordernisse] and criteria of all *cognition of things* in general' (B113-4), and that hence, despite the fact that these concepts 'must really have been taken as *material*, as belonging to the possibility of things itself...in fact they should have been used in a merely *formal* sense, as belonging to the logical requirement [Forderung] for every cognition' (B114; my ital.). For an example of the use of 'true' as a 'transcendental predicate' of *things*, compare Baumgarten's *Metaphysica*, §90: 'omne ens est verum *transcendentaliter*'. As we have seen, for Kant, 'transcendental' will now denote, not the most general predicates of things, but the most general features of the *relation* between thought and things – of our 'mode of cognition' of objects.

<sup>9</sup> Cf., *Jäsche Logik*, Intro, §VII: 'there is error as well as truth only in judgment' (9:53). In the passage cited in a note above, from the 'Appendix' to the 'Transcendental Dialectic' (B670), Kant writes that 'truth' is the agreement of our *concepts* with their objects – but the distinction between concepts and judgments is not altogether straightforward at this point in our development, and will be taken up in the latter half of this chapter. Things are complicated even further once we see that Kant aligns the 'transcendental' sense of truth (mentioned above) with

Hence, truth and its opposites pertain, not to objects themselves, nor to sense-perception *per se*, but only to judgments, considered as attempts to establish a relation between ‘our understanding’ and objects.

In fact, the ‘no truth without judgment’ thesis follows fairly straightforwardly from several claims which were examined in the previous chapter, and traversed again in the previous section. To summarize briefly: there can be no *relation* of a representation to an object – or, at least no way for us to *take* an object to be ‘posited’ by a representation, and hence no relation of ‘objective purport’<sup>10</sup> – except through the involvement of the categories. Hence there can be no relation of *agreement* between a representation and an object without the representation being ‘unified’ according to categorial synthesis. But since the categories are simply the forms of judgment viewed under ‘objective’ determinations, then all categorial synthesis is *ipso facto* judgmental synthesis (though not vice versa). Therefore, no question of truth can arise except with respect to representations which have been unified according to a form of judgment.

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*objective reality*, then the question arises whether other representations (such as, say, concepts) cannot be said to be ‘true’ (in this sense). For now, though, it will suffice to note that it is intellectual, rather than merely sensible, cognition that is the primary locus of truth.

<sup>10</sup> I leave open here whether or not a merely *causal* relation could obtain between representations and objects, prior to or independently of the involvement of categorial synthesis.

It is worth mentioning that this aspect of his position, when formulated at a sufficient level of generality, does not present us with claims that are especially new with Kant. As is well-known, and as Aquinas notes in one of the 'Responses' in his *Summa Theologiae* (I.16.1), a similar position is advocated by Aristotle. Aquinas tells us, first, that 'the Philosopher says (*Metaphysica* VI), 'The true and the false reside not in things, but in the intellect'.<sup>11</sup> But more precisely, Aristotle does not hold that truth is *just* 'in' the intellect *per se*, as becomes clear when St. Thomas elaborates upon his position later in the same Response, writing (famously) that 'truth is the agreement or correspondence of thought and thing [veritas est adaequatio rei et intellectus]' (ibid.). A similar remark can be found in the 'Response' to the next 'Article': 'truth is defined by the conformity of intellect and thing [per conformitatem intellectus et rei veritas definitur]' (I.16.2).

Kant is also joined by Aquinas and Aristotle in the further specification of the nature of the cognitive items which are 'truth-apt', for all three take the type of intellectual activity to which truth is applicable to be essentially *synthetic* or combinatory activity. For instance, in *De Anima* (III.6) Aristotle writes that

the thinking of undivided objects is among those things about which there is no falsity. Where there is both falsity [to pseudos] and truth [to alethes], there is already a combination [sunthesis] of thoughts [noematon] as forming a unity [hen] [...] for falsity always depends on a combination [sunthesis] [...] and that which produces

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<sup>11</sup> Cf., *Metaphysica* E.4: 'ou gar esti to pseudos kai to alethes en tois pragmasin...all' en dianoiai' (1027b25-27).

[poioun] a unity [hen] is in each case the intellect [nous]. (430a26-430b6)<sup>12</sup>

This also elaborates upon Aristotle's more famous definition of 'truth' (and falsity) (*Metaphysica* Γ.7), in which he speaks as if truth applied primarily to *linguistic* representations, writing that truth is 'saying [legein] of what is, that it is' (1011b27). Yet Aristotle upholds a doctrine of general correlation between thought and language as outlined in *De Interpretatione*, such that he explicitly applies 'truth' and 'falsity' to both speech and thought: 'Just as there can be a *thought* [noema] in the soul which is neither true nor false while others are necessarily one or the other, so also with *spoken sounds* [en te phone]' (16a10-12). Recall also that we have already seen a similar correlation in Kant – compare §15 above.<sup>13</sup> What is more, in addition to the passage above from *De Anima* III, later in the very same section of *Metaphysica* (Γ.7) in which Aristotle furnishes the aforementioned truth-definition, he also discusses truth and falsity as things which apply directly to the intellect and its acts, writing that

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<sup>12</sup> Aquinas also means to be following Aristotle in claiming that 'properly speaking, truth [veritas] resides in the intellect [in intellectu] composing and dividing, and not in the senses [in sensu]' (I.16.2). Though Aristotle writes in *De Anima* (III.3) that 'perceptions are always true' (428a11), we might compare Aquinas, *Summa Theologiae*: 'falsity [falsitas] is said not to be proper [propria] to sense, since sense is not deceived as to its proper object' (I.17.2).

<sup>13</sup> Locke's kindred remarks on truth in his *Essay concerning Human Understanding* can function as a commentary on (near-paraphrase of) Aristotle: "Truth then seems to me, in the proper import of the word, to signify nothing but the joining or separating of signs, as the things signified by them do agree or disagree one with another. The joining or separating of signs, here meant, is what by another name we call *proposition*. So that truth properly belongs only to propositions: Whereof there are two sorts, viz. mental and verbal; as there are two sorts of signs commonly made use of, viz. ideas and words' (IV.5.2). As we saw in the previous Chapter (cf., §15), Kant would appear to reject the claim that we could have consciousness of 'mental' (ideational) propositions which failed to make use of words.



the understanding [dianoia] either affirms [kataphesin] or denies [apophesin] every object of understanding [dianoeton] or of reason [noeton]...whenever it is true or false. When it connects by assertion or negation [sunthe phasa e apophasa] in one way, it is true, and when it does so in the other way, it is false. (1012a1-5)

Later in the Chapter (§28) we will turn to Kant's own treatment of the specifically affirming ('kataphatic') and denying ('apophatic') functions of synthesis in judgment, and shall see that these forms (and the 'categorical' form of judgment generally speaking) will be accorded by Kant a sort of primacy among the functions. For now, though, it should be evident that, in his general explication of the notion of truth, Kant stands in a tradition at least as old as Aristotle, insofar as he takes the proper bearers of truth (and falsity) to be judgments (intellectual acts of synthesis), and insofar as he takes the condition for the truth of a judgment to be whether it puts the intellect in a relationship of agreement with an object.

The tradition which combines the commitment to a correspondence theory of truth with a picture which links truth with 'judgmental' acts of the mind is one that runs from Aristotle and Aquinas throughout the modern period, though there is by no means uniform agreement about the nature of these 'acts'. For example, Descartes, like Kant, upholds the correspondence theory of truth. In an October 16, 1639 letter to Mersenne, for instance, Descartes writes that 'for my part, I have never had any doubts about truth, because it seems a notion so

transcendentally clear that nobody can be ignorant of it. [...] [T]he word ‘truth’, in the strict sense, denotes the conformity [conformité] of thought with its object’ (AT II.596-7).<sup>14</sup> And, like Kant, for a mere ‘mode of thought’ to enjoy or to fail to enjoy this relation of ‘agreement’, Descartes holds that it must be ‘referred’ by the mind to an object – i.e., it must be actively taken to possess objective reality:

ideas... provided they are considered solely in themselves [in se] and I do not refer them to anything else, they cannot strictly speaking be false. [...] [I]f I considered just the ideas themselves simply as modes of my thought [ut modos cogitationis meae], without referring them to anything else, they could scarcely give me any material for error. (3<sup>rd</sup> *Meditation*; AT VII.37)

Descartes infers that the only modes of thinking ‘where I must be on my guard against making a mistake’ are *judgments* (ibid.); as he puts it in the 4<sup>th</sup> *Meditation*, ‘falsity in the strict sense...can occur only in judgments’ (AT VII.43).

Hence, like Kant, Descartes holds that it is only in our ‘acts’ of engaging with ideas in judgments, then, that we ‘refer’ an idea to ‘something else’, to something beyond itself, and thus open up space for the question of the ‘conformity’ of the idea with this other thing to arise.<sup>15</sup> Yet unlike Kant, for

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<sup>14</sup> Cf., also Spinoza, *Ethica*: ‘A true idea must conform with its object [debet cum suo ideato convenire]’ (Ia6) – though this must be read in conjunction with Spinoza’s doctrine of truth as a *norma sui* (Iip43s). For passages which indicate the reception and interpretation of this nominal definition of truth as correspondence by Kant’s more immediate predecessors (Wolff, Meier, et.al.), see footnotes below.

<sup>15</sup> Here contrast Spinoza, *Ethica*: ‘By *idea* I understand a concept of the mind... I say *concept* rather than *perception*, because the word *perception* seems to indicate that the mind is acted on by the object [ab obiecto pati]. But concept seems to express an action of the mind [actio mentis]’ (IId3); Cf., Iip43s: an idea is not ‘something mute, like a picture on a tablet’, but ‘a mode of thinking, namely, the act of understanding itself [ipsum intellegere]’; and Iip49s: ideas are not

Descartes, ‘*all* the intellect does is enable me to *perceive* the ideas which are subjects for *possible* judgments’, which means that the intellect ‘when regarded strictly in this light’ also ‘turns out to contain no error in the proper sense of the term’ (AT VII.56; my ital.). As the French edition has it, ‘by the intellect alone I neither affirm [assure] nor deny [nie] anything, but I only conceive the ideas of things, which I am *able* to affirm or deny’ (AT IX A.45; my ital.). Rather, according to Descartes, it is only once the *will* is involved that an affirmation or denial of an idea – and so a judgment in the strict sense, as an act of referring of an idea to something beyond itself – occurs, and so that the question of the adequacy of this ‘reference’, and with it, the space for error, can arise.<sup>16</sup>

We can infer from our previous discussion (§7) that Kant will reject the necessity of referring to the will in giving an account of the *logical* essence of judgment as such, and hence of the nature of the affirmative and negative logical functions of unity in judgment. By contrast, at times Kant does make it sound as if the will is involved in the mental act of what Kant calls ‘holding-true

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‘mute pictures on a panel’, but rather ‘an idea, *insofar as it is an idea* [quatenus idea est], involves an affirmation or negation’ (Geb II.132; my ital.).

<sup>16</sup> Compare Gary Hatfield, *Descartes and the Meditations* (London: Routledge, 2003): ‘Judgments affirm or deny something. [...] [I]n the act of judging we take a stand on whether the content of the idea holds true of something. In judging, either we affirm that what the idea represents is the case (affirmation), or we assert that it is not the case (denial)’ (151). This is to construe Cartesian judgment along roughly ‘Brentanian’ lines – i.e., as the positing (or rejecting) of the object of an idea as obtaining among the sphere of actual objects. Brentano, in turn, took himself to be following up on Descartes’ suggestions, in opposition to Kant’s thesis that all judgment involves ‘synthesis’ or ‘combination’. See Brentano’s 1889 *Vom Ursprung sittlicher Erkenntnis* §20 and note 21; for Brentano’s criticisms of Kant’s views, see his 1874 *Psychologie* II.3.3 and II.7. For helpful discussion of Brentano’s conception of judgment as *thesis* in relation to Kant’s doctrine of *synthesis*, see Wayne Martin, *Theories of Judgment* (Cambridge: Cambridge, 2006), ch.2.

[Fürwahrhalten].<sup>17</sup> But this ‘act’ (or, rather, ‘occurrence [Begebenheit]’) has to do, not with the production of a synthetic *unity* of representations in a judgment, but rather with the assessment of the ‘sufficiency’ of the ‘ground [Grund]’ for claims concerning the *validity* [Gültigkeit] of the contents expressed in a given judgment, as Kant explains in the first *Kritik*’s ‘Canon of Pure Reason’ (B848). That is, ‘holding-true’ is an act of *claiming* that the content of a given judgment corresponds to something ‘objective’ (ibid.), though the varying degrees of ‘grounding’ that we take ourselves to have for such a claim to truth will yield different forms of such claims, such as claims to ‘know [wissen]’, ‘believe [glauben]’, or merely ‘opine [meinen]’ that the content of a judgment ‘is in agreement with the object’ (ibid.).

Instead of ‘holding-true’ (or ‘judgment’ in the ‘Cartesian’ sense), it would be more correct to say that the ‘judgment’ which is under investigation in Kant’s logic is, by contrast, the claimable *content* of such acts of ‘holding-true’, insofar as logic investigates the elementary ‘ways of unifying’ representations according to certain functions of synthesis. In particular, ‘Transcendental Logic’ is devoted to the elaboration of those basic forms of synthesizing our representations which

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<sup>17</sup> Compare the *Wiener Logik*: ‘We can see from our expressions, ‘I accept that [nehme das an]’, ‘I concede that [räume das ein]’, or ‘I withhold my approval [halte meinen Beifall zurück]’, that there must be something in our approval that is arbitrary [willkürlich], where we ourselves have to determine whether we want to hold [halten wollen] the cognition to be true or not’ (24:859). Yet overall Kant seems to reject the influence of the will even in ‘holding-true’; cf., *Jäsche Logik* §IX: ‘The will [Wille] does not have any influence immediately on holding-true; this would be quite absurd’ (9:73). For more discussion, see Chapter VI, §49.

can produce unities that 'agree' with the conditions of being possible empirical truths, and so actual candidates for 'holding-true'. This indicates a further point of departure from Descartes, for Kant thinks the intellect is itself far from merely passive or receptive in relation to this claimable content, but is instead responsible for – even *productive* of – its very 'shape' or 'form'.<sup>18</sup>

But here we can pick up a thread we dropped above, namely, whether it is appropriate to say that *formal* logic is likewise concerned with judgments *qua* possible contents for 'holding-true'. That is, we should now ask whether or not, for Kant, a relation to truth – or at least holding-true – is built into the formal-logical essence of judgment, if it is constitutive of judgments as treated in formal logic that they be the sorts of things which can be (taken as) true.

§23 For many, the answer to this question will seem quite obvious, since most present-day philosophers take it for granted that the very essence of judgment (or

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<sup>18</sup> Hence I find John McDowell's interpretation of the 'exercise' of Kantian spontaneity in judgment to be much too 'Cartesian' in this regard, with its focus on 'sticking one's neck out about how things are' (as McDowell puts it in his 'Response' to Crispin Wright in *Reading Mind and World* (London: Routledge, 2002), 287) and *committing* to a content's being true, rather than on the productive role of understanding in the *formation* of the very content itself. See, for example, *Mind and World* (with a new Introduction; Cambridge: Harvard, 1996), Lecture I, §5, where 'spontaneity' is cashed out as the idea that 'minimally, it must be possible to decide whether or not to judge that things are as one's experience represents them to be. How one's experience represents things to be is not under one's control, but it is up to one whether one accepts the appearance or rejects it' (11). 'Judgment' here is being used in the Cartesian sense of 'accepting' or 'rejecting', and so in the sense of 'Fürwahrhalten', and not in the way that is central to Kant's understanding of judgment in logic – as productive of the 'logical togetherness' of a content itself, to use a phrase that McDowell himself deploys in his Woodbridge lectures, *Journal of Philosophy*, 95.9 (Sept 1998). I deal with Kant's notion of spontaneity in more detail in Chapter VI.

the judgment-like things (propositions, etc.) treated by today's logic) must be *defined in terms of truth-evaluability*. Now, as with the conceptual dependence of truth and falsity upon judgment, so too is the idea of the converse dependence of judgment upon truth and falsity often traced back to Aristotle. Consider the following remarks made in the course of introducing the subject-matter of *De Interpretatione*:

A sentence [logos] is a significant spoken sound [phone semantike]. [...] Every sentence is significant [semantikos]..., but not every sentence is a statement-making sentence [logos apophantikos], but only those in which there is truth or falsity. There is not truth or falsity in all sentences: a prayer is a sentence but is neither true nor false. The present investigation deals with the statement-making sentence; the others we can dismiss, since consideration of them belongs rather to the study of rhetoric or poetry. (IV, 17a1-7)

Though Aristotle recognizes other forms of 'sentences', on the assumption that the investigation he is engaged in presently (i.e., in *De Interpretatione*) is *formal logic*, Aristotle can be seen as claiming that it is essential to the definition of the relevant primitive elements of the subject-matter of logic (here: 'statement-making sentences'), that they be things 'in which there is truth or falsity'.<sup>19</sup>

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<sup>19</sup> The fact that, infamously, *De Interpretatione* IX takes up sentences (about the sea-battle) which, at least on some readings, are (or at least appear to be) neither true nor false, though they can be paired according to (apparent) *logical* contradictories, is something which complicates whatever prima facie simplicity this statement might have. Also, one must be careful not to over-emphasize this passage, at the expense of whatever might be said about the defining features of the primitive elements of *demonstration* in the *Analytica Priora*. Some interpreters claim that the two analyses lead to different characterizations of the primitives – i.e., noun-verb vs. term-copula; compare Ross's *Aristotle*, 26f; but especially, Geach: 'History of the Corruptions of Logic' *University of Leeds Review*, 12.1 (1969), 'Contraries and Contradictories', *Supplement to Proceedings of the Aristotelian Society*, 30 (1956), and (implicitly) 'Subject and Predicate', *Mind*, 59.236

This commitment is expressed perhaps most straightforwardly in contemporary attempts to construct a logic of judgments around what has come to be known as the principle of *bivalence*: there are two exclusive and exhaustive ways for a judgment to be – namely, *true* and *false*. In other words, every judgment must either be true or be false, and not both. This represents, in effect, an implicit definition of ‘judgment as such’ from a logical point of view, since ‘being-true’ and ‘being-false’ carve up all possible ‘ways’ that a judgment can ‘be’. Moreover, this construal of the basic logical significance of judgment allows for the conferral of a sort of ‘formality’ to the science which studies the relationships between judgments and their truth-values, a formality exemplified by the fact that, because it studies judgments *exclusively* as ‘things in which there is truth and falsity’, logic can abstract from all other individuating ‘content’ of judgments, and consider them *solely* with respect to their truth or falsity. In effect, this renders the ‘content’ of all true judgments (and all false judgments) indistinguishable – ‘materially’ *equivalent*, from a logical point of view.<sup>20</sup> Finally, this construal of the

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(Oct., 1950), 461-482, esp 464f. (The first two essays are reprinted in Geach's *Logic Matters* (Oxford: Basil Blackwell, 1972).

<sup>20</sup> As C.I. Lewis, among others, is fond of pointing out, this has the effect of erasing any distinction between sentences which *are* (actually) true, from sentences which *must* be or merely *may* be true. See for example Lewis's ‘Implication and the Algebra of Logic’, *Mind* 21.84 (Oct. 1912), 522-531, where Lewis argues that this fails as a treatment of the ‘logical’ behavior of subjunctive conditionals: ‘Hypotheses whose truth is problematic have logical consequences *which are independent of its truth or falsity*’ (529). In this regard, it is worth noting that, in *Kant's Analogies of Experience* (Chicago: Chicago, 1973), Arthur Melnick claims that Kant departs from now-classical treatments of the ‘propositional’ connectives: ‘the hypothetical form of judgment is most plausibly construed as being, for Kant, the *nonmaterial* hypothetical, and thus cannot be

logical essence of judgment allows for an equally quasi-‘formal’ characterization of the notion of logically valid ‘inference’ or ‘consequence’, in terms of the preservation of truth throughout the course of a sequence or pattern of judgments.

The resulting conception of logic, and the symbolic language in which its commitments find expression, gained such prominence among philosophers (and such traction in the curriculum) in the early part of the 20<sup>th</sup> century that it is now known as ‘classical’.<sup>21</sup> And no doubt because of its wide-spread acceptance, many (perhaps especially sympathetic) interpreters have found it natural, even desirable to ascribe (implicitly or explicitly) such a position to Kant. In so doing, they have been led to suppose (or have simply *presupposed*) that Kant, like many of our contemporaries, would take the formal-logical essence of judgment to lie in the fact that it is the sort of thing which must be either true or false. Hence many contemporary interpreters of Kant pass silently from the initial establishment of a conceptual dependence of truth upon judgment (i.e., no truth (or falsity) without

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assimilated correctly under propositional or truth-functional logic’ (39). I argue below that Melnick is quite right to note this departure.

<sup>21</sup> The viewpoint is summarized nicely by Lou Goble, in his ‘Introduction’ to the *Blackwell Guide to Philosophical Logic* (Oxford: Blackwell, 2001): “Classical logic’ here does not mean the logic of antiquity; it is not Aristotle’s logic. [...Rather, it is] logic in a narrowly circumscribed language that is *two-valued*, in the sense that every sentence in that language is presumed to be either true or false, but not both, and that is furthermore *extensional*, in the sense that expressions can be replaced by others with the same denotation or truth-value as the original. In addition, logical consequence is usually assumed to mean formal *truth preservation* [my ital.]; an argument is valid just in case it has a valid form, and a form is valid just in case it has no instance or interpretation that would make all the premises true and the conclusion false’ (4).



judgment) to an interpretation in which Kant *also* holds that there can be no judgment without truth-or-falsity.<sup>22</sup> And since formal logic is the science of judgment, such interpreters will go on to claim that truth must be taken up as a central, perhaps even defining concept of Kant's logic.<sup>23</sup>

But regardless of how natural (or inevitable) it may seem, I want to argue in what follows that this interpretation is a mistaken one, that Kant does *not* build truth-evaluability into the very nature of judgment as such.

The most important reason for Kant's divergence in this regard is that Kant's conception of the essence of judgment has to be generic enough to subsume *all* of the possibilities for intellectual activity, no matter what the sphere. This conception must therefore be equally applicable, not just to theoretical judgments, but to practical and aesthetic judgments as well, since Kant holds the *very same* logical forms to guide intellectual syntheses in these domains as well. But Kant also seems to hold that these other sorts of judgments are not themselves truth-evaluable, or apt for truth-valuation. That is to say, while non-theoretical

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<sup>22</sup> Cf., Hanna, *Kant and the Foundations of Analytic Philosophy* ('truth-evaluable' 1, ('bivalent') 30, 63, etc. Longuenesse, *Kant and the Capacity to Judge*, ('admits of being either true or false') 106, 140, etc. Pippin, *Kant's Theory of Form* ('bearer of possible truth and falsity') 37f., though later in this book, Pippin hints at alternative interpretive positions – see below (§26). Moreover, there is a difference between claiming (as Pippin does) that it is necessary for every judgment to be a *possible* bearer of a truth-value, and claiming (as is more common) that it is *necessary* for every judgment to (actually) bear a truth-value.

<sup>23</sup> Cf., Prauss, 'Zur Wahrheitsproblem bei Kant': 'Zwar hat auch der formale Logiker mit *Wahrheit* insofern zu tun, als er sich mit dem beschäftigt, was wahr oder falsch sein kann, nämlich mit Erkenntnissen, bzw. mit *Urteilen*' (171-2; my ital.).

judgments may be assessed as ‘right’, or ‘good’, or ‘appropriate’, for Kant, the question of their being *true* (or false) simply does not arise.

For example, Kant argues in the *Grundlegung* that it is our moral duty to take the conformity of the *form* of our practical judgment with the moral law, i.e., ‘mere conformity to law in general [bloße Gesetzmäßigkeit überhaupt]’ (4:402), as our determining ground for our maxim or practical judgment, as the ‘principle for action’, or ‘principle according to which [we] *act*’ (4:422n). That is, we are to exercise our practical judgment in such a way that our maxims ‘be in conformity [gemäß sein] with the universality of a law as such’ (4:421). But then the relevant sort of ‘conformity’ at issue in morality is not between a judgment and its object, but rather between the form of a given judgment and the form of universal law. Indeed, it is essential to Kant’s practical philosophy that, as he puts it in the second *Kritik*, the ideal or model of morality is a practical judger for whom ‘the determining ground of the will is *not the object* but the law of the will’ (5:58).<sup>24</sup>

Moreover, the very notion of an ‘object’ in the moral sphere is something quite distinct from that of an ‘object’ in the sphere of nature. Kant defines the ‘concept of an object of practical reason’ as ‘the representation of an object as an effect [Wirkung] possible through freedom’, such that ‘to be an object of practical cognition so understood signifies, therefore, only the relation [Beziehung] of the

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<sup>24</sup> In fact, in the second *Kritik*, Kant argues explicitly that ‘all practical principles that presuppose an object (matter) of the faculty of desire as the determining ground of the will are, without exception, empirical, and can furnish no practical laws’ (5:21).

will to the action [auf die Handlung] by which it [i.e., the object] or its opposite would be made actual [wirklich]' (KpV 5:57). But then the question of the practical cognition being assessed according to its 'correspondence' with such an 'object' will surely be out of place, for the 'object' here is something which is (a) represented as a merely *possible* effect, and so (b) 'exists' only 'intentionally', or in a manner entirely 'internal' to the judgment itself, and so, finally, (c) will only really exist or be 'made actual' as an *effect* of the practical cognition itself. Hence either *every* practical cognition trivially 'fits' its object (and so is true) since it is partially defined by the 'actuality' it intends to bring about,<sup>25</sup> or the whole question of object-cognition 'fit' must be reversed in the practical case, with the relevant question being the extent to which the actual 'object' realized as a result of the action actually *conforms with the cognition*, i.e., with the prior representation of the intended effect of the action.<sup>26</sup> But this is not a question of the theoretical 'truth'

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<sup>25</sup> This is a common way of attempting to reinscribe practical judgments within the regime of 'classical' logic; see, e.g., Quine's 1965 'On Austin's Method' (reprinted in *Theories and Things* (Cambridge: Harvard, 1981), 86-91): '*How to Do Things With Words* was prompted in part by an animus against the true/false fetish. Yet the relevance of the book to the fetish is not clear, if we think of truth in terms of Tarski's paradigm. The paradigm works for evaluations, after all, as Smart has noticed, as well as for statements of fact. And it works equally well for performatives. [...] 'I bid you good morning' is true of us on a given occasion if and only if, on that occasion, I bid you good morning. A performative is a notable sort of utterance, I grant; it makes itself true; but then it is true' (90). Quine refers to J.J.C. Smart's 1965 paper, 'The methods of ethics and the methods of science', *Journal of Philosophy*, 62 (1965), 344-49. There Smart claims 'If [we accept] 'It is true that *p* if and only if *p*' as the basis of his account of truth, then this can go over even where the saying that *p* is to be construed as a prescriptive expression of attitude' (346).

<sup>26</sup> I use here the metaphor of 'direction of fit' made popular by J.L. Austin, 'How to Talk: Some simple ways', *Proceedings of the Aristotelian Society*, (1952-3), reprinted in *Philosophical Papers*, 3<sup>rd</sup> ed., eds. Warnock and Urmson (Oxford: Oxford, 1979), 134-153. The relevant contrast between descriptive (theoretical) and prescriptive (practical) 'directions' is most famously explored in Anscombe's *Intention*, 2<sup>nd</sup> ed. (Ithaca: Cornell, 1963), though she herself does not use the phrase.

of the judgment, but rather of the practical ‘success’ or ‘effectiveness’ of the action that is guided (determined) by this intention (maxim).

Hence, in the practical case, we assess the ‘conformity’ of a judgment, not to an object, but to a form of a will. The situation is similar in the case of an aesthetic judgment, where the relevant sort of ‘agreement’ that the judgment institutes is again not one between our cognition and some object, but as Kant puts it in the third *Kritik*, a ‘harmony’ (KU §9, 5:218) between *the mental capacities of a subject*:

[A]n aesthetic judgment is of a unique kind, and affords absolutely no cognition (not even a confused one) of the object...; by contrast, [it] relates the representation...solely to the subject [lediglich auf das Subject bezieht].... The judgment is also called aesthetic precisely because its determining ground is not a concept but a feeling (of inner sense) of that unison [Einhelligkeit] in the play of the powers of the mind [Gemütskräfte]. (KU §15, 5:228)

In an aesthetic judgment, ‘we do not relate [beziehen] the representation...to the object [auf das Object] for cognition, but rather to the subject [auf das Subject]’ (KU §1, 5:203; cf., §15, 5:228). In this way, just as in the practical case, the principle or ‘determining ground [Bestimmungsgrund]’ of an aesthetic judgment does not lie *in the object*, though, unlike the practical case, here the ‘ground’ for the judgment ‘can be nothing other than *subjective*’ (KU §1, 5:203). Hence, insofar as

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See especially Anscombe’s analysis in §32 of the difference in the direction of fit between a man shopping according to his wife’s list (prescriptive: purchases must fit list), and a detective making his own list of the man’s selections (descriptive: list must fit purchases).

an aesthetic judgment can 'afford absolutely no cognition of an object', and insofar as it 'relates' the relevant representation '*solely* to the subject', it would seem as though all talk of 'truth' would be entirely out of place, since such a judgment is simply not concerned to establish even a *relation* between the given representation and an object, let alone belong to a sphere in which the question of its *agreement* with the object could so much as arise.

And yet, despite the distance of both practical and aesthetic judgments from truth-evaluability, these are nevertheless, for Kant, *judgments* in the fullest sense of the term. As Kant puts it in the third *Kritik*, 'a relation to [Beziehung auf] the understanding is always contained [enthalten]' even in aesthetic judgments; what is more, Kant claims that this fact entitles him to guide his inquiry into the 'Moments' of aesthetic judgment by reference to nothing other than 'the *logical functions* of judging' (KU §1n, 5:203; my ital.). And a similar claim is made on behalf of practical judgments in the 'Analytic' of the second *Kritik*, in which Kant is guided in his analysis of the 'categories of freedom' again by the very same pure concepts of understanding which underwrite the 'Analytic' of the first *Kritik* (cf., 5:65f). Hence in each of these non-'theoretical' species of 'judgment in general', we will find the very same 'logical' articulation as we did in judgments which aim at truth (albeit an articulation which 'unifies' material of a different sort in each case). Yet we now have reason to think that Kant would not take truth-aptness to extend so far.

On these grounds, I think we must conclude that Kant's understanding of 'judgment in general' cannot be restricted to 'truth-evaluable content', and should admit as well that Kant means for the very same formal-logical 'functions' to be at work in spheres where questions of truth do not arise. Formal logic is not limited, for Kant, to providing the forms of 'theoretical-scientific' understanding alone, and so should not be construed as the 'science of (theoretical) science'. Formal logic is not restricted to the analysis of thinking that is directed at 'the true', which is just to say that, for Kant, the formal-logical essence of judgment is detached from truth itself.

If anything, it will be a 'special' logic which is the science of specifically truth-evaluable judgments – namely, 'Transcendental Logic'. And, as we have seen, this is precisely what Kant claims in the first *Kritik*: the 'Transcendental Analytic' is 'a logic of truth' (B87). Should we then expect this logic to treat judgment in a way which mirrors more closely the definition of judgment given by present-day 'classical' logic? Will the judgments of Transcendental Logic be defined by reference to their truth-evaluability?

In the next section I want to turn to Kant's analysis of two further species of judgment within the 'theoretical' sphere – what I will call categorially 'undetermined' judgment and dialectical judgment respectively – in order to draw out the extent to which even within the 'logic of truth', Kant appears to disconnect judgment from at least the *actual* possession of a truth-value. This

would suggest that even in the case of (so-called) 'scientific' judgment, Kant stands at some distance from one of the fundamental commitments of 'classical' logical analysis – the principle of bivalence.

§24 In the opening section of this chapter, we already witnessed Kant making room within his system for the fact that not all judgmental unities will meet the conditions for even *transcendental* truth, and so for objective reality (for achieving a relation to an object). Rather, Kant allows for syntheses or combinations which are 'well-formed' judgments from a formal-logical point of view, but which will not have met the conditions for being taken to present an object or enjoy 'objective purport'.

Now, this failure can be the result of at least two distinct causes. On the one hand, the relevant syntheses can remain categorially *undetermined*, as would be the case in which we have in mind, say, a categorical relation between two concepts (' $\alpha$  is  $\beta$ '), but we do not yet take the subject-concept to be the sort of thing which must *always* function as a subject and never a predicate (and so do not 'determine' the unity as ' $\alpha$  is a substratum for  $\beta$ '). Until we determine the concepts involved in a judgment according to categories, we cannot be said to have made a judgment which purports to be of an object.

This sort of case is discussed, for example, in §14 of the B-deduction (B128-9),<sup>27</sup> and is of a piece with Kant's claim at the end of the 'Schematism', that

even after abstraction from every sensible condition, significance [Bedeutung], but only a *logical* significance of the mere unity of representations, is left to the pure concepts of the understanding, but no object [Gegenstand] and thus no significance is given to them that could yield a concept of the object [Object]. (B186)

That is to say, by regarding something only as having the logical unity of a judgment, we have not yet conferred upon it any capacity to represent an object. As I argued in the previous chapter (§20), this scenario is, roughly, what I think Kant means to pick out by his concept of a 'judgment of perception', introduced in the *Prolegomena*, something which we take to have the logical connection indicative of a synthesis according to a function of judgment, but which we do not take to be 'of' an object. Yet without the presence of such an object-relation (i.e., without the introduction of transcendental 'content'), the judgment at issue is hence not one which can be assessed for its truth or its falsity.<sup>28</sup>

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<sup>27</sup> We discussed this example in the previous chapter (§19), but let me reprint the text here for ease of reference: 'the function of the categorical judgment was that of the relationship of the subject to the predicate, e.g., 'All bodies are divisible'. Yet in regard to the merely logical use of the understanding it would remain *undetermined* [unbestimmt] which of these two concepts will be given the function of the subject and which will be given that of the predicate. For one can also say: 'Something divisible is a body.' Through the category of substance, however, if I bring the concept of a body under it, it is *determined* [bestimmt] that its empirical intuition in experience must always be considered as subject, never as mere predicate' (B128-9; my ital.).

Note that at least the typical practical judgment will not be 'undetermined' in this sense, but will rather represent an 'object' as a possible 'actualization' by an action of the subject according to one of the 'categories of freedom' given in the KpV.

<sup>28</sup> I don't mean here to ascribe to Kant any views about the 'in corrigibility' of judgments of perception, but rather a view in which such judgments should be taken as *neither true nor false*,



On the other hand, Kant thinks that we can make judgments in which we take ourselves to have successfully categorially ‘determined’ a given unity of representations so as to achieve a relation to an object, but have (implicitly) done so in such a way as to *conflict* with the conditions of the application of the categories. Kant thinks this sort of judgment is quite common among the metaphysicians of his day, and so chief among these cases of ostensibly ‘objective’ syntheses are those which involve use of what Kant calls the ‘Transcendental Ideas’ as if they possessed ‘objective reality’. Some examples of such *dialectical* judgments would include taking the ‘I’ as a substance (‘The thinking subject is a persisting substratum for all of its thoughts’), or taking the ‘world-whole’ itself as a cause (‘Everything in world-whole succeeds universally and necessarily from something else within the world-whole’). In these cases, the ‘unity’ at issue is one which we take to represent an ‘object’, and so which we take to be a judgment with a relation to an object, or with ‘objective purport’. The problem is that the ‘object’ at issue in such thoughts turns out to be an example of what Kant calls in the ‘Amphiboly’ an *ens rationis*, or ‘entity of reason’:

the object [Gegenstand] of a concept to which no intuition that can be given corresponds [correspondirt] is = nothing [Nichts], i.e., a concept without an object, like the *noumena* – which cannot be counted under [gezählt unter] the possibilities although they must

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since without objective purport. Perhaps a more promising analysis would assimilate judgments of perception with *aesthetic* judgments, insofar as both sorts of judgments refer their respective unities of representations *only* to the subject.

not on that ground be given up [ausgegeben] as impossible (*ens rationis*) – or like something such as certain new fundamental forces, which one thinks [denkt], without contradiction [Widerspruch], to be sure, but also without any example [Beispiel] from experience even being thought, and which must therefore not be counted under the possibilities. (B347)

These ‘objects’, though not to be regarded as absolutely impossible – and so not a form of *nihil per se*, but rather a form of *ens*<sup>29</sup> – are still nevertheless of a sort that is ‘without any example from experience’, and so not to be ‘counted under’ the *real* ‘possibilities’, since it cannot be shown that the relevant ‘object’ meets the conditions required of a (real) object of possible experience – i.e., intuitability via sense-perception. But this failure is simply identical with a failure to ‘agree’ with the conditions for having a ‘general relation’ to ‘experience as such’ (B185), and so represents a failure to enjoy ‘transcendental truth’, as this was defined above.

This implies that, in the case of thoughts about Ideas, though such thoughts *claim* to have ‘objective purport’, they in fact fail to achieve such purport, insofar as we cannot understand what it would mean for such an ‘object’ to be present to our minds in sense-perception. For it is only by giving such an account of the connection between a representation and sense-perception that Kant thinks we can give ‘significance’ to the claim that we actually have on hand a determinate

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<sup>29</sup> As Kant says about the thinking subject (B422-3n) or the world (B506) or God (B703, B707), each can be determined as nothing more than a mere ‘Etwas’. Compare as well Kant’s discussion of how we come to the concept of a ‘noumenon’ as an ‘object in itself’, ‘by taking the entirely *undetermined* [unbestimmte] concept of a being of understanding [Verstandeswesen], as a Something in general [Etwas überhaupt] outside of our sensibility, for a *determinate* [bestimmte] concept of a being [Wesen] that we could cognize through the understanding in some way’ (B307).

representation *of an object*. For these reasons, Kant proceeds to call the ‘object’ of such a thought which has no demonstrable ‘objective reality’ a mere ‘thought-thing [Gedankending]’ (B348).

But if we cannot demonstrate that, in dealing with such judgments, we are actually thinking ‘of’ some object, rather than dealing with a mere ‘play’ of representations unified according to a logical function and ostensibly determined by a category, then it is difficult to see what we could mean by claiming that these judgments nevertheless must ‘be’ determinately true or false. Rather, Kant’s thesis is precisely that we have failed to specify -- and indeed, in principle, *cannot* specify -- a determinate ‘object’ with which the judgment could correspond or fail to correspond. Our thoughts ‘about’ Ideas ‘have in fact no relation to any object [Beziehung auf irgend ein Object] that could be given congruent to them’ (B393).<sup>30</sup>

At this point, we might wonder whether we should simply take such metaphysical judgments about Ideas to be *false*, since they will *always* fail to ‘agree’ with any and every object we encounter or can encounter in sense-perception. Yet Kant claims in the quote above (B347) that the ‘objects’ of such Ideas cannot

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<sup>30</sup> The general upshot of Kant’s analysis is summarized nicely near the end of the third *Kritik* (§90): ‘[T]o assume [anzunehmen] the possibility of a supersensible being determined in accordance with certain concepts would be a completely groundless presupposition [Voraussetzung], since in this case none of the requisite conditions of a cognition which depend upon intuition are given, and thus nothing is left as a criterion of this possibility but the mere principle of contradiction (which can prove nothing but the possibility of *thinking* [des Denkens], not that of the *object* which is thought itself [des gedachten Gegenstandes selbst])’ (5:466; my ital.).

be counted as absolutely impossible, which implies that *all* relations to such objects cannot be ruled out absolutely, and hence that some form or other of ‘agreement’ between thought and such objects might yet be available. Most importantly, Kant thinks that we cannot rule out the possibility of a different sort of intellect (which God might have) that would be able to ‘intuit’ these objects directly, in way not constrained by the intellectual and sensible conditions of our experience of objects (cf., KU §§76-77).<sup>31</sup>

This space is what Kant means to leave open when he claims later in the Dialectic that, even though ‘we can have no acquaintance [Kenntniß] with an object [Object] that corresponds [correspondirt] to an Idea’, we *can* have what he calls a ‘*problematic* concept’ of it (B397; my ital.). The fact that thoughts involving such problematic concepts can enjoy a type of quasi-objective significance without yet enjoying demonstrably (or determinately) ‘real’ (or ‘objective’) significance is of great importance to Kant’s overall project, especially his *moral* philosophy.<sup>32</sup> Hence, though we cannot demonstrate that these judgments are

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<sup>31</sup> We will return to this topic in Chapter VI, when we consider the vital importance of these sections for Kant’s account of the nature of the ground of the validity of the Aristotelian logic, insofar as it is the logic of a merely *discursive* understanding. I am grateful to James Conant and David Wellbery for impressing upon me the significance of a non-discursive understanding, not only for Kant’s Critical philosophy, but for developments in post-Kantianism as a whole.

<sup>32</sup> Cf., Charles Parsons, ‘Kant’s Philosophy of Arithmetic’: ‘Logic is also not subject to the great limitation of knowledge based on intuition, that of appearances. When Kant says that it must be possible to think of things in themselves, he implies first that such a conception does not contradict the laws of logic, and second that in the statements we make about them, the logical laws are still a negative criterion of truth. If he could not trust logic in this realm, Kant’s metaphysics of morals would not be able to get off the ground’ (117).

even possibly true, we cannot claim either that such judgments are necessarily false either.<sup>33</sup>

By calling Ideas ‘problematic concepts’, Kant means to say that they are both demonstrably unrelated to any ‘real’ object of sense-experience but also not *necessarily* unrelated to all possible objects of every form of experience. In fact, Kant goes on to argue in the second *Kritik* that the transcendental Ideas do indeed acquire a kind of ‘objective reality’ in the *practical* sphere, through their relation to the demands of the moral law, the ‘fact [Factum]’ of which we have an apriori consciousness (5:47).<sup>34</sup>

The acquisition of another form of objective purport, however, still does nothing to confer a *truth*-value upon these judgments of Ideas. Rather, from the point of view of truth and falsity, i.e., considered as possible claims to theoretical

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<sup>33</sup> Compare, again, Kant’s remarks about noumena: ‘we have no insight into the possibility of such noumena, and the domain outside of the sphere of appearances is empty (for us), i.e., we have an understanding that extends farther than sensibility *problematically*, but no intuition, indeed not even the concept of a possible intuition, through which objects outside of the field of sensibility could be given, and about which the understanding could be employed *assertorically*’ (B310).

<sup>34</sup> Compare Kant’s treatment in the ‘Vorrede’ of the ‘enigma of the critical philosophy’ – ‘how one can *deny* objective *reality* to the supersensible use of the categories in speculation and yet *grant* them this *reality* with respect to the objects of pure practical reason’: ‘what is meant by [this] is only that in this respect an *object* belongs to [the categories], because they are either contained in the necessary determination of the will apriori or else are inseparably connected with the object of its determination’ (KpV 5:6). Compare as well the later discussion of the moral law itself as ‘the idea of a nature not given empirically and yet possible through freedom, hence a supersensible nature to which we give *objective reality* to at least in a *practical respect* [Beziehung]’ (5:44; my ital.). Kant will claim later in the second *Kritik* that ‘the objective reality of the moral law’ itself is ‘firmly established of itself, by the law’s being ‘given, as it were, as a fact [Factum] of pure reason of which we are apriori conscious and which is apodictically certain’ (5:47). I cannot hope to treat of this difficult doctrine here, though a comparative analysis of objective reality in a ‘theoretical or speculative’ respect with ‘objective reality in a practical respect’ would be mutually illuminating, to be sure.

cognition, these judgments themselves will always be merely ‘problematic’. In this regard, consider the following remarks from the *Wiener Logik* about the bracketing of truth in our treatment of such judgments:

If a judgment is thought *without saying what is true and not true*, then this is a problematic judgment, which is accepted [angenommen] in order to see whether the other judgment follows [folgen] if I accept this one. It is thought merely as to its possibility. I see only whether the judgment is possible, even if the thing itself [Sache selbst] is not possible. (24:933; my ital.)<sup>35</sup>

Hence, with the notion of a problematic judgment, Kant here reserves a place for the treatment of a thought as neither determinately true nor false, which reflects his rejection of *strict bivalence* within the sphere of theoretical judgments.<sup>36</sup> To possess a determinate truth-value, a representation must bear a relation to a determinate object. Kant thinks we can only assume that there is such a relation to the extent that we can give an account of what it would mean to encounter the

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<sup>35</sup> Kant claims that this capacity for engaging with thoughts as if they were merely problematic is an essential one, ‘since on all sides men have hit upon strange propositions and have asserted [behauptet] them’ (24:933).

<sup>36</sup> In *Kant and the Foundations of Analytic Philosophy*, Robert Hanna argues that ‘[a]lthough Kant’s topic-neutral pure general logic is strictly bivalent, his topic-sensitive transcendental logic...is not strictly bivalent: it allows for true propositions, false propositions, and semantically empty propositions lacking truth and falsity alike (aka ‘truth-value gaps’)’ (30). That is, he argues that ‘Kant’s conception of a pure general logic, as a version of classical logic, is explicitly committed to strong bivalence’, and goes on to cite (B599; JL 9:53) as support (253). I think this position cannot be sustained. How can it both be the case (a) that *all* judgments (no matter what their object) must be true-or-false and (b) that *not all* judgments (concerning certain ‘objects’) must true-or-false. This is clearly inconsistent. I think a more promising line is presented by H.J. Paton (op.cit.), who claims that all empirically meaningful judgments are determinately true-or-false, whereas those lacking such meaning might not be. The validity of bivalence in the empirical sphere is claimed as well by Paul Abela, in his *Kant’s Empirical Realism* (Oxford: Oxford, 2002), 226.

relevant object in sense-perception (i.e., within, at least, time). This reflects Kant's commitment to empiricism or 'verificationism', broadly construed, about truth-evaluable judgments.<sup>37</sup> Hence we can say, with Carl Posy, that Kant 'injects sensation (or more precisely human, spatio-temporal perception) into the notion of truth'.<sup>38</sup>

Kant includes the 'problematic' form of judgment on the Table of the logical functions of unity that he gives in KrV §9 (see above, Table 1.1), and explicates it as follows: 'Problematic judgments are those in which one regards [annimt] the affirmation [Bejahen] or denial [Verneinen] as merely *possible* (arbitrary [beliebig])' (B100). This elaborates the particular way in which the

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<sup>37</sup> The classic statement of this interpretation of Kant is Strawson's account, in *The Bounds of Sense* (London: Methuen, 1966), of Kant's 'principle of significance': 'there can be no legitimate, or even *meaningful*, employment of ideas or concepts which does not relate them to empirical or experiential conditions of their application. If we wish to use a concept in a certain way, but are unable to specify the kind of experience-situation to which the concept, used in that way, would apply, then we are not really envisaging any legitimate use of the concept at all. In so using it, we shall not merely be saying what we do not know; we shall not really know *what we are saying*' (16; my ital.). As it stands, this is too strong a criterion of meaningfulness, since clearly practical judgments have 'meaning', as do judgments about Ideas in the practical sphere, even if in these cases too it is not required that we relate them to 'empirical conditions'. A more careful statement is given by Robert Hanna, *Kant and the Foundations of Analytic Philosophy*: 'Since noumenal objects are uncognizable by creatures with our specific cognitive constitution, and since the ideas of pure reason are objectively invalid or objectively unreal, hence *empirically* vacuous or 'empty', these propositions are all in fact *empirically* meaningless, and have no truth values' (30; my ital.). As Hanna implies, for Kant, empirical truth requires empirical meaningfulness, a notion which I have argued itself can be cashed out as a representation's possession of transcendental truth. What I think we must resist is any account which attributes to Kant an empiricist-verificationist theory of meaning *as such*.

<sup>38</sup> Posy, 'Kant and Conceptual Semantics', *Topoi* 10 (1991), 67-78; here, 69. Here Posy ascribes to Kant what he calls a *semantic humanism*, which consists in 'introducing characteristically human factors into the definition of elementary truth'; more specifically, 'a semantic humanist will take perception, perceptual evidence, and other epistemic conditions to be factors not merely in the knowledge of any given empirical judgment but in the actual truth of that judgment' (74).

‘problematic’ form belongs under the title of ‘modality’, a title which ‘concerns only the value [Werth] of the copula in relation to [Beziehung auf] thinking in general’ (ibid.). It is perhaps worth reminding ourselves that affirming and denying are themselves logical functions of ‘quality’, and represent the two forms that the copula can take, depending on whether the predicate-concept of a judgment is ‘attributed [beigelegt] to the subject[-concept] or opposed [entgegengesetzt] to it’ (B97). The final thing to note is that Kant claims that ‘a problematic proposition [Satz] is therefore that which only expresses logical possibility (which is *not objective*)’ (B101; my ital.).<sup>39</sup> The parenthetical remark here points in the direction of the present interpretation, that considering something as to its merely logical possibility is to bracket the question of the relation of this thing to any object.

Kant also says here that a problematic proposition expresses ‘a free choice [freie Wahl] to allow such a proposition to be valid [gelten zu lassen], a merely arbitrary assumption [bloß willkürliche Aufnehmung] of it in the understanding’ (B101). The problematic valuation of the copula contrasts with the ‘assertoric’ valuation, in which the predication is ‘considered [betrachtet] as *actual* [wirklich] (true [wahr])’ (B100). Perhaps on account of the parenthetical reference here to ‘true’, or the idea of ‘letting’ something be ‘valid’, several interpreters have

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<sup>39</sup> Kant uses this phrase, despite what we find in *Jäsche Logik* §30: ‘A problematic proposition [Satz] is a *contradictio in adjecto*’ (9:109).



suggested that we should interpret ‘modality’ in quasi-‘epistemic’ terms – i.e., in terms of ‘modes’ of ‘taking-true [Fürwahrhalten]’.<sup>40</sup> Yet we have already argued above (§22), however, that such modes of ‘holding-true’ should not be identified with any of the *formal*-logical ‘functions’ that give *unity* to a judgment. But here it would seem that the modal functions do not change the relevant unity of the judgment, but rather have to do with the *relation* between the unity and ‘thinking in general’. And if Kant does not mean that the different ‘values’ of the copula correspond to different modes of ‘holding’ something true (i.e., opining, believing, knowing), then what *do* these values represent?

I am not sure that a fully satisfactory account of the modal functions can be given, but what I want to suggest here is that Kant’s parenthetical use of ‘true’ here should be taken as shorthand for ‘it is true that *I affirm  $\beta$  of  $\alpha$* ’, and should be taken as a reference to the *pragmatic* features of judging as an act of a judging subject. That is, I think Kant is reaching here for a doctrine of the basic forms of illocutionary ‘force’ with which a given judgmental unity can be produced by our

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<sup>40</sup> Cf., Kirk Wilson, ‘Studies in the Formal Logic of Kant’s Modal Functions of Judgment’ (*Kant-Studien*, 1978): ‘Kant’s modal functions are more like epistemic operators that are related to alethic modalities in special ways’ (252); ‘what is meant by ‘the value of the copula’ is nothing mysterious: it is simply the modification of the copula in (S is P) with respect to how the conceptual unity is *maintained to be true*’ (253; my ital.). By contrast, compare Hanna, *op.cit.*: ‘There are good reasons for taking [B100] to mean that modal predicates are strictly ‘logical’ and not ‘determining’, *not* to mean that modal predicates are merely attitudes of the mind toward propositions’ (259), and adds in a footnote that ‘[m]any interpreters read this text as saying that, for Kant, modality is a function of propositional attitudes; see e.g., Pap, *Semantics and Necessary Truth*, 23n. But my alternative way of looking at the modal concepts is strongly borne out by Kant’s careful distinction between logico-semantic modality (as discussed in [KrV, §9]) and epistemic modality. The latter is expressed by propositional attitudes, or the modes of ‘taking-to-be-true’ [Fürwahrhalten] (B849-50)’ (259n39).

understanding.<sup>41</sup> By referring them to ‘pragmatic’ features, I mean to contrast the role the modal functions play from both the *epistemic* predicates (as in ‘I opine that’, ‘believe that’, ‘know that’), and *semantic* or *alethic* predicates of a completed judgmental unity itself (as in “ $\alpha$  is  $\beta$  is possibly true’, ‘actually true’, ‘necessarily true’). This, I suggest, is what Kant has in mind by his reference to the relation between the ‘copula’ and ‘thinking in general’.

We can summarize the resulting picture of the modal contribution, in combination with the other logical functions, on the following Table (3.1), on which, as before, ‘ $\alpha$ ’ and ‘ $\beta$ ’ stand for concepts, and the ‘ $\phi$ ’ under ‘Relation’ stands for another (act of) judgment:

**Table 3.1: The Formal-Logical Articulation of a Judgment**

	Modality		Quality		Quantity		Relation
It is	possible actual	that	I affirm I deny	$\beta$ of	all some	$\alpha$	categorically on the condition that $\phi$

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<sup>41</sup> This sort of reading is sketched by Jill Vance Buroker in her *Kant's Critique of Pure Reason: An Introduction* (Cambridge: Cambridge, 2006), 90-91, to whom I am grateful for conversations about this and other related topics in the Metaphysical Deduction.

Now, by emphasizing the connection of the judgment to ‘thinking in general’, this pragmatic formulation of the role of the modal functions helps us to make explicit the role of the copula as marking a mental ‘act’ by a thinking subject. This, in effect, introduces the thinking subject into the heart of Kant’s account of the logical form of judgment. Now, to be sure, this introduction of *subjectivity* into the notion of logical form places Kant at some distance from contemporary conceptions of the subject-matter of logic (especially after Frege), and will thus take further elaboration to both motivate its inclusion and make it intelligible. This feature of Kant’s views – and in particular, the essential connection between judgment and self-consciousness or *apperception* – will be the topic of the next sections, in which we aim to give a positive account of Kant’s view of the *basic principle* which unifies all of the relevant acts as acts of judgment, since, as we have seen in the previous sections, it is not to be found in the traditional notion of truth-evaluability.

### **B. Judgment, Subjectivity, Meaningfulness**

§25 We must turn to subjectivity at this point, because in a footnote to §16 of the B-Deduction, Kant makes it quite clear that it is ‘the synthetic unity of apperception’ which is *the* basic principle of his account of the logical essence of judgment. He claims there that apperceptive unity ‘is the *highest point* to which one

must affix all use of the understanding, even the whole of *logic*' (B134n; my ital.).<sup>42</sup> But before we try to say what Kant might mean by the unity of apperception itself, I want to lay out two important criteria of success for any interpretation of Kant's understanding of the essence of judgment, which we can derive from our previous reflections. First, it must be generic enough to apply to judgments in all domains (cf., §23). Second, it must be the case that it is applicable to *all* of the elementary forms that judgment can take.

Kant intends to have put us in a position to check the second sort of applicability since (as we noted in §10) he also claims to have identified an exclusive and exhaustive list of these forms, which he presents on the famous Table in the 'Leitfaden' (KrV §9). In fact, there is a sense in which we could simply take this list of forms to be itself a specification of the logical essence of judgment – i.e., if something has some suitable combination of these forms, then it is a judgment; if not, then it is not. Moreover, this sort of approach would fit neatly with typical 'definitions' of the basic expressions which belong to the syntax of a formal language – essentially, they are given through a straightforward *stipulation* of the primitive elements of expressions, and then recursive specification of the acceptable combinations of these elements.<sup>43</sup>

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<sup>42</sup> Cf., R1694 [1773-7]: 'Setzen wir in der Logik das Bewußtsein voraus' (16:86).

<sup>43</sup> Compare Geoffrey Hunter, *Metalogic* (California: California, 1971): 'The set of well-formed formulas of a particular formal language is determined by a *fiat* of its creator, who simply lays down what things are to be wffs of his language. Usually he does this by specifying (1) a set of

But however 'extensionally' adequate the resulting definition of judgment would be, it would not seem to be very informative – i.e., it would not give us insight into the very concept ('intension') of judgment as such, as Kant understands it – since to take such a 'stipulative' approach would not give us any further insight into *why* all of these forms are forms of one and the same sort of thing (i.e., all forms of *judgment*), other than because Kant insists they are so.<sup>44</sup> And Kant clearly takes the Table to provide an *analysis*, and not a creation, of the notion of judgment, as something with an independent (pre-Table) existence, as something over and against which his Table can (and should) be compared to establish its success.<sup>45</sup> What then can we say in general about judgment, such that we can see it as something that can take all and only these forms?

What I will argue in what follows is that the notion of the *unity of apperception* is intended to provide the ground for Kant's account of judgment

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symbols (the alphabet of his language) and (2) a set of *formation rules* determining which sequences of symbols from his alphabet are wffs of his language' (4).

<sup>44</sup> So, compare Christopher Leary, *A Friendly Introduction to Mathematical Logic* (Upper Saddle River, NJ: Prentice Hall, 2000): 'it is silly to pretend that the intended meanings do not drive our choice of symbols and the way we use them' (6). The question we are asking is: what are the 'intended meanings' of the forms listed on the Table – though we will want to pursue a sense of 'meaning' that is not essentially referential ('semantic', in this sense).

<sup>45</sup> As we noted in §4 above, this is the general constraint on *philosophy* as such. Cf. 'Doctrine of Method': 'In philosophy one must not imitate mathematics in putting the definitions first, unless perhaps as a mere experiment. For since they are *analyses* of *given* concepts [Zergliederungen gegebener Begriffe], these concepts, though perhaps only still confused, come first' (B758; my ital.). Compare as well his early 1763 'Inquiry concerning the distinctness of the principles of natural theology and morality': 'In philosophy, the concept of a thing is *already given* [schon gegeben], albeit confusedly or in an insufficiently determinate fashion. I must *analyze* [zergliedern] it. [...] It is the business of philosophy to *analyze* concepts which are given in a confused fashion, and to render them complete and determinate' (§1; 2:276,278; my ital.).

which will go beyond producing (stipulating) a mere list of acceptable ‘uninterpreted’, syntactical forms, since we will be aiming to say something about (to repeat) *why* these forms are all forms of *judgment*. (Roughly, we are aiming to say something about why these forms are the ‘acceptable’ ones.)<sup>46</sup> But, to return the discussion to the main task at hand, I will show that the general account of judgment in terms of apperceptive unity is one which can be constructed without making reference to truth, or ‘relation to objects’. In this sense, then, it will supplement Kant’s syntactic specification of the forms of judgment by providing what is a decidedly *non-semantic* account of the formal-logical essence of judgment.

Let me begin to lay out such an account by collecting some of the points made from previous sections and summarizing them in the following (provisional) exposition of the concept of judgment: judgment is something which *involves the act of synthesizing (combining) representations in one consciousness by way of a unifying function*. I will now say a bit more about the key notions involved in our initial analysis.

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<sup>46</sup> The most sustained attempt to retrace or reconstruct the derivation of the logical functions of unity from the (bare) concept of apperceptive unity is surely Klaus Reich’s *Die Vollständigkeit der kantischen Urteilstafel* (Berlin, 1932; 2nd ed., 1948). Though Reich’s attempt has come in for much criticism (by, e.g., Reinhard Brandt, Michael Wolff, and others), I think that his general proposal for the strategy of Kant’s derivation has to be on the right track. The work itself is a surely at least ‘a minor classic in the history of Kantianism’ (xii) and possibly ‘the fullest and most skillful evaluation the Metaphysical Deduction has had’ (xiii), as L.W. Beck puts it in his ‘Foreword’ to the English translation of Reich’s work (by J. Kneller and M. Losonsky (Stanford: Stanford, 1992)). Even if one is sympathetic with Reich’s overall thesis, his particular focus, however (and appropriately so, given the aim of his book), is a derivation of the forms of judgment as judgment is construed in the domain of transcendental logic (or the realm of objective cognition); further work would thus need to be done to parcel out the aspects of Reich’s reconstruction that could be taken up in formal logic.

We can attend, first, to the notion of *function*. We have seen already (in §10) that Kant defines judgments in the ‘Leitfaden’ as ‘functions of unity among our representations’, and defines a ‘function’ in turn as ‘the unity of the action [Handlung] of ordering different representations under a common one’ (B93). I have already argued that the function, as the *unity* of an act, should be considered as distinct from the *act* (or action) of unifying a manifold of representations into ‘one’ representation, an act which Kant calls *synthesis* in §10 of the Metaphysical Deduction, which he calls *combination* [Verbindung] in §15 of the B-edition Transcendental Deduction – and later, perhaps most prominently in his correspondence with J.S. Beck, which he calls *composition* [Zusammensetzung].<sup>47</sup>

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<sup>47</sup> Cf., the passages from Kant’s January 20, 1791 letter to Beck which parallel those from the B-Deduction: ‘a totality [Inbegriff] requires a *composing* [Zusammensetzen] (synthesis) of the manifold. It must, thus (as a totality) be *produced* [gemacht]’ (11:314); ‘Since composition [Zusammensetzung]...cannot be *given* but must be *produced*, it must rest on [beruht auf] the pure spontaneity of the understanding in concepts of objects in general (of the composition of the given manifold)’ (11:316). As should be clear by now, the ‘concepts’ that combination ‘rests on’ are nothing other than the *categories* (as ‘concepts of an object in general’ (B128)), and the categories (as pure concepts) are, in turn, nothing other than ‘general’ representations ‘of pure combination (synthesis) – cf., KrV, §10: ‘Die reine Synthesis, allgemein vorgestellt, giebt nun den reinen Verstandesbegriff’ (B104). As this section of the ‘Leitfaden’ makes clear, the role of the pure concepts in combination can be investigated from two different points of view: as a ‘function that gives unity to the different representations in a *judgment*’ and as a function that ‘gives unity to the mere synthesis of different representations in an *intuition*’ (B104-5). As I have argued in the previous chapter, the former point of view is that of *formal* logic; the latter, *transcendental* logic *stricto sensu*.

Let me also note that, though the following paragraphs of my text make use of material from the Transcendental Deduction, and so from an analysis which takes place within ‘Transcendental Logic’, the points which I take from this analysis are intended to be sufficiently ‘formal’ so as to be ones which could have been made from within ‘Pure General Logic’ as well. (As I have argued, this section of the *Kritik* actually includes material from three distinct ‘logics’: formal, transcendental, and theoretical-special (or ‘Transcendental’) logic.)

On the other hand, a function should be distinguished from the *product* of such synthetic activity (even if the involvement of a given function surely leaves its mark on the production). Rather, a ‘function’ is that which ‘gives unity’ to an act of ‘synthesis’ (B104-5). Hence, insofar as a function is ‘in’ the form of judgment, this gives us a way of differentiating the *form* of judgment from both the *activity* of judging (i.e., synthesis) and from the *content* judged (i.e., representations). A variety of distinct acts (however they are to be individuated) can all involve the same form, and a variety of distinct sets of representations can be unified according to the same form.<sup>48</sup> Finally, we can note that in §19 of the B-Deduction, Kant ties the logical functions to apperceptive synthesis by claiming that the judgmental ‘copula’ is the emblem of such synthetic activity. The copula

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<sup>48</sup> On the ground that (as the ‘Leitfaden’ claims) a judgment just *is* a function of unity (so too with thinking; cf., B428), if we take part of the logical essence of any given judgment to be a *way* of synthesizing (combining, composing) representations into a unity, then we can have room for a ‘type’-‘token’ distinction at the level of judgment, since the same *way* of unifying representations can be realized (concretely) at various times. Hence judgment-types would not be sensible things, even if tokenings might (in some sense) belong to the time-series. Compare the classical statement of the token-type distinction by Peirce in his *Collected Papers*, IV §537: ‘A common mode of estimating the amount of matter in a MS. or printed book is to count the number of words. There will ordinarily be about twenty *the’s* on a page, and of course they count as twenty words. In another sense of the word ‘word’, however, there is but one word ‘the’ in the English language; and it is impossible that this word should lie visibly on a page or be heard in any voice, for the reason that it is not a Single thing or Single event. It does not exist; it only determines things that do exist. Such a definitely significant Form, I propose to term a *Type*. A Single event which happens once and whose identity is limited to that one happening or a Single object or thing which is in some single place at any one instant of time, such event or thing being significant only as occurring just when and where it does, such as this or that word on a single line of a single page of a single copy of a book, I will venture to call a *Token*.’ I will take up the issue of the connection between judging (or intellectual activity in general) and temporality in chapter VI.



[Verhältnißwörtchen] 'is' is what 'designates the relation [Beziehung] of the representations to the original apperception and its necessary unity' (B142).<sup>49</sup>

Secondly, we can attend directly to the notion of *apperception* or consciousness itself. In the beginning of §16 of the B-Deduction, Kant identifies the unity of apperception with the unity of consciousness [Bewußtsein], both of which, moreover, are represented (in its 'pure' or 'original' form) by: 'I think' (B132). §16 goes on to tell us that the synthetic unification of a manifold of representations by the understanding is *always* something which takes the form of the unity of apperception: not only is combination 'an operation [Verrichtung] of the understanding', the understanding is 'itself nothing further than the faculty of combining [verbinden] a priori and bringing the manifold of given representations under *unity of apperception*' (B135; my ital.). Moreover, as we have seen, a footnote to this section tells us that 'the synthetic unity of apperception is the highest point to which one must affix all use of the understanding, even the whole of *logik*'.

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<sup>49</sup> As is well known, Kant also appears to define 'judgment' in general in this section as 'a relation that is *objectively valid*' (B142; cf., R3052 [1778-89], 16:633), though this is surely too narrow to cover all judging in all domains. I suggest, rather, we take this as a definition of 'judgment' in *transcendental* logic. This is restriction should be read as well into Kant's claim that 'the aim of the copula 'is' in [judgments] is to distinguish the objective unity of given representations from the subjective' (B141-2). Rather, from the formal-logical point of view, 'Das logische Verhältnis ist das Verhältnis der Begriffe zur Einheit des Bewusstseyns überhaupt (der Einstimmung und des Wiederstreits)' (R3058 [1790's], 16:634; cf., R3050 [1776-89], 16:632).

It is worth noting that, in the *Nouveaux Essais*, Leibniz too takes the logical 'particles' as 'marks' of the action of mind, and as clues to the 'forms' of understanding (III.7.3) and its 'operations' (III.7.6; cf., III.9.10).

because, as Kant reminds us, ‘this faculty *is* the understanding itself’ (B135n; my ital.).<sup>50</sup>

Because the understanding is constitutively defined as the capacity to judge, it should follow that the understanding’s unification of representations in consciousness (apperception) is closely connected with, if not identical to, its unification in judgment. Jäsche’s *Logik* points to this connection in its ‘definition [Erklärung]’ of ‘judgment in general [überhaupt]’ (JL §17): ‘A judgment is the representation of the unity of the consciousness [Einheit des Bewußtseins] of various representations, or the representation of their relation [Verhältniß] insofar as they constitute [ausmachen] a concept’ (9:101).<sup>51</sup> Kant himself makes the tie explicit in the following passage from the *Prolegomena* (§22):

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<sup>50</sup> Compare Kant’s early remarks in his 1762 essay on the four figures of the syllogism: writing about ‘the mysterious power [Kraft] through which judging is possible’ in §6, Kant tells us that his ‘present opinion tends to the view that this power or capacity [Fähigkeit] is nothing other than the faculty [Vermögen] of *inner sense*, that is to say, the faculty of making one’s own representations the objects of one’s own thought’ (2:60; my ital.). Though Kant later will draw a strict distinction between apperception and inner sense – cf., KrV §24 ‘it is customary in the systems of psychology to treat inner sense as the same as the faculty of apperception (which we carefully distinguish)’ (B153) – parts of this thesis carry over: judging involves being conscious of representations (though not, typically, *as* objects in their own right) which, from a different point of view, are items ‘in’ the subject’s mind as modifications. For some discussion of the development of Kant’s views on the distinction between inner sense and apperception, see Karl Ameriks, *Kant’s Theory of Mind* (2<sup>nd</sup> ed.), 241ff. Also, cf., Dickerson, *Kant on Representation and Objectivity*, 89ff.

<sup>51</sup> Thomas Land has convinced me that the ‘or’ here should be taken to introduce, not a mere gloss on, but an addition to, the preceding clause, in order to make explicit provision for *analytic* judgments – though these too are instances of a (synthetic) *unity* of consciousness. (For tireless insistence upon this point, see the writings of H.J. Paton; e.g., *Kant’s Metaphysic of Experience*, ch. X, §§6-8, and ‘The Key to Kant’s Deduction of the Categories’, *Mind* 40.159 (July 1931), 310-329.)

To represent the relation between two concepts in such a way as to constitute (or ‘make up’) one concept is to show that one is analytically contained in or under the other. Hence, this

[T]he business [Sache]...of the understanding is to think. To think, however, is to unite [vereinigen] representations in a consciousness. [...] The unification [Vereinigung] of representations in a consciousness is judgment. Therefore, thinking is the same as judging or as relating representations to judgments in general [auf Urteile überhaupt beziehen]. (4:304)<sup>52</sup>

Especially in light of the texts from the B-Deduction, this passage can be taken to imply that the unification of representations ‘in a consciousness’ is governed by the logical functions of judgment. In fact, Kant goes on to make precisely this claim later in the same section of the *Prolegomena* (§22): ‘The logical moments of all judgments are so many possible ways [Arten] of uniting representations in a consciousness’ (4:305).<sup>53</sup>

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distinction is connected to that between the analytic and synthetic unity of consciousness (apperception) discussed in the note to §16 of the B-Deduction. There Kant writes that ‘the analytical unity of consciousness pertains to all common concepts as such, e.g., if I think of red in general, I thereby represent to myself a feature that (as a mark) can be encountered in anything, or that can be combined with other representations’ (B133n), which implies that the form of consciousness involved in the analysis of the ‘marks’ of a concept is something different from the form of consciousness involved in taking this concept ‘thought [gedacht] in synthetic unity with others (even if only possible representations)’ (B134n). As I understand it, the former consciousness proceeds through analytical judgments which lay out what relations between marks ‘make up’ the concept. Compare also *Prolegomena* §22 (4:305).

<sup>52</sup> Some other definitions: *Wiener Logik* (1780s): ‘A judgment is generaliter the representation of the unity in a relation of many cognitions. A judgment is the representation of the way that concepts belong to one consciousness universally[,] objectively. If one thinks two representations as they are combined together and together constitute one cognition, this is a judgment. (24:929); *Dohna-Wundlacken Logik* (1790s): ‘Judgment is the representation of the unity of given concepts, insofar as one is subordinated to the other or excluded from it’ (24:762). Cf., R3050 and R3051 [1776-89] (16:632-3). I discuss the connection between judgments and ‘objectivity’ below.

<sup>53</sup> To this let me add that, as Kant’s use of ‘judgments in general’ in our first quote from *Prolegomena* §22 echoes KrV §9 – where he identifies the ‘functions of thinking [Denken]’ that are contained in the ‘form of the understanding [Verstandesform]’ which is present in ‘a judgment *in general* [Urteil überhaupt]’ (B95; my ital.) – I think it is fair to take the ‘relating’ of representations to ‘judgments in general’ to consist in the unification of these representations through one of the general-logical functions of ‘judgment in general’. (Similarly, with *Prolegomena* §39, where Kant

Conversely, we will now expect that unification in judgment through logical functions is something which must be (at least in principle) something that is able to be accompanied by consciousness (by: ‘I think’). At the end of §15 of the B-Deduction, however, Kant appears to make a much stronger claim. There he indicates that the very concept of combination, as well as the ‘forms’ of combination or synthesis (i.e., pure concepts as either categories or logical functions), actually *rests upon* a ‘higher’ unity, which ‘precedes’ it, and ‘makes it possible’:

[I]n addition to the concept of the manifold and of its synthesis, the concept of combination also carries with it the concept of the unity of the manifold. Combination is the representation of the *synthetic* unity of the manifold. The representation of this unity cannot, therefore, arise from the combination; rather, by being added to the representation of the manifold, it first makes the concept of combination possible. This unity, which precedes [vorhergeht] all concepts of combination a priori, is not the former category of unity (§10); for all categories are grounded on [gründen sich auf] logical functions in judgments, but in these combination, thus the unity of given concepts, is already thought. The category therefore already presupposes combination. We must therefore seek this unity (as qualitative, §12) someplace higher, namely in that which itself contains the *ground* [Grund] of the *unity* of different concepts *in judgments*, and hence *of the possibility of the understanding*, even in its logical use. (B130-1; last sentence, my ital.)

The backwards reference to §12 points us to the definition of ‘qualitative unity’, which is the mere ‘*unity* of the concept...insofar as by that only the unity of the

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describes judgment in terms of ‘bringing the multiplicity of representations under the unity of thinking in general [Einheit des Denkens überhaupt]’ (4:323.)

comprehension [Zusammenfassung] of the manifold of cognition is thought [gedacht], as, say, the unity of the theme in a play, a speech, or a fable' (B114).

Hence, whatever the 'higher' unity is that will ground the unity of judgment, then, it must be that which is responsible for the sort of 'thematic' unity which accrues to things like a completed speech-act. In other words, it will be that which allows judgment to possess the 'qualitative unity' of something which 'makes sense' to thought. This 'higher' qualitative unity is introduced in the following section (§16), and is nothing other than the *unity of apperception* (consciousness). As the title of §17 tells us that 'the principle [Grundsatz] of the synthetic unity of apperception is the supreme principle [Princip] of *all* use of the understanding' (B136; my ital.); this 'synthetic unity' is a 'condition [Bedingung] for *all* thinking' (B138; my ital.).

**§26** Hence, the synthetic unity of apperception is the principle of a 'thematic' (sensical) unity of the comprehension of a manifold in consciousness in general, and hence functions as the ground of the *logical* unity of representations in a judgment. But this point will generalize beyond judgment *per se*, since *every* act of the understanding can be 'traced back' to judgment. As a consequence, Kantian logic will incorporate reference to the 'I think' – i.e., to the apperceiving subject (the 'I' who is conscious, who comprehends a manifold with qualitative unity) – in the very definition of both judgment as such and of all the other *operationes mentis*.

Provisionally, then, the basic formal-logical schema for judgment ‘in general’ can now be presented as: ‘I think [ $f(\alpha, \beta_m, \dots)$ ]’. In this expression, as usual, ‘ $\alpha$ ’ and ‘ $\beta$ ’ stand for concepts, ‘ $f(\dots, \dots)$ ’ stands collectively for the logical functions involved in the judgment, and ‘I think [---]’ indicates the presence of an act of the subject which unifies the concepts according to the functions. This schema articulates the manner in which a judgment is to occur ‘in one consciousness’ and so be something available to a conscious subject.

Clearly, then, with the introduction of this necessary and fundamental tie between judgment and subjectivity – especially in the notion of ‘qualitative unity’ – it would seem that we have gone beyond the resources allotted to formal logic construed as a merely syntactic science. But we have not yet made appeal to a *semantic* foundation for the logical unity of judgment, insofar as we not sought such a foundation in (possible) *referential* or *extensional* relations to objects. We have, instead, appealed to the conditions which must be met for something to have the *qualitative unity* which allows for a thinking subject to comprehend a given manifold of concepts in a thematic or sensical unity. What sort of conditions are these?

I have already hinted in the above analysis of the ‘modal’ functions (§24) that these conditions will be at least *pragmatic* in nature – that is, connected to the possibilities for intellectual activity by a thinking subject, for ways in which I can ‘do’ things with concepts, and so directed, not at the relation between unifications

of representations and objects, but rather such unities and acts of 'thinking in general'.<sup>54</sup> What has come out in the previous section is that the conditions of judgment in general are equally *intensional* in nature – they are the conditions which must be met if something is to be able to be taken by a subject as a qualitative, *meaningful* (not nonsensical) unity.<sup>55</sup> In general, then, what I suggest is that the syntactical forms from the Table are forms of judgment because they are forms that intellectual *activity of a subject* must take if it is to have qualitative, *meaningful* unity.<sup>56</sup> Rather than being (per se) 'concepts of an object in general', or

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<sup>54</sup> Compare C.W. Morris, *Foundations of the Theory of Signs* (1938), §3: 'One may study the relations of signs to the objects to which the signs are applicable. This relation will be called the *semantical dimension of semiosis*, symbolized by the sign ' $D_{sem}$ '; the study of this dimension will be called *semantics*. Or the subject of study may be the relation of signs to interpreters. This relation will be called the *pragmatical dimension of semiosis*, symbolized by ' $D_p$ ' and the study of this dimension will be named *pragmatics*' (6). Compare also, Carnap, *Introduction to Semantics* (Cambridge: Harvard, 1942), §4: 'If in an investigation explicit reference is made to the speaker, or, to put it in more general terms, to the user of a language, then we assign it to the field of *pragmatics*' (9).

<sup>55</sup> By 'intensional', I mean (roughly) what has gone under the rubric of 'connotation' (Mill) or 'sense [Sinn]' (Frege), though without any necessary tie to presentation of an object as a referent. Compare Alonzo Church, *Introduction to Mathematical Logic* (Princeton: Princeton, 1958): 'the sense is what is grasped when one understands a name' (§01, 6), 'the sense of a sentence may be described as that which is grasped when one understands a sentence' (§04, 25). Importantly, 'as in the case of names generally, it is possible to grasp the sense of a sentence without therefore necessarily having knowledge of its denotation (truth-value) otherwise than as determined by this sense' (§04, 26), since (following Frege) 'the possibility must be allowed of concepts which are not concepts of any actual thing, and of names which express a sense but have no denotation' (§01, 7). Yet in this regard, we can extend such possibilities to grasping 'senses' without 'grasping' denotations (either objects or truth-values). Compare Kant's use of 'qualitative unity' in KrV §12 to range over plays, speeches, and fables.

<sup>56</sup> In claiming Kant's understanding of the subject-matter of logic is thoroughly 'intensional', I am in agreement with (among others) Pippin, *Kant's Theory of Form*: 'It should also be noted here how much Kant's initial remarks indicate that his whole view of logic is entirely *intensional*. For him, clearly, logic was a logic of judgments, not propositions, a logic of the relations between concepts or between judgments, not an *extensional* logic, capable for example of formally defining truth functional relations between propositions' (94; my ital.). Compare also R.L. Anderson, 'It all adds up after all: Kant's philosophy of arithmetic in light of the traditional logic', *Philosophy and*

forms of truth-claims *alone*, the logical functions are the pure general forms of activity in which thematic-sensical unity can be found. That is, the logical functions represent the kind of unity of ‘intension’ or ‘sense’ which ranges over both truth-claims, but also claims of ‘rightness’, or ‘beauty’, or (to take the previous examples) the sorts of expressions involved in fictional discourse (such as plays, speeches, fables).<sup>57</sup>

The full articulation of the role of apperceptive unity as the ground of logic, as well as the derivation of further consequences of the necessary tie between judgment and subjectivity, will have to wait until a later section, as will the interpretation of any specific logical form or principle in terms of meaningful

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*Phenomenological Research* 69.3 (Nov. 2004), 501-540: ‘[Kant’s] conception of the logical subject matter is *intensional* throughout’ (512).

Pippin makes the further claim that Kant’s logic is ‘the logic of assertion, and so of the forms of assertion’ (ibid.), which I think points us in the right direction, by suggesting that we see Kant as dealing primarily with acts of judging by a subject rather than with relations between objects. Such an interpretation of Kant will be close to the general philosophical position outlined in Brandom’s *Making It Explicit* (Cambridge: Harvard, 1994), which focuses upon *pragmatic* valuations (such as, though not limited to, a judging subject’s ‘taking-true’) over *semantic* valuations (such as a judgment’s ‘being-true’). Brandom himself hints at the possibility of finding something like this position in Kant (see MIE 8, 86, etc), but does little to develop this interpretation. Unfortunately, in his earlier essay ‘Asserting’ (in *Nous*, 17.4 (Nov. 1983); 637-50), he attributes to Kant a view that (all?) judging ‘is a kind of internal asserting’, and implies that Kant also runs afoul of neglecting the distinction between judgments involving an assertion of a predication and judgments involving ‘unasserted predications occurring in negations or as antecedents of asserted conditionals’ (637). Attention to his doctrine of ‘problematic’ form of judgment would make evident that Kant does not ‘founder’ on these last points (or at least not obviously so).

<sup>57</sup> Cf., *Wiener Logik*: even ‘the poet must observe *logical* correctness [Richtigkeit] to the extent of *having unity*’ (24:835; my ital.). Though to this, compare *Dobna-Wundlacken Logik*: ‘the poet is concerned with universal illusion, with *subjective truth*. The poetic is always true aesthetically, seldom logically’ (24:709; my ital.). I think here, as in the third *Kritik*, Kant is using ‘logical’ as an abbreviation for ‘theoretical-speculative’, to stand in for the use of judgments to make determinations of objects, rather than, e.g., to express reflectively inner states.



activity (cf., §28). For now, let me simply register the following brief set of qualifications.

First, I do not mean to claim that, because logic makes essential reference to subjectivity, Kant takes logic to be, in the end, simply reducible to psychology, especially not *empirical* psychology, since Kant takes logic to be an a priori (non-empirical) discipline, and its laws to be demonstrably universal and necessary (cf., B78, etc.). Hence whatever notion of a 'subject' it will be to which we will turn when we try to furnish pragmatic interpretations of the syntactical forms of judgment, we cannot derive the interpretations by making essential reference to any particular empirical subject. In fact, Kant is committed to a stronger claim: the 'subject' under analysis in formal logic cannot be determinately represented as an *object* in any sense, because it cannot be thought in accord with the concepts of 'an object in general' in their schematized form. (This is the lesson of the 'Paralogisms'.) And so logic cannot be reduced to a priori 'rational' psychology either.<sup>58</sup>

Second, it is also worth mentioning that the synthetic *unity* of apperception which was correlated above with the formal-logical unity of judgment cannot be reduced to anything like an empirical or 'de facto' togetherness 'in' consciousness, where the 'in' refers to something like an ontological 'place' where representations

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<sup>58</sup> Here too we run into the question as to whether, and if so, in what sense, the statements of logic itself are 'true', if there is not, strictly speaking, any *object* for these statements.

‘are’ (e.g., the mind [Gemüt]), and togetherness means something like: happening to form an ‘aggregate’ or ‘assemblage’. In effect, this would be to make the unity conferred upon judgment into a merely ‘quantitative’, rather than qualitative, unity.<sup>59</sup>

But, to return once again to earlier threads of our discussion, we should note that, up to this point our exposition of Kant’s conception of the logical essence of judgment has stayed within the ‘formal’ (or at least, non-semantic) point of view, insofar as it has avoided making reference to *objects* (let alone truth), and (in general) insofar as it has limited itself to talk of either (a) the relations of representations *to a thinking subject* (e.g., being taken as ‘sensical’) or (b) relations of representations *to one another* (e.g., unification, combination, composition).<sup>60</sup> Note

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<sup>59</sup> On this point, see David Bell, ‘Some Kantian Thoughts about Propositional Unity’, *Aristotelian Society Supplementary Volume*, 75.1 (July, 2001) 1-16. Though I disagree with his analysis of ‘judgments of perception’, the connection that Bell suggests between what I have called the elementary ‘qualitative’ unity of judgment and what he calls pure *aesthetic* experience is worth pursuing – insofar as this ‘comprehension’ of ‘sense’ or ‘meaningfulness’ needs to be explicated without reference to the concept of an *object*, but makes necessary reference to *subjectivity*.

<sup>60</sup> As many commentators have pointed out (and as we ourselves have remarked in a footnote above), later in the B-Deduction Kant will claim that, as the title of §19 states: ‘the logical form of all judgments consists in the *objective* unity of the apperception of the concepts contained therein’ (B140), and then later in the section appears to define judgment as ‘a relation [Verhältnis] that is *objectively valid*’ (B142). But, as §18 tells us, the sort of apperception in question is called ‘objective’ because it refers to ‘that unity through which all of the manifold given in an intuition is united *in a concept of the object*’ (B139; my ital.). Hence if the ‘definition’ of §19 were general-logical, this would imply both that *all* judgments involve categories (‘concepts of an object in general’), and *all* judgments are objectively valid. But the very example that Kant gives in §19 of an expression of a ‘relation’ that has merely ‘subjective validity’ – i.e., ‘If [wenn] I carry a body, then [so] I feel a pressure of weight’ – seems to be a ‘unity’ in consciousness complete with logical form (e.g., hypothetical), and so a perfectly acceptable candidate for judgment or thought (perhaps: a ‘Wahrnehmungsurteil’).

Rather, I think that we should take the goal of these sections to be the establishment of the (weaker) claim that *only* judgments can objectively valid. For, as §19 goes on to point out, Kant

that each of these characterizations is generic enough to apply to judgments across all philosophical domains. What I want to show now, however, is that Kant consistently admits that we can treat even theoretical (truth-apt) judgments from this formal point of view, in abstraction from their capacity for 'truth'.

In §9 of the 'Leitfaden', for example, Kant marks the difference in point of view when we consider a judgment (i) as a unification of representations *with one another*, and when we consider it (ii) as a unification of representations in the concept of an *object* (as the institution of a possible relation to an object). To treat a judgment from the latter point of view would be to take it as a *cognition*, in the sense defined on the 'Stufenleiter', considering it as an 'objective perception', where 'perception' is a 'representation with consciousness' (B376).<sup>61</sup> There Kant contrasts judgment considered as cognition (or 'cognition in general') with several other uses: first, the consideration of 'the use of judgments in syllogisms [Vernunftschlüssen; inferences of reason]' – something he calls (later in the same section) 'the use of judgments in relation to one another [untereinander]' – and then, secondly, with the consideration of the judgment's 'internal validity

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wants to distinguish the sort of relation which can be 'of' objects from a kind of relation 'in' consciousness 'in which there would be only *subjective* validity, e.g., in accordance with *laws of association*' (B142; my ital.). Not just any sort of connection among representations 'in' consciousness can count as (possibly) 'objective'. The laws of association merely produce what are merely quantitative 'assemblages' without the *qualitative* unity requisite of judgment.

<sup>61</sup> Cf., (1790s) *Dobna-Wundlacken Logik*: 'Cognition is relation [Beziehung] of representation to an object [auf einem Gegenstand] – combined [verbunden] with an *actio* in the mind [Gemüt] – consciousness (representation of our representation)' (24:701).

[Gültigkeit]' (B96).<sup>62</sup> The point of view relevant for these 'uses' which abstract from or bracket the status of the given judgment as a possible *cognition* is, I contend, the formal-logical view.<sup>63</sup>

If this is so, then (as was suggested in the previous chapter) I think we can interpret the distinction at issue as an indication that Kant takes the logical reflection upon the formal essence of a given judgment to be capable of showing only (a) the judgment's 'agreement' with the rules for the *formation* of judgments as such (its 'internal validity'), or (b) the possible formal-logical *transformations* of the current form of the judgment into another (its use 'under' another judgment) – either 'immediately', without consideration of another judgment (e.g. 'inferences of the understanding'), or 'mediately', in relation to other judgments (considered 'formally'). That is to say, the Table at issue in §9 is (primarily) concerned, not with distinctions relevant to determining the agreement (or even *relation*) of a

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<sup>62</sup> This use of 'internal' (in 'internal validity') occurs again at B190, where Kant distinguishes a judgment's bearing an 'internal contradiction' from one that is merely 'false' and/or 'groundless'. Compare also the passages from the 'Introduction' to the 'Transcendental Logic' cited above: 'General logic abstracts, as we have shown, from all content [Inhalt] of cognition, i.e. from any relation [Beziehung] of it *to the object* [auf das Object], and considers only the logical form in the relation [Verhältnis] of cognitions *to one another* [auf einander], i.e., the form of thinking in general' (B79). Though here the particular sort of 'cognition' is left underdetermined, the general point holds true whether what is to be related 'to one another' is a set of concepts or a set of judgments.

<sup>63</sup> Moreover, we might well say that these other 'uses' are themselves *logical*. This is meant to echo the 1770 Inaugural Dissertation (*De Mundi*). There (in §5) Kant distinguishes between two uses of the understanding: the *usus realis*, 'by which concepts themselves, whether of things or of relations, are *given* [dantur]', and the *usus logicus*, by which 'concepts, no matter whence they are given, are merely *subordinated* [subordinantur] to each other, the lower, namely, to the higher (common characteristic marks), and compared with [conferuntur] one another in accordance with the principle of contradiction' (2:393). Another better-known explication of the merely 'logical' use of understanding in inference is given in the Transcendental Dialectic (B362f).

judgment with some object (or domain of objects) qua possible cognition, but rather with distinctions relevant for the identification of something as a possible thought or judgment as such, or as a possible premise or conclusion in an inference.<sup>64</sup>

This distinctly formal-logical way of treating judgments is also tracked in Kant's discussion in 'Amphiboly' of the possibility of *comparison* [Vergleichung] of representations or concepts which can occur '*prior* to all objective judgments' (B317). In this sort of comparison, 'concepts in a state of mind [Gemütszustand]' can be found to 'belong to each other [zu einander gehören]' in several types of 'relation [Verhältniß]' (B317).<sup>65</sup> When concepts are considered in this manner,

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<sup>64</sup> I say 'primarily' because, as Kant notes, the third 'moment' under each of the four 'titles' on the Table in KrV §9 has a peculiar status, in that its identification as a 'form' of thought as such requires that we introduce assumptions which do not have an obvious place within *formal* logic.

An interpretation in some ways similar to the one I am suggesting here is put forward by Arthur Melnick (*Kant's Analogies of Experience*): 'As soon as we consider, however, how judgments of such form relate to objects rather than how they relate to other judgments (i.e., in Kant's terminology, as soon as we pass from general to transcendental logic) a *domain* that the variables range over must be provided; and further, a principle for deciding what is to count as *one object* of the domain must be supplied. The question, e.g., of whether the sentence is true (a semantical question) depends not only on the domain but on how objects in the domain are individuated' (39-40; my ital.). I take up this question in the next chapter (IV).

<sup>65</sup> More precisely, they can be found to 'belong together' in seven types of 'relation': the concepts or representations can be related to one another through 'identity [Einerleiheit]', 'difference [Verschiedenheit]', 'agreement [Einstimmung]', 'opposition [Widerstreit]', in an 'inner' or 'outer' relation to one another, or in a 'matter-form' ('determinable-determination [Bestimmbare-Bestimmung]') relation.

*Nota bene:* with the reference to the consideration of representations qua constituents of a 'state of mind', rather than as referring or presenting objects, one should have in mind our discussion in Chapter II of the *formal* vs. *objective* reality of a representation (i.e., as mere 'modification' or 'state' of 'mind' vs. as 'related' to an object).

Kant takes them to be ‘compared *logically*’ (B325).<sup>66</sup> But this logical comparison of concepts, and so the determination of these relations of ‘belonging’ *to one another*, is something we can do ‘without worrying about where their *objects* belong [Objecte gehören]’ (my ital.), since ‘what is exhibited [dargestellt]’ through the forms of ‘relation’ is ‘*not the object* [Gegenstand] in accordance with what constitutes its concept (magnitude, reality), but rather *only the comparison* of representations, in all their manifoldness, which *precedes* [vorhergeht] the concepts of things [Dinge]’ (B325; my ital.). On this ground, these forms of logical comparison must be ‘distinguished from categories’ (B325), since the synthetic unity achieved through comparative combination does not present (exhibit) any object beyond the mere comparative relation itself. Even so, and this is the main point, this merely logical comparison results in the ‘generation [Erzeugung]’ of unities whose forms are recognizably those of *judgments*.<sup>67</sup>

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<sup>66</sup> It is worth noting that ‘belongs to [gehört zu]’ (along with ‘pertains to [kommt zu]’ and ‘is contained in or under [enthalten in/unter]’) are all used as German correlates of the phrase used most frequently by Aristotle to characterize the logical form of the familiar categorical judgments involved in the syllogistic – with a universal affirmative categorical judgment being expressed as ‘B belongs to all A’ [to B huparkhei panti to A]’ (cf., *Priora Analytica* I.2 (25a15ff)). Compare Meier, *Auszug* §302: ‘Ein allgemein bejahendes Urtheil ist wahr, wenn das Prädicat allen unter dem Subjecte enthaltenen zukommt’ (16:648). Cf., Friedemann Buddensiek, *Die Modallogik des Aristoteles in den Analytica priora A*, in *Zur modernen Deutung der aristotelischen Logik*, Bd. 6 (Hildesheim: G.Olms, 1994). We will return to this point in the next chapter when we discuss Kant’s understanding the formal-logical essence of (syllogistic) *inference* and the nature of the *term-relations* (i.e., between concepts) which it involves.

<sup>67</sup> So, without getting into the details of the correlation: to the extent that comparison indicates an ‘identity’, a universal judgment can be made; similarly for: ‘difference’, particular; ‘agreement’, affirmative; ‘opposition’, negative; ‘inner’ relation, categorical; ‘outer’ relation, hypothetical; ‘determinable’, problematic; ‘determinate’, assertoric. (In the ‘Amphiboly’ (B317-8), Kant only lists correlative forms for ‘Quantity’ and ‘Quality’; moreover, and to continue a point from a previous footnote, the lack of correlative forms for the special (third) ‘moments’ of

In fact, so long as we are concerned only with the exhibition of something with the 'logical form' of a judgment and not concerned at all with what (if any) 'content [Inhalt]' or matter (of the representations or concepts) is possibly involved (B318), it would seem that such merely formal-logical comparison of the representations *with one another* (rather than with objects) is all that is necessary to arrive at a possible judgment 'as such' (though not, to be sure, a possible cognition). And note that this characterization is generic enough to apply, no matter which 'domain' the given concepts are drawn from. In other words, to unify representations (taken 'formally') in a consciousness, for a thinking subject to 'take' them as 'belonging to one another' according to some function of unity, just *is* to establish something that, from the point of view of formal logic, is a judgment, since it presents the representations unified according to a formal-logical function. This is, then, the force of Kant's claim that 'I can think *whatever I like* [was ich will], as long as I don't contradict myself' (Bxxvi-n; my ital.).<sup>68</sup>

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each title – i.e., 'singular', 'infinite', 'disjunctive', and 'apodeictic' – is due to the fact that extra-logical presuppositions must be made for these forms to be identifiable.) For some discussion of the connection between the formal-logical functions of unity in judgment (from the Table in KrV §9) and the Amphiboly's concepts (relations) of logical comparison, see Longuenesse's *Kant and the Capacity to Judge*, ch. 6. Though I disagree with Longuenesse insofar as she seems to take the relations of comparison to be essentially *extensional* in an 'object'-related sense. (Rather than in Kant's non-object-related sense of the logical 'Umfang' of a concept. See below, and next chapter.)

<sup>68</sup> The possibility of the generation of unities that enjoy the logical form of a judgment, through 'mere' *comparison* of concepts, is something which finds direct precedent in Kant's pre-Critical definitions of judgment. Consider the following definition from §1 of his early (1762) essay on the four figures of the syllogism: 'To compare [vergleichen] something [Etwas] as a mark [Merkmal] with a thing [Ding] is *to judge*. The thing itself is the subject; the mark is the predicate. The comparison is expressed [ausgedrückt] by means of the copula

In the next section, we will explore what Kant thinks is involved in the implied pragmatic constraint of not contradicting *myself*. In particular, we will need to determine whether Kant's account of specifically logical contradiction itself is something which makes essential reference to semantical notions, or whether it too can be given a fully pragmatic or intensional interpretation. This will raise the possibility that there is no real role in Kant's system for a notion of distinctly *logical* truth to play.

### C. Consistency vs. Truth

§27 In the next sections I want to turn to Kant's account of truth directly. I have cautioned against any readings which take 'judgment' to be constitutively defined in terms of truth-evaluability. Such interpretations are misled, perhaps, by the fact that Kant claims that only judgments can be true, since it is only in judgments that we have the requisite categorial synthesis in order to institute a relation between our thought and an object. But any truth-centered interpretation will make it difficult to see why or how the notion of truth could form the basis

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[Verbindungszeichen; lit.: 'combination-sign'] 'is' or 'are" (2:48). Joelle Proust (*Questions of Form* (Minneapolis: Minnesota, 1989)) argues that Kant came to recognize that his pre-Critical picture of judgmental unity as essentially 'comparison' of concepts is insufficient to account for the objective validity of judgments, which compels him to introduce a more substantial notion of synthesis or combination to accommodate the necessary role of *intuition* in the representation of objects. However, insofar as formal logic brackets any possible role of intuition in judgment (and with it, its possible relation to objects), then it would seem that Kant can still consider concept-'comparison' in a consciousness to be a sufficient formal-logical characterization of judgmental unity.



of one of the explicit *contrasts* that Kant draws between formal (pure general) logic and 'Transcendental Logic', insofar as he claims that the latter, but *not the former*, could be rightly called the 'logic of truth' (B87). Furthermore, as we have seen, there are ways of judging (e.g., aesthetic and practical) which do not attempt to establish such relations to objects, and formal-logical analysis of judgment must be generic enough to range over these sorts of judgments as well. And we have seen that Kant allows for ways of treating even theoretical (truth-evaluable) judgments so as to bracket or abstract from the features which purport to establish such relations to objects.

In short, then, I have argued that because formal (pure general) logic considers the activity of the understanding (and so judgments) in complete abstraction from the capacity of this activity to relate to objects, and since truth has been defined as a species of 'relation to objects' (namely, 'agreement'), we should conclude that formal logic must treat judgments in abstraction from truth as well. In the present section, I want to argue for this same conclusion, though by way of an alternate route, one taken by Kant himself, and one which focuses not on the notion of judgment, but on the notion of *truth* itself.

Now, earlier (§22) we noted that Kant departs from some of his Rationalist predecessors by insisting that truth concerns a *relation* between cognition and object, and so is not something which pertains to objects considered 'in themselves'; truth is not, that is to say, a 'transcendental predicate

of *things*' (B113-4). We might call this Kant's 'no truth without judgments' thesis. But there is a second thesis which might be derived from Kant's conception of truth as a relation, though this thesis receives less emphasis. For it would seem to follow as well – and Kant appears to hold – that it is just as incorrect to take truth to pertain to *judgments* (or cognitions generally) considered 'in themselves'. In other words, Kant seems to be committed to a view in which both 'terms' of the relation should be necessary for truth. What I want to explore further in the next few sections is this secondary consequence of Kant's definition of truth as a relation – what we might call the 'no truth without objects' thesis. If Kant really does hold to this second thesis, then we would have yet further reason for thinking that formal logic simply cannot be concerned with truth in the relevant sense, since we have seen that this logic takes up exactly the perspective sketched above, namely, one in which judgment (thought in general) is considered 'in itself' (with respect to their 'formal reality'; cf., §18).

We would expect that, if Kant is genuinely committed to the 'no truth without objects' thesis, then his more sustained discussions of truth itself should make clear that truth is a notion which can be understood only by taking into account something more than can be gathered from the formal-logical consideration of judgment (intellectual activity) as such. Moreover, we would expect this thesis to constrain the extent to which Kant could recognize the possibility (or even intelligibility) of so-called logical 'truths'. This thesis would

also raise special questions concerning Kant's account of the nature and ground of the 'truth' of analytic judgments – especially insofar as the 'truth' of the latter are said to be 'cognized' on the basis of logical principles alone.<sup>69</sup> Finally, when we couple this with the fact that Kant seems to recognize multiple 'senses' of truth – recall our discussion of 'transcendental truth' above (§21) – all of this suggests that we will have to handle with care the occurrences of the word 'truth' in his specifically 'logical' texts (e.g., the *Logikvorlesungen*, or the *Jäsche Logik*).

To begin our demonstration that Kant's discussions of 'truth' take him self-consciously beyond the purview of formal logic, I want to turn to a well-known passage from the 'Introduction' to the 'Transcendental Logic' in which Kant himself provides something close to the argument (i.e., for the detachment of truth from the essence of formal logic) that was sketched in the paragraphs above:

If truth consists in the agreement [Übereinstimmung] of a cognition with its object, then this object must thereby be distinguished [unterschieden] from others; for a cognition is false if it does not agree with the object to which it is related [worauf sie bezogen wird] even if it contains something that could well be valid of other objects. Now a general criterion of truth would be that which was valid of all cognitions without any distinction [Unterschied] among

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<sup>69</sup> Cf., Kant's remarks in the KrV's 'System of all Principles': 'if the judgment is analytic, whether it be negative or affirmative, its truth must always [jederzeit] be able to be cognized sufficiently [hinreichend erkannt] in accordance with the principle of contradiction' (B190). Provisionally, we can say that, should the preceding account be heading in the right direction, it would seem that analytic judgments could only be 'true' in some *other* sense than that they stand 'in agreement with an object'. We have already met with an alternative sense (namely, 'transcendental'); I introduce another ('formal') sense of 'agreement' below.

their objects. But it is clear that since with such a criterion one abstracts from all content [Inhalt] of cognition (relation to its object [Beziehung auf ihr Object]), yet truth concerns [angeht] precisely this content, it would be completely impossible and absurd to ask for a mark [Merkmal] of the truth of this content of cognition, and thus it is clear that a *sufficient* and yet at the same time *general* sign [allgemeines Kennzeichen] of truth cannot possibly be provided. (B83; my ital.)<sup>70</sup>

The relation of this argument to Kant's conception of formal logic is fairly straightforward. Formal logic is precisely a science which considers judgments 'without any distinction among their objects' and 'abstracts from all content of cognition'. On the other hand, truth is essentially concerned with this cognitional 'content' (construed as the cognition's 'relation to object') to such an extent that it requires that the relevant 'object must thereby be distinguished from others', as Kant puts it in the above quote. Because Kant takes truth to be the agreement of

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<sup>70</sup> Compare the following Logik-Reflexion from the late 1770's: 'The object is the matter [Materie] of cognition. Agreement [Übereinstimmung] with this is truth. Logic abstracts [abstrahirt] from the matter; hence, it gives no *criterium* of truth other than that without which a cognition would not even be a cognition in general [gar keine Erkenntnis überhaupt seyn würde], i.e., the consistency [Zusammenstimmung] of a cognition with itself' (R2155; 16:254). Cf., also from the same period R2162 (16:256). I will return to this last point in a moment – i.e., that logic provides (partial) criteria which must be met if something (i.e., a (putative) 'cognition') is to be counted as a member of the class 'cognition in general' in the first place.

Also, it is worth noting that here Kant is trying to make (at least) a terminological point in the face of the Wolffians, who take 'agreement with an object' to be a *logical* criterion of truth. Cf., Wolff, *Logica* §505, entitled 'veritatis & falsitatis definitio nominalis', the first section in a chapter entitled 'de veritatis criterio': 'veritas est consensus iudicii nostri cum objecto, seu re representata.... Dicitur autem haec *veritas logica*' (387).

Compare also, Meier's *Auszug*, §99: 'Es besteht demnach die *logische Wahrheit der Erkenntnis* (veritas cognitionis logica), in der Übereinstimmung derselben mit ihrem Gegenstande' (16:262). Meier is contrasting 'logical' with 'aesthetic' truth (cf., *Auszug* §106), pointing to a general contrast that Kant too makes use of (in his logic lectures based on Meier's text, but also places like the KU 1<sup>st</sup> Intro, VIII (10:223)). Here, though, Kant is meaning to draw a distinction that will eventually cut against certain 'ontological' glosses the Wolffians make of purely 'logical' principles.

a cognition with a specific (determinate, distinguishable) object, it is evident that there is nothing for formal logic to say about truth, since this logic does not have the means to distinguish judgments which *are*, from those which *are not*, 'about' objects in the first place, let alone distinguish one such object from another.

If anything, formal (pure general) logic would have been able only to provide 'a general criterion' or 'mark' or 'sign' of truth, something whose presence or absence would be somehow identifiable by reflection upon the mere 'form' of a given judgment – reflection, that is, upon the general-logical function of unity through which the representations involved in a given judgment have been synthesized. But Kant takes his argument to show this very notion – i.e., that of an object-unspecific sign according to which every essentially object-specific agreement-relation could be evaluated – to be something 'completely impossible and absurd [ungereimt]'.

Now, with regard to other 'logics', things might not be *quite* so straightforward concerning the possibility of a criterion for 'material' truth as this forceful dismissal makes them appear. For, we might ask, doesn't 'Transcendental Logic' deal with 'material', and with a 'transcendental content'? And haven't we already argued that it does specify conditions for a kind of 'truth' – namely, transcendental truth? Why doesn't agreement with these conditions constitute a material (albeit 'transcendental') 'criterion' for truth – material since, in providing these conditions, the 'Transcendental Logic' brings into view a certain sort of

(transcendental) content, and purports to say something apriori about all possible objects of cognition? Moreover, as we have noted above, Kant actually calls the ‘Transcendental Logic’ the logic of truth, insofar as it represents a science which does not bracket the relation of cognition to objects, but explicitly reflects upon the use of the categories in relation to the condition ‘that *objects* are given to us *in intuition*’ (B87; my ital.).

Even so, it would seem that even transcendental truth is, in the end, a necessary, but clearly *insufficient* criterion for the ‘material’ truth of the sort at issue in the passage under discussion above (i.e., B83), for (either pure or special) transcendental-logical considerations alone do not seem to be sufficient to ‘distinguish’ one fully determinate object from another. This is because, as has now become clear, material-objective truth consists in the agreement of a judgment with an *individual* object. For this the further connection between the judgment and an *empirical* intuition (*sensation*) appears to be required.<sup>71</sup> Rather,

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<sup>71</sup> This condition is made most explicit in relation to the objective *truth* (rather than apriori necessity and universality) of mathematical judgments. Compare Kant’s discussion of the status of these judgments in §21 of the B-Deduction: ‘all mathematical concepts are not by themselves cognitions, except insofar as one presupposes that there are things that can be presented to us only in accordance with the form of that pure sensible intuition. *Things in space* and *time*, however, are only given insofar as they are perceptions (representations accompanied with sensation), hence through empirical representation. The *pure concepts* of the understanding, consequently, even if they are applied to apriori intuitions (as in mathematics), *provide cognition only insofar as these apriori intuitions, and by means of them also the concepts of the understanding, can be applied to empirical intuitions?* (B147; my italics in last sentence). For similar reasons, like mathematics (to paraphrase the *Metaphysische Anfangsgründe*), we might say that transcendental logic deals with the ‘essence [Wesen]’ of ‘objects in general’, but not with any particular ‘existence [Dasein]’ (cf., MAN 4:467n). Compare also Manley Thompson’s discussion of this point in his ‘Singular Terms and Intuitions’, 338f. (I bracket here questions about what exactly is involved in demonstrating the ‘applicability’ of apriori intuition to empirical intuition.)

'Transcendental Logic' earns its title as a 'logic of truth' only in the sense that it specifies *in general* how the categorial determinations are to be related to objects, such that 'no cognition can contradict it without at the same time losing *all* content [Inhalt], i.e., *all* relation to *any* object [Beziehung auf irgend ein Object], hence *all truth*' (B87; my ital.). It too provides merely a necessary condition which any cognition must meet if it is to have *any* relation to *any* object, and hence even be *possibly* true. But this means that the criterion provided by transcendental logic is likewise, in the end, too 'object-*unspecific*' to discriminate whether a correspondence obtains between any cognition and a *single* object. This helps flesh out why Kant claims that transcendental truth is merely a *condition*, and not a species, of empirical truth (cf., B185).

Some of the issues involved in these recent points will take center-stage in the following chapter (IV), especially those concerning the inability of transcendental logic to provide principles sufficient for the discrimination (and re-identification) of individual objects. More specifically, they will play a crucial role in a contrast I wish to draw between what I will call Kant's *conceptualist* understanding of the formal-logical functions of 'Quantity', on the one hand, and the *objectual* understanding of the quantifiers in modern logic. These issues will also prove pivotal in Kant's departure from the familiar Fregean and Russellian analyses of the purely logical representation of 'individuals' (definite descriptions), due to Kant's rejection of a first-order identity-predicate as 'formal-logical'.

But more immediately of interest is the fact that, if not even transcendental logic can directly take up the question of the material-objective truth or falsity of cognitions, then formal logic must remain all the more severely agnostic (or ‘neutral’) concerning the truth or falsity of those items it treats. This conclusion fits quite well with others of Kant’s remarks (taken from the same ‘Introduction’) about the relationship between formal logic and truth:

General logic analyzes [löst auf] the entire formal business of the understanding and reason into its elements, and presents these as principles of all logical assessment [Beurteilung] of our cognition. This part of logic can therefore be called an analytic, and is on that very account at least the *negative touchstone of truth*, since one must before all else examine and evaluate by means of these rules the form of all cognition *before* investigating its content [Inhalt] in order to find out whether with regard to the object [in Ansehung des Gegenstandes] it contains *positive truth*. But since the mere form of cognition, however well it may agree [übereinstimmen] with logical laws, is far from sufficing to constitute the *material (objective) truth* of the cognition, nobody can dare to *judge of objects* and to *assert anything about them* merely with logic [bloß mit der Logik über Gegenstände zu urtheilen und irgend etwas zu behaupten] without having drawn on antecedently well-founded information about them from outside of logic.... (B84-5; my ital. throughout.)

As we would now suspect, Kant treats the formal-logical assessment of cognition as something that takes place independently of an investigation into its ‘content’ (we might add: in *either* its material *or* transcendental sense), and proceeds in abstraction from whether or not the cognition ‘contains positive truth’. Since, from this point of view, nothing ‘about’ objects is being ‘asserted’ or ‘judged’, then (*a fortiori*) nothing that agrees or disagrees with objects (is ‘positively’ true or



false) is being asserted or judged. Rather, when a judgment is considered 'in itself' (considered with respect to its 'formal reality', we might say), the only 'agreement' that can be established is the agreement of the judgment *with logical laws*.<sup>72</sup>

Now, Kant *is* willing to characterize this sort of agreement (with logical law) as a 'touchstone [Probirstein]' for material truth (positive agreement with objects). We have seen this to be true of 'transcendental' truth as well. There is thus a clear sense in which, as he writes (in the 'Introduction' to 'Transcendental Logic'), 'so far as it expounds the general and necessary rules for the understanding, [formal logic] must present *criteria of truth* in these very rules' (B83). But this is only because if something *fails* to agree with these rules – e.g., if something 'contradicts itself' and so 'violates' the principle of contradiction – then it cannot even be counted as a judgment:

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<sup>72</sup> This point will become important in connection with the sense in which Kant can still claim that 'analytic' judgments are 'true', and provably so through formal logic alone. Not least because, as we shall examine at length in chapter **IV**, general logic is itself concerned only with the formal features of general-determinable *concepts* (considered *intensionally*), and not thoroughly determinate individual *objects*. What will be noteworthy is that the ground for the 'truth' of a judgment which arises from the 'analysis' of concepts is what Kant calls the principle of *identity* [Einstimmung], though it is clear that this governs cases in which a concept is being shown to be identical with (agree with) a part of another *concept*, and not an individual object.

The connection between whatever might be called 'logical' truth in Kant's theory, and an intensional point of view, is gestured at (though not developed) by Mary Tiles, in her 'Kant's Logic' (*Handbook of the History of Logic*): 'In judgment aimed at objective truth we cannot think that we are just subjectively comparing our ideas. Or, to put it another way, intensional relations between concepts can no longer ground the truth of judgments. This may serve for (analytic) logical truth, but not for objective truth' (107-8). Again, we will focus upon Kant's 'intensionalism' when we take up his doctrine of concepts in the next chapter (**IV**).

Whatever the content [Inhalt] of our cognition may be, and however it may be related to the object [sich auf das Object beziehen], the general though to be sure only negative condition of all of our judgments whatsoever is that they do not contradict themselves; otherwise these *judgments in themselves* [an sich selbst] (even without regard to the object [ohne Rücksicht aufs Object]) are *nothing* [nichts]. (B189; my ital.)

Since only judgments can be true (or false) (cf., §23), then if this something fails to be a judgment, then it fails to be the sort of thing which can be true. Agreement with logical rules can then function as a negative criterion or a *conditio sine qua non* for (positive) truth, because it functions as a negative condition of *all our judgments whatsoever*.

Kant goes on to call this sort of ‘agreement’ a *logical* ‘criterion of truth’, something explicitly defined in this passage as ‘the agreement [Übereinstimmung] of a cognition with the general and formal laws of understanding and reason’ (B84). Considerations such as these might suggest, as they did to Jäsche, that there is a distinctly logical sense of ‘truth’, what Jäsche calls both ‘formal truth’ and ‘logical truth’:

[F]ormal truth consists merely in the consistency [Zusammenstimmung] of cognition with itself, in complete abstraction from all objects whatsoever and from all difference among them. [...] [T]hat it be logically possible, i.e., not contradict itself: This characteristic of *internal* logical truth is only negative, however. (JL §VII, 9:51)

What Jäsche has in mind is an analysis of this talk of ‘consistency’ or ‘agreement’ on the above model of ‘transcendental’ truth, in order to make such ‘formal

agreement' fit the template for 'truth in general'.<sup>73</sup> Yet, to be sure, like transcendental truth, this 'fit' is surely imperfect (tenuous, even), since the 'object' with which a cognition stands in a relation of agreement is: the conditions (laws, principles) of understanding in general. We might also introduce a correlative notion of formal or logical 'falsity' to pick out the lack of agreement with this 'object' (i.e., failure to accord with logical law).<sup>74</sup>

Yet if we want to make use of these labels, what must be kept foremost in mind is the fact that formal or logical truth (and falsity) in this sense pick out what are essentially *non-semantic* notions – they involve no objective reference, and do not involve agreement with objects at all. Hence, to avoid confusion, I suggest that we instead use 'logical' or 'formal' *consistency* (and *inconsistency*) to mark the sort

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<sup>73</sup> I speak of this as 'Jäsche's' phrase, since I haven't found this phrase used in this sense in Kant's own published or unpublished writings from the Critical period. The one instance I have found occurs in the *Reflexionen*. First, in his notes on metaphysics from the 1780's, Kant does use the term 'formale Wahrheit' to pick out the 'plurality of determinations and their agreement under [an object] according to the laws of the understanding' (R5749; 18:342). Also, in a logic *Reflexion* from the early 1770's (R2145), Kant uses the phrase 'logical truth', though it is defined as the 'agreement [Übereinstimmung] of a predicate with a given *representation* of an object', which gets contrasted with '*real* truth' as the relation of agreement between a representation and an 'actual [wirklich] *object*'; real truth also gets called 'truth of intuition' (16:251; my ital.). This sounds more like a predecessor to the distinction between 'analytic' and 'synthetic' truths, than what Jäsche had in mind.

<sup>74</sup> Kant appears to use 'false' in this 'formal' sense when he writes (in the same section of KrV) that 'what contradicts [widerspricht] logical laws 'is *false*, since the understanding thereby contradicts [widerstreitet] its general rules of thinking and thus contradicts itself' (B83-4; my ital.). To the extent that, as we have seen, such a 'thing' fails to be a judgment, and since judgment is the locus of possible truth, then, if we agree with the *Wiener Logik* that 'falsehood' can be defined as 'lack [Mangel] of agreement with the object' (24:824), then we can call everything which 'lacks' this agreement 'false', both those whose lack is 'de facto' and those whose lack is necessary. This would, however, have the extraordinary consequence of making *all* non-judgments 'logically false'.

of ‘agreement’ (and lack of agreement) that is distinguishable at the formal-logical level.

§28 The peculiarity of depicting this notion of consistency as a form of truth becomes even more apparent if we consider other ways in which Kant explains the relevant notion. We have already seen the ‘agreement’ at issue cashed out in terms of an agreement with the logical (general, formal) laws of the understanding. In the same section of the ‘Introduction’ to the ‘Transcendental Logic’ discussed above, Kant puts matters slightly differently, writing that a cognition is ‘in *complete* accord [völlig gemäß] with logical form’ if and only if it does not ‘*contradict itself*’ (B84; my ital.). A similar formulation is found in a Logik-Reflexion from (no earlier than) the late 1770’s, where Kant writes that the formal criterion of truth is the ‘*consistency* [Zusammenstimmung] of a cognition *with itself* [mit sich selbst]’ (R2155; 16:254; my ital.).<sup>75</sup> Returning once more to the ‘Introduction’ to the ‘Transcendental Logic’, Kant explains the ‘agreement’ in

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<sup>75</sup> Cf., *Wiener Logik* (1780s): ‘A general [allgemeine] criterium of truth deals only with the form of thought, which is agreement [Übereinstimmung] of the cognition not with the object, but with itself [mit sich selbst]’ (24:823); ‘Since we abstract from all relation to the object [Beziehung aufs Object], and consider only the rules for the *consistency* [Zusammenstimmung] of the understanding *with itself* [mit sich selbst], the criterium of truth in logic can only be the agreement of the laws of cognition with themselves’ (24:826). Like the last passage, Jäsche’s text (§VII) links our first two formulations (‘agreement with logical laws’ and ‘agreement with itself’) as follows: ‘*formal* truth consists merely in the consistency [Zusammenstimmung] of cognition *with itself* [mit sich selbst] in complete abstraction from all objects whatsoever and from all difference among them. And the universal formal criteria of truth are accordingly nothing other than universal logical marks of the agreement [Übereinstimmung] of cognition *with itself* [mit sich selbst] or – what is one and the same [einerlei] – *with the universal laws of the understanding and of reason*’ (9:51; my ital.).

view in formal logic in a third fashion, as the agreement with the *faculty of understanding itself*: ‘general logic...teaches us nothing at all about the content [Inhalt] of cognition, but only the formal conditions of agreement [Übereinstimmung] with the understanding, which are entirely indifferent [gleichgültig] with regard to objects [Gegenstände]’ (B86).

We should now ask: how do these three formulations of ‘agreement’ – i.e., between a judgment and (i) logical laws, (ii) itself, and (iii) the understanding – relate to one another? I think we can allow the natural identification of the third with the first, on grounds that the agreement with the *faculty* of understanding would seem simply to consist in agreement with the *laws* for the use of the faculty. What, then, about the other phrasing? Is there a difference between claiming, on the one hand, that formal truth consists in the consistency (non-self-contradictoriness) of a cognition or judgment *with itself*, and claiming, on the other, that it consists in the conformity of the cognition to logical principles?

Jäsche’s text does not recognize any difference between the two, speaking of ‘the agreement of cognition with itself or – *what is one and the same* [welches einerlei ist] – with the universal laws of the understanding and of reason’ (§VII, 9:51; my ital.). I think this identification is a correct one. That is, it seems that here again there is no essential difference between a judgment’s self-agreement and its agreement with logical law. This identification receives further support if we recall, first, that one of the formal-logical principles is nothing other than the

*principle of contradiction* [Satz des Widerspruches] – this principle, like the principles which are grounded upon it, ‘is a merely logical principle [Princip] which abstracts from every content [Inhalt] of cognition, and has in view nothing but the logical form of cognition’ (B599; cf., B192)<sup>76</sup> – and second, that this principle is a negative condition on something’s *being a judgment* in the first place (cf., B189). As a consequence, the class of judgments which ‘conform’ to logical principles (or, what seems to be the same thing, those that conform to the faculty of understanding) appears to be coextensive with the class of non-self-contradictory judgments – or what is the same thing, the class of *all* possible judgments.<sup>77</sup>

Let me dwell for a moment on this consequence. If we accept this account of Jäsche’s ‘formal truth’, then we ought to conclude that, in Kant’s specific sense, *all* thoughts (judgments, intellectual representations) are self-consistent, are non-self-contradictory, and so *all* thoughts are (in Jäsche’s sense) ‘*formally*’ or ‘*logically*’ true. Something like this point would seem to be behind the following remark from the *Wiener Logik*: in the sense in which ‘cognition is true if it agrees with itself’ – i.e., in exactly the formal-logical sense of ‘truth’ under

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<sup>76</sup> The principle about which these things are being said is the principle of ‘determinability’ of concepts, which Kant says ‘rests on [beruht auf]’ the principle of contradiction and is ‘therefore [daher]’ a merely logical principle, etc. I discuss the principle of determinability in the following Chapter (IV).

<sup>77</sup> For this reason, we might wish to re-label what Jäsche calls ‘formal truth’ as mere ‘self-consistency’ or ‘non-self-contradictoriness’, as it perhaps better captures the sense of these passages, and makes it clear that the notion at issue is to be applied to judgments without making any reference to any relation external to the judgment itself. For it is most common for Kant to identify the ‘thing’ with which a judgment ‘agrees’ when it is ‘formally’ consistent – that with which intellectual synthesis is in a relation of agreement – as *itself*, or its *own* laws.

discussion – ‘all *lies* can be true’ (24:822; my ital.). Hence, unlike its signification in the context of other logical theories, for Kant, to say of something that it is ‘formally true’ (better: self-consistent) is not to assign this thing to some special class of thoughts (say, tautologies), but instead is only to distinguish something as a thought rather than a *non*-thought. But this is to say again that the conditions for ‘formal truth’ – or better, self-consistency – are the conditions for *possible judgments*.<sup>78</sup>

Now, if such (self-)consistency, considered essentially as an agreement with the principle of contradiction, is something which can be understood in a non-semantic fashion (by which we have meant: without reference to any objects), then we should expect that this type of construal can be generalized, such that agreement with other logical principles should be amenable to non-semantic treatment as well.<sup>79</sup> The possibility of this sort of treatment is suggested

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<sup>78</sup> As the ‘Principles’ tells us, judgments which ‘contradict themselves’ are ‘nothing’ (B189). Kant repeats this point quite clearly in his controversy with Eberhard (*Über eine Entdeckung*): ‘whatever conflicts with [nicht bestehen mit] this principle [of contradiction] is obviously *nothing* [nichts] (*not even a thought* [gar nicht einmal ein Gedanke])’ (8:195; my ital.). Cf., *Wiener Logik*: ‘The principle of contradiction is such, in fact, that *nothing* [nichts] can be opposed to it [ihm entgegen sein]’ (24:826; my ital.). I return to this point in Chapter VI, in course of arguing that such principles (as that of contradiction) do not represent prescriptions for thinking, but rather indicate what is constitutive of something’s so much as being a thought *at all*.

<sup>79</sup> Because they take *logical* truths to be identical with *analytic* judgments, and then go on to note that Kant takes the principle of contradiction to be sufficient for the determination of the truth of analytic judgments, many interpreters conclude that Kant takes this principle to be sufficient for the derivation of all logical truths (principles). (For citations, see Paton, *Kant's Metaphysic of Experience* and Reich's *Völlständigkeit* (pages cited in a footnote above).) But this ignores texts in which Kant clearly seems to admit that not *all* logical principles (for instance, of syllogistic inference) can be derived from the principle of contradiction – for instance, in *Logik-Reflexion* 3213 (late 1770's-1780's) he writes that the ‘Satz des Widerspruchs ist ein principium

by remarks from the *Logikvorlesungen*, such as the following from the (1780s) *Wiener Logik*, in which Kant distinguishes between truth taken objectively and ‘subjective’ truth: ‘One can say *generaliter* that objectively, truth is agreement [Übereinstimmung] with the object; *subjective* truth is agreement with the laws of the understanding and of reason’ (24:833; my ital.).<sup>80</sup> This would seem to imply that the determination of something as in agreement with logical law is something which requires reflection solely upon the ‘subjective’ aspect of a judgment – something which, incidentally, would fit quite nicely with our alignment in the previous chapter (II) of the ‘subjective’ with the ‘formal’ reality of thought.

For the moment, however, let us restrict our attention to the principle of contradiction. What would it look like, then, to treat notions like opposition, contradiction and self-consistency non-semantically? We already have a sense that Kant takes such a treatment to be possible, insofar as the Amphiboly suggests that merely logical reflection upon a given manifold of representations can tell us whether they stand in a kind of ‘opposition [Widerstreit]’ to one another – namely, whatever sort of opposition between representations is required for the generation [Erzeugung] of a *negative* [verneinende] judgment (B317) – and that such ‘opposition’ can be posited ‘prior to all objective

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formale der *Sätze*, nicht der *Schlüsse*’ (16:714). (I.e., other formal principles will be necessary for inference.)

<sup>80</sup> For a similar use of ‘subjective’ as ‘formal-logical’, consider the following remarks from Jäsche’s *Logik*: ‘Since general logic abstracts from all content [Inhalt] of cognition through concepts, or from all matter of thought, it can consider a concept only in respect of its *form*, i.e., only *subjectively*’ (§5n1; 9:94; my ital.).



judgments' (B317). But what sort of opposition can this be? And what can ground the judgment that a representation, considered 'formally', is *opposed* to, rather than just *different* from, another? We have been talking as if we know what Kant has in mind by these sorts of terms ('opposition', 'contradiction', etc.), but have actually provided very few details.

What these terms mean in contemporary 'classical' (truth-functional) logic is manifest in the fact that the principle of contradiction is most typically associated with an expression like ' $\sim(p \ \& \ \sim p)$ ', which is read as something like 'it is not true the both ' $p$ ' and 'not- $p$ ' are true' (with 'not- $p$ ' as itself short for 'it is not true that  $p$ '). Now, if we want to refrain from introducing semantic considerations, we could eschew talk of truth and instead just stipulate as an axiom that this formation is always 'acceptable' (with the intra-parenthetical ' $p \ \& \ \sim p$ ' always being excluded) as a possible 'expression' in the system of signs.<sup>81</sup> But this of course would again leave it opaque *why* just these formations are (or are not) acceptable, other than for the 'reason' that the constructor of the syntactic system has made it so by fiat. For is there anything about the 'internal' properties of these sign-combinations that requires us to allot them this oppositional role in the syntactic system? It is hard to see what this could be.

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<sup>81</sup> Again, I am excepting for the moment a contemporary logic of judgments which consists in a system of natural-deduction elaborated proof-theoretically.

Instead, as the suggested reading of the symbols implies, the common explanation (or justification) of this principle in contemporary logic goes on to appeal directly to certain extra-syntactical properties assigned to the signs in question – namely, to the semantic assignments given to the sign of ‘ $\sim$ (---)’ and ‘(---) & (---)’, as well as to the restrictions on what can be substituted into the argument-places of these function-signs (possible interpretations of ‘ $p$ ’). It would then ultimately justify the relevant syntactic axioms in terms of the relations which obtain at this level of semantic value – most prominently, the exclusive and exhaustive opposition between *truth* and *falsity*. This, apparently, is what allows us to interpret ‘ $\sim$ (---)’ as a *negation*-sign, such that there will be an exclusive and exhaustive opposition between a judgment and its negation ( $p \vee \sim p$ ).<sup>82</sup> Of course, this would, in effect, make the appeal to truth an essential part of our understanding, not only of ‘contradiction’, ‘negation’, ‘opposition’, and so on, but also that of contrast-terms (‘non-contradictory’, ‘consistent’, etc.), and so render them essentially semantical in nature.

What route does Kant take in his explication of these notions? I think it can be shown that, though Kant too turns to extra-syntactical components of judgment in order to explain the logical sense of opposition and contradiction,

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<sup>82</sup> Compare Church, *Introduction to Mathematical Logic* (§17): ‘The notion of *consistency* of a logistic system is *semantical* in motivation, arising from the requirement that nothing which is logically absurd or self-contradictory *in meaning* shall be a theorem, or that there shall not be two theorems of which one is the *negation* of the other’ (108; my ital). In this section, Church goes on to define a non-semantic sense of consistency that means: not all expressions that count as well-formed can be ‘proved’ as theorems.

rather than appealing to semantic properties in the (possible) 'objects' or 'referents' of the elements in judgment, Kant explicates these notions by appeal to the basic *pragmatic* and *intensional* features which distinguish the activity of the *subject* in the comprehension of something as *meaningful*.

Recall our analysis of the logical essence of judgment. In Kantian formal logic things are identified as judgments solely by virtue of (i) their possession of a certain type of *unity*, insofar as (ii) this has been achieved by the *combinatory activity* of the understanding according to a syntactically specifiable set of forms, (iii) its form is something which can be available to *consciousness*, and (iv) this form makes possible a certain sort of (qualitative) *meaningfulness* to be 'comprehended' in the unity. We hinted already above (cf., end of §26) at a possible treatment of contradiction within such a framework, but we can get another glimpse by considering another (fourth) formulation of the 'formal' criterion of truth, found in the following remark from the *Dohna-Wundlacken Logik*:

The general [allgemeine] criterion of truth will really always be only formal, will abstract from all content [Inhalt] and difference [Unterscheid] of cognition. It will never say to me, then, whether my cognition agrees [übereinstimme] *with the object*, but whether my cognition agrees *with me myself* [mit mir selbst]. The general criterion of truth will not be an organon but only the *conditio sine qua non*, the unavoidable [unumgängliche] condition of truth. This is that *we are in agreement with ourselves in thought* [wir im Denken mit uns selbst einstimmig sind]. (24:718-9; my ital.)

The very same ‘formal’ criterion of truth is here stated as the condition that we are ‘in agreement with ourselves in thought’. Drawing on the other articulations of this criterion, we can take this as the ‘negative condition on all judgments’, that my act of synthesis ‘agrees with me myself’.

As was the case with our construal of the modal functions, putting matters this way again helps to emphasize that the condition of judgment is a condition on possible intellectual activity. Bringing this to light is essential, insofar as the main sort of opposition, or failure of agreement, that Kant is meaning to rule out is precisely between the two *ways of predicating* concepts of one another. This understanding of contradiction falls out of Kant’s *general* understanding that the sort of ‘opposition’ that is in view in formal logic is not primarily one which obtains between two ‘objects’, i.e., truth and falsity, taken as ‘values’ of unanalyzed judgments, nor is it one which obtains between ‘positing’ and ‘rejecting’ whole judgments themselves, as occurs in the Cartesian picture, or as obtains in Kant’s system at the level of holding-true (cf., §22). Rather the main form of contradictory opposition in Kant’s logic is more ‘Aristotelian’, i.e., the one which arises between the acts of affirming and denying concepts of other concepts *within* judgments, as opposing forms of predication.<sup>83</sup>

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<sup>83</sup> The present emphasis on concept-concept predication foreshadows my argument in the following chapter (IV) that Kant’s understanding of the basic logical form of predication will also not be ‘Fregean’ (i.e., construed solely as an act of bringing *objects* under concepts); perhaps by now, however, such a claim will be unsurprising, given the general interpretive trend of taking Kantian formal logic not to refer to, or deal with objects *at all*. In fact, Kant’s discussions of the

For another example of Kant's 'predicative' analysis of contradiction, this time from the pre-Critical period, compare the following passage from an early essay (1763) on negative magnitudes:

Two things are opposed [entgegengesetzt] to each other if one cancels [aufhebt] that which is posited [gesetzt] by the other. [...] Logical opposition...consists in the fact that something is simultaneously [zugleich] *affirmed* and *denied* [bejaht und verneint] of the very same thing. The consequence of this logical conjunction [Verknüpfung] is *nothing at all* [gar nichts] (*nihil negativum irrepraesentabile*), as the law of contradiction asserts. (2:171; my ital.)

Kant repeats roughly this explanation in another essay of the same year ('Only Possible Proof', 1763), though this time beginning from the notion of contradiction:

Anything which is self-contradictory [in sich selbst widersprechend] is internally [innerlich] impossible. [...] With this contradiction, however, it is clear that Something [Etwas] must stand in logical opposition [Widerstreit] to Something [Etwas]; that is to say, the one must deny [verneinen] that which is simultaneously [zugleich] affirmed [bejaht] in the same thing. [...] I call this repugnancy the *formal* type of unthinkability [das Formale der Udenklichkeit] or impossibility. (2:77; my ital.)

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logical principles of judgment (and inference) are nearly always framed in terms of concept-concept relations that are *internal* to judgments, rather than treating judgments in an *external* fashion of what might be said about unanalyzed judgment-wholes in relation to truth-values (the 'p' and 'q' and 'T' and 'F' of truth-functional logic). As we shall see, this is true even of judgment-forms whose 'matter' is other judgments (i.e., hypotheticals and disjunctives). (This is a fact which the representation of inference-schemes involving these sorts of judgments (e.g., *modus ponens* and *tollens*) will have to take into account. It is not obvious that the ("Stoicized") schema – i.e., 'if the first, then the second; the first; therefore, the second' – will be sufficient.) For more recent work by two philosophers who hope to place (a rehabilitated) Aristotelian logic on at least equal philosophical and logistical footing with modern (Fregean) logic, see Michael Wolff, *Abhandlung über die Prinzipien der Logik* (Frankfurt: Klostermann, 2004), and Fred Sommers, *The Logic of Natural Language* (Oxford: Clarendon, 1982).

Notice that, in this last passage, what first gets stated in terms of the opposition between ‘things’ then gets rephrased in terms of an opposition between acts, an opposition which faces what ‘one’ is supposed to ‘do’ (‘affirm’, ‘deny’). The ‘Negative Magnitudes’ essay gives the following example of such an unthinkable ‘logical conjunction’, in which one purports to affirm the same thing that one is also (‘simultaneously’) denying: ‘A body which would be [wäre] both in motion and also, in the very same sense, not in motion?; and though, taken separately, the affirming and the denying each represent a ‘Something [Etwas]’ that is ‘thinkable [cogitabile]’, their ‘conjunction’, Kant repeats, yields ‘nothing at all [gar nichts]’ (2:171).

It is important to recognize that Kant also holds that it is not necessary for us to consider the *content* of any of the concepts being ‘conjoined’, in order to identify logical opposition, or rule out a particular conjunction of logical opposites as ‘nothing’. Rather, we only need attend to the logical *form* of the predication itself. This becomes clear from another example of contradiction that Kant gives later in the ‘Negative Magnitudes’ essay: ‘to be dark [finster] and not dark [nicht finster] simultaneously [zugleich] in the same sense is in the same subject [Subject] a contradiction [Widerspruch]’ (2:172). Kant points out that ‘not dark’ here functions as a ‘logically negating [verneinend]’ predicate, and ‘dark’ functions as ‘logically affirming [bejahend]’, even though ‘in a metaphysical sense’ – which I

take to mean with respect to its 'content' – 'dark' is a 'negation' or negative concept (e.g., 'privation of light') (2:172).<sup>84</sup> This is because, as Kant writes in the 'Transcendental Ideal', 'logical negation [Verneinung], which is indicated solely by the little word 'not'...is far from sufficient to designate [bezeichnen] a concept in regard to its content [Inhalt]', because 'not', Kant thinks, is 'never properly attached [hängt] to a *concept*, but rather only to its *relation* [Verhältniß] to another concept *in a judgment*' (B602; my ital.).<sup>85</sup> And 'relating', as we have argued repeatedly, occurs through an act of synthesis on the part of the subject.

To summarize: drawing from the general definition of 'opposition' given in the 'Negative Magnitudes' essay, we can interpret the specifically *logical* opposition between affirming and denying – signaled by the presence or absence of the word 'not', as an attachment to the 'relation' of concepts in judgment – as the opposition between *acts* which take the form of the 'positing [Setzung]' of a relation and those which take the form of a 'canceling [Aufhebung]' of the relation. A problem arises from their conjunction because there is no possible 'act' on the part of the subject which corresponds to the resulting characterization (i.e., of positing and canceling simultaneously). Kant's basic ('brute') claim is that

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<sup>84</sup> Hence the fact that concepts with actual empirical content ('dark', 'in motion') are being used in these examples is of no relevance to the exposition of logical opposition.

<sup>85</sup> This is precisely how Kant there (i.e., KrV §9) explicates the formal-logical nature of the negating or negative [verneinende] form of judgment: 'General logic abstracts from all content [Inhalt] of the predicate (even if it is negative), and considers only whether it is attributed [begelegt] to the subject or opposed [engegengesetzt] to it' (B97) – i.e., it considers only the form (i.e., quality) in which it is being predicated.

we have failed to specify a ‘something’ to be *done* in thought, since we can make no *sense* of anything ‘being done’ in this alleged ‘form’ (assemblage of representations). What it seems as though we are being asked to do by this mere ‘conjunction’ is ‘not possible’, not even ‘thinkable’.<sup>86</sup>

Now, we have yet to treat of one of the more well-known functions of the principle of contradiction – namely, its role as ‘the universal and completely sufficient *principle of all analytic cognition*’ (B191). This has been an unfortunate omission, insofar as it ties in directly with another use of ‘truth’ in Kant’s system, and perhaps the sense of truth that most of his readers associate with his conception of logic – namely, *analytic* truth. But it also raises a particularly pressing worry for the foregoing interpretation of Kant’s understanding of formal logic as solely a logic of consistency *as opposed to* a logic of truth. For as Kant tells us in the ‘Principles’, ‘one can also make a *positive* use’ of the principle of contradiction: ‘i.e., not merely to ban falsehood and error (insofar as it rests on contradiction), but also to *cognize truth*’ (B190; my ital.). But this suggests fairly straightforwardly that Kant *does* allow for merely formal-logical principles to deal with truth and not mere consistency. As Kant says here, ‘if the judgment is analytic, whether it be negative or affirmative, its *truth* must always [jederzeit] be able to be *cognized sufficiently* in accordance with the principle of contradiction’

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<sup>86</sup> I return to this feature of Kant’s views in Chapter VI; see as well Manley Thompson’s discussion in his ‘On *apriori* Truth’, *Journal of Philosophy*, 78.8 (Aug. 1981), 458-482. (I thank Michael Hardimon for pointing me to this Thompson piece.)



(B190; my ital.). Will the account I've suggested above be able to incorporate Kant's apparent commitment to the 'positive' use of a merely formal-logical principle to 'cognize truth'?

I think it can, but in order to demonstrate that Kant's doctrine of analytically true judgments does not pose any particular problem for my account of Kant's doctrine of the formality of logic, we will first need to lay out the basic tenets of Kant's doctrine of *concepts*. This will occupy us for most of the following chapter, at the end of which we will again take up the idea of 'analytic truth', and its place in Kant's logical framework.

## CHAPTER IV

### Kant's Doctrine of Concepts

#### A. Predicative Unity without Objects

§29 As we turn to Kant's understanding of concepts, it might be useful to begin with a bit of a recapitulation of what I hope to have established thus far. In Chapter I, I argued that, for Kant, logic is a branch of philosophy, and consists in the *scientific* investigation of the capacity for 'understanding in general'. Moreover, unlike metaphysics, logic is *formal* science; it is 'formal' philosophy. In Chapter II, I argued that Kant's understanding of the 'formality' that characterizes formal (pure general) logic amounts to the idea that logic considers intellectual capacities independently of all 'semantical' (by which I have meant 'referential') features – that is, without concerning itself with any questions as to their (even possible) *relation to objects*.

In the previous chapter (III), I began to draw out the consequences that this 'non-intentional' or 'proto-syntactic' characterization of logic's formality will

have upon Kant's understanding of the logical essence of a judgment, focusing primarily upon the detachment of the essence of judgment from *truth*. Such detachment is necessary since Kant defines truth as a semantical concept, as a species of 'relation to objects' (namely, the relation of 'agreement'). I then argued that, instead of truth (or object-reference in general), Kant takes the *unity of consciousness* (apperception) to be the fundamental notion in terms of which an 'interpretation' for the logico-formal 'syntax' of thought will be provided.<sup>1</sup> This unity, in turn, was explicated along two axes: (i) the qualitative, 'thematic' unity that pertains to things which have (or make) 'sense' (on rough analogy with Fregean 'Sinne'), as well as (ii) the unity which characterizes the activity of *taking*

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<sup>1</sup> It is perhaps worth making clear at this point that I do not mean to be arguing that Kant either self-consciously fashions his position in just this way or unconsciously develops it in precisely this order, where the implication would be in either case that he somehow fully (or nearly fully) anticipated 20<sup>th</sup> century programs that associate logic with the syntactical features of some language, together with a deductive apparatus. Here I have in mind 'Carnapian' projects which identify logic with the investigation of formal syntax of the language of science. Now, as Warren Goldfarb has argued, the very idea of a 'syntactical' or 'schematic' understanding of logic is not fully intelligible until after Hilbert's metamathematical turn; see Goldfarb's 'Logic in the Twenties: The Nature of the Quantifier' (*Journal of Symbolic Logic*, 44.3 (Sept. 1979), 351-368, esp. 358ff. Hence, I will content myself with speaking of Kant's 'proto-schematic' or 'proto-syntactic' conception of the formality of logic. But yet even if there are clear differences between Kant's perspective and these projects, the possibility of casting Kant's logic in these terms can help us see to what extent it is accurate to claim that, as Michael Friedman has argued at length, Carnap's own project has decidedly Kantian overtones – though, to the extent that this is true, it would be somewhat unsurprising, given the Neo-Kantian milieu in which Carnap is writing. See Friedman's *Reconsidering Logical Positivism* (Cambridge: Cambridge, 1999) and his *Parting of the Ways* (LaSalle: Open Court, 2000). At the very least, it is clear that, as I noted in the previous chapter, Kant means to discover or disclose the forms of thought through analysis of something *given* (i.e., the capacity for understanding), and so not to construct them by fiat. In any case, I have taken recourse to contemporary notions like 'syntax', 'semantics', 'reference', 'interpretation', and so on, as I have found them to provide a quite useful (heuristic) auxiliary language within which someone might reconstruct Kant's positions in a manner that can nevertheless be both faithful to his theses (if not, or at least not obviously, to his actual mode of presentation) and yet accessible to modern ears.

something to have (or make) sense.<sup>2</sup> Finally, we saw that each of these two aspects is construed broadly enough by Kant to allow for the logical forms to have a variety of ‘materializations’, not only in various sorts of theoretical judgments (or the ‘sense’ which pertains to truth-claims), but also in judgments in the practical and aesthetic domains.

I suggested that we might construe the basic notion of the logical form of judgment as consisting in the unity that something must have in order to express a possible act of ‘saying’ (affirming or denying, problematically or assertorically) something ( $\alpha$ ) of (all or some of) something else ( $\beta$ ), yet without building into the sense of ‘saying’ at issue any sort of presupposition that the unity as a whole or any of the elements involved ( $\alpha$  or  $\beta$ ) need to bear any relation to objects at all. Yet we have said very little about the nature of the elements themselves, i.e., about what can be substituted for the symbols ‘ $\alpha$ ’ and ‘ $\beta$ ’. In each case, I have identified these elements as *concepts*, since Kant tells us in the ‘Amphiboly’ that it is concepts which provide the ‘logical matter’ of a judgment (B322). But we have not yet explained what Kant means by ‘concept’, nor shown that it is possible to

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<sup>2</sup> So, if ‘semantic’ is taken in a sufficiently broad sense – as concerned with *any and every* question of ‘meaningfulness’ (as it might be used in philosophy of language), rather than with the systematic determination or provision of a *model* (a universe of objects) for an otherwise uninterpreted syntax (as it is typically used in ‘model-theoretic’ contexts) – then we can say that Kant’s logic *is* concerned with semantics (since it is concerned with the bounds of *sense* or *intension*). As I have already argued in the previous chapter, it is clear that Kant does not take the scope of logic to be *completely* restricted to questions of syntax, since this would give no answer to why the resultant formal system should count as a depiction of the forms of *understanding*. (Hence the constitutive role of what I have called intensional and pragmatic considerations.)

give an account of the nature of concepts in which they do not consist in something that bears an essential relation to an object, such as being (at least possibly) 'true of' them.

For contemporary readers, this will seem to be an especially pressing task, since after Frege, the very notion of 'concept' is now almost automatically associated with a predicate-expression that occurs in sentences which can express a true or a false thought or proposition, an expression which has an empty place (i.e., the 'x' in 'x is red') in which to insert a name or another expression which stands for an individual object. This symbolization goes hand in hand with Frege's thesis that concepts are a kind of 'function' from the objects named by the singular terms, to the truth-values represented by the resulting thoughts.<sup>3</sup> From this point of view, to try to give an account of concepts without making any reference to objects might seem as impossible as trying to explain what it is to give directions on a map without mentioning the fact that you have to begin *from* somewhere or other.

But this is just to make explicit two 'Fregean' assumptions that contemporary logic carries with it. First, contemporary logic assumes that the basic logical form of unity in thought or judgment – the basic logical articulation of an atomic judgment – consists in the subsumption of an object under a

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<sup>3</sup> See his 1891 essay, 'Funktion und Begriff: 'ein Begriff ist eine Funktion, deren Wert immer ein Wahrheitswert ist' (*Kleine Schriften*, 133).

concept, symbolized as ‘ $Fa$ ’. Second, contemporary logic assumes that the distinction between an object and a concept encoded in such a conception of an atomic judgment not only must be taken as fundamental for any interesting logical system, but also, and more broadly, that such a distinction is a *logical* distinction if anything is. Taking a Frege-like distinction between concepts and objects to be logically fundamental has become something of second-nature, or at least for those of us brought up (under the tutelage of Quine) to simply *identify* ‘logic’ with the now-long-standard Frege-inspired first-order predicate logic.<sup>4</sup>

Indeed we can say that it is built into the essence of first-order logic that it ‘deals’ with objects, or at least the form of thinking about objects, insofar as it incorporates both individual constants and first-order variables which are taken to range over individuals in the domain of quantification, but also insofar as it incorporates an identity-predicate which, when combined with quantifiers, allows for the construction of additional singular terms, namely, schematic representations of definite descriptions. We can identify three clauses in definite-descriptions – namely, an existence clause ( $\exists x$ ), a characterization clause ( $x$  is

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<sup>4</sup> Hence no one (or hardly anyone) will blink when Kit Fine begins his recent book (*The Limits of Abstraction* (Oxford: Clarendon, 2002)) by stating that he will ‘follow Frege in taking there to be a basic distinction between objects and concepts’, such that ‘objects are referred to by means of singular terms and concepts by means of predicates’ (1). Even Michael Dummett, who is otherwise critical of Frege’s semantical grounding of logic (in particular Frege’s emphasis on *truth* as the central notion of logic), still insists that ‘a plausible pattern for the terminus of...syntactical analysis, that is, for the underlying compositional structure of each sentence, was first provided by Frege, and, so far as I know, it has not been improved on since’ (*Logical Basis of Metaphysics*, 25).

F”), and a uniqueness clause (“ $\forall y$  (if  $y$  is F, then  $y = x$ )”). Without the last clause, we are left with ‘Something that is F exists’, which can be made true by any number of different objects, so long as they are F and they exist. With the uniqueness-clause, however, we are able to single out the one individual about which we wish to say of it, and it alone, that it is F. Indeed, it has been hailed as one of Frege’s essential insights that it is only under a certain construal of identity that reference to individual objects becomes expressible within logic itself. Charles Parsons puts the general sentiment of post-Fregean philosophy of logic exceptionally clearly: ‘we do not have objects unless we can meaningfully apply the identity predicate’.<sup>5</sup>

In this way, first-order logic might be taken to give an account of the basic forms of ‘singular’ (object-directed) thought, and so to give us an analysis of the basic concept of an ‘object in general’. Now, as I have already argued above, Kant thinks that the concept of an ‘object in general’ is not a formal-logical, but rather a *transcendental*-logical, notion. That is, it belongs to the science which gives an account of the basic forms of thought *of an object* as such, but not to the science which is concerned to give an account of thought *in general*. Moreover, we can

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<sup>5</sup> Charles Parsons, ‘Objects and Logic’, *The Monist*, 65.4 (October 1982) 491-516; here, 497. One naturally thinks here as well of Quine’s famous principle, from his 1975 ‘On the Individuation of Attributes’ (reprinted in *Theories and Things* (Cambridge: Harvard, 1981): ‘We have an acceptable notion of class, or physical object, or attribute, or any other sort of object, only insofar as we have an acceptable principle of individuation for that sort of object. *There is no entity without identity*’ (102; my ital.).

note that, for Kant, the concept of an ‘object in general’ is, in fact, the highest concept of *ontology*, or rather, the successor science to ontology, the ‘analytic of the pure understanding’ to which ‘the proud name of an ontology...must give way’ (B303).<sup>6</sup>

Putting matters this way helps to bring out the difference between Kant’s perspective and that of Frege’s. For though this is a somewhat vexed question in Frege-scholarship, I think it is safe to say that the majority of his readers have taken the logical distinction between ‘concept’ and ‘object’ to be drawn, not merely from the linguistic distinction between singular terms and predicates, but rather from the nature of the things themselves, the things represented by the linguistic expressions. In this, they take Frege to hold that logical distinctions either rest upon, or directly entail, or even fully coincide with, corresponding *ontological* distinctions.<sup>7</sup> Consider, for example, Michael Dummett’s assessment of Frege’s answer to the question of the relation between logic and ontology:

Ontology is concerned to enumerate and characterize the most general categories of the things that exist: and Frege, with his classification of what exists into objects and functions of various types was surely concerned with ontology in this sense. [...] [T]he

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<sup>6</sup> Interestingly enough, in the 1784-5 *Metaphysik Volckmann* lecture-transcripts, Kant identifies ‘transcendental philosophy’ with both ‘transcendental logic’ and ‘ontology’ (28:360).

<sup>7</sup> In *Frege: Philosophy of Language*, Dummett reads Geach, in ‘Frege’ (in *Three Philosophers*), as claiming that we can apprehend the logical (ontological) distinctions independently of our grasp on linguistic expressions. The flip-side of the dispute is captured nicely by William Marshall’s oft-cited claim (from his 1953 *Philosophical Review* essay ‘Frege’s Theory of Functions and Objects’) that ‘Frege has taken a linguistic difference to be a rift in nature’.



basic structure of *thought* is also the basic structure of *reality*. [...] There cannot be an aseptic logic that merely informs us how language functions and what is the structure of the thoughts which it expresses *without committing itself to anything concerning reality*...<sup>8</sup>

To repeat, not everyone would agree with this metaphysically 'realistic' sort of interpretation of Frege,<sup>9</sup> but I suspect that it at least will be recognized as a not implausible way to render the full significance of Frege's distinction.

And the general thought that the categories of logic provide the basic categories of an ontology is probably a familiar one to most, even if perhaps the point of reference for discussions concerning the logic-ontology nexus might be Quine, rather than Frege. One thinks here of Quine's famous claims in his 1948 essay 'On what there is',<sup>10</sup> that 'one's ontology is basic to the conceptual scheme by which he interprets all experiences' (29), such that *every* theory – logic included, we might suppose – is ontologically committed, that is, 'is committed to those and only those entities to which the bound variables of the theory must be capable of referring in order that the affirmations made in the theory be true' (33), such that

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<sup>8</sup> From a chapter entitled 'Realism' in Dummett, *The Interpretation of Frege's Philosophy* (Cambridge: Harvard, 1981), 429, 431-2, my ital..

<sup>9</sup> For an alternate view which takes the conditions for communication as prior to ontological commitments, see Thomas Ricketts, 'Objectivity and Objecthood: Frege's Metaphysics of Judgment' in *Frege Synthesized*, ed. Leila Haaparanta and Jaakko Hintikka (Dordrecht: D. Reidel, 1986). For a further development of this view, which tries to ground the objectivity of logic in our practices of judging and inferring, see Erich Reck, 'Frege on Numbers: Beyond the Platonist Picture' in *Harvard Review of Philosophy* 13 (2005), 25-40, and 'Frege on Judgment, Truth, and Objectivity' [unpublished].

<sup>10</sup> Originally in *Review of Metaphysics* 2, 21-38; reprinted in *From a Logical Point of View*, 2<sup>nd</sup> revised ed. (Cambridge: Harvard, 1980). Citations are to the original pagination.

‘to be assumed as an entity is, purely and simply, to be reckoned as the value of a variable’ (32). This thesis of what may be called the inseparability of questions of logical form from ontological matters is of a piece with Quine’s equally well-known claims from §33 of *Word and Object*,<sup>11</sup> that ‘the simplification and clarification of logical theory to which a canonical notation contributes is not only algorithmic; it is also conceptual’ as well, such that ‘[t]he quest of a simplest, clearest overall pattern of canonical notation is not to be distinguished from a quest of ultimate categories, a limning of the most general traits of reality’ (161).<sup>12</sup>

Seen in this Quinean light, Frege’s mature logic, since it is of a higher-order, is ‘committed’ to there ‘being’ both concepts and objects (including conceptual extensions), due to his abstraction-principles. Moreover, there is reason for thinking that Frege is committed to there being ‘Sinne’ (by way of his analysis of indirect discourse), though this too is a somewhat controversial topic. By contrast, Quine’s own restriction of elementary logic to first-order logic brings with it only a commitment to objects (individuals), since there is no second-order

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<sup>11</sup> Cambridge: MIT, 1960.

<sup>12</sup> As Quine himself puts it in his closing remarks to ‘Ontological Relativity’ (in *Ontological Relativity*), since ‘both ontology and satisfaction [as it is used in Tarski’s explication of truth] are matters of reference’, ‘both truth and ontology may in a suddenly rather clear and even tolerant sense be said to belong to *transcendental metaphysics*’ (68; my ital.).

quantification over concepts, and so there is no essential reference to anything like Fregean 'Begriffe', nor is there any room for Fregean 'senses' either.<sup>13</sup>

Yet in whatever sense Frege's logic is committed to their 'being' objects and concepts, and Quinean logic commits us to their 'being' objects but not concepts, it is worth noting that, in much of the tradition stemming from Aristotle, the 'ontological' commitment made in logic is rather to *concepts alone*, insofar as the 'variables' of traditional syllogistic are taken to range only over concepts and not necessarily over individual objects. This feature is of a piece with the fact that is much-emphasized by Jan Łukasiewicz in his classic work on Aristotle's logic, namely that the syllogistic has no place for essentially singular terms (a fact that Łukasiewicz calls 'the greatest defect of the Aristotelian logic') (§3).<sup>14</sup>

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<sup>13</sup> A comparison of Quinean and Kantian logics would produce extremely illuminating results, and mutually so. (So too of course would the Quine-Frege comparison.) The Kant-Quine comparison would be especially intriguing, given Quine's proposal for the elimination of singular terms. I will try to say a bit more about the Quine-Kant relation below, but for some preliminary discussion, see Manley Thompson's 1972 'Singular terms and intuitions in Kant's epistemology' (*Review of Metaphysics* 26). What is especially striking is that Quine recognizes quite straightforwardly (in his 'Carnap and Logical Truth' (*Synthese*, 12.4 (1960)) that 'Kant's readiness to see logic as analytic and arithmetic as synthetic, in particular, is not superseded by Frege's work (as Frege supposed (*Grundlagen* §§87f)) if 'logic' be taken as elementary logic. And for Kant logic certainly did not include set theory' (§II, 354).

<sup>14</sup> *Aristotle's Syllogistic from the standpoint of modern formal logic* (2<sup>nd</sup> ed.; Oxford: Clarendon, 1955): 'Aristotle does not introduce singular terms or premises into his system' (§1); 'In building up his logic Aristotle did not take notice either of singular or of empty terms. Alexander justly remarks that the very definition of the premises given by Aristotle has application to universal terms alone and is not suitable to individual or singular' (§2). I discuss the relevant sense of 'non-empty' below.

Now, what I will demonstrate in this chapter is that Kant's own logic is precisely 'Aristotelian' in this regard – it too has no place for essentially singular terms, and its variables range only over what are *essentially general* representations, or what Kant calls 'concepts'. Hence, as Kant's formal logic is not straightforwardly 'committed' to there being individual objects, it will not have any place for a first-order identity-predicate, nor will it be appropriate to 'read' our understanding of the first-order quantifiers 'into' his logical functions of 'quantity' in his logic.

Moreover, we will see that Kant also takes over the traditional account of the basic form of predication as a relation between two concepts, and not between an individual and a concept. This entails that what Kant will mean by calling a concept a 'predicate of possible judgments' (B94) is not what Frege might mean by making a similar claim, since the 'predicative' quality of Fregean concepts refers to the possibility of an individual object 'saturating' their argument-place, which entails that a possible relation to individual objects is 'built in' to their very essence. When Kant calls concepts 'possible predicates', he has in mind the traditional form of predication, and so means to point to the fact that it is of the essence of concepts that they bear relations to *further concepts*. Moreover,

unlike Frege, we shall see that Kant in no way means to exclude the possibility that concepts would function as 'possible *subjects*' of judgments as well.<sup>15</sup>

In this way, we can see that, though Kant agrees with Frege that the identity of a concept is defined by the contribution it can make within judgments, this contribution is of an essentially different nature. Moreover as I have argued in the previous chapter, Kant does not tie the logical essence of judgment itself to truth, and so will equally not tie the 'meaningfulness' of judgments in general to anything like the conditions of their truth. Instead, Kant deploys a much wider criterion of meaningfulness – that of 'thematic' unity (cf., §25). But then, any formal-logical construal of the identity of a concept likewise cannot be tied to the differential contributions it makes to the truth-values of judgments, since such a construal will have to be generic enough to cover those concepts (e.g., aesthetic ones) that make contributions to judgments in domains for which truth is not an appropriate unit of appraisal. For these reasons as well, Kant will have to be seen as deploying a broader notion of 'predication' than that of the Fregean object/truth-value functional characterization.

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<sup>15</sup> For Łukasiewicz (op.cit.) it is precisely this familiar 'term-logic' thesis – that 'the same term may be used as a subject and as a predicate without any restriction', that 'terms be homogenous with respect to their possible positions' in judgments (§3) – which is at the root of the failure of the traditional logic to build an account of singular terms. Kant's own treatment of this 'syntactical' criterion of the generality of the elements involved in a judgment will also be taken up below, in discussion of the connection between logical subject and *substance*.

More generally, then, I will argue that it is most fruitful to read Kant, not as anticipating Fregean insights, but rather as attempting to provide a substantive and revolutionary *philosophical* justification of the abstraction that Aristotelian logic makes from singular thought. In particular, it attempts to underwrite this abstraction by insisting wholeheartedly on the *empiricist* thesis that all of our dealings with individuals must go ‘through sensibility’, such that no purely intellectual construction can put us into a relation with any determinate individual.<sup>16</sup>

It will be instructive, then, to see how, on just this point, Kant stands with Locke against Leibniz. For as I will show below, Kant’s doctrine of the formality of logic is actually fashioned in critical response to Leibniz’s particularly striking ‘anticipation’ of the Fregean picture – namely, his attempt to incorporate singular terms (and so the form of singular thought), and with it the very concept of an individual ‘object in general’, *within logic*. For in Leibniz’s attempt to fashion a purely logical notion of an ‘individual’ (something he thought would be made possible by the principle of identity, his doctrine of the ‘complete individual

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<sup>16</sup> It is worth mentioning that, at least on this point, Kant would seem again to be following Aristotle; cf, *De Anima* II.5: ‘actual perception [aesthesia] is of individuals [kath’ekaston], while understanding [episteme] is of universals [katholou]’ (417b22-23); also, *Analytica Posteriori* I.18: ‘perception [aesthesia] is of particulars [kath’ekaston]; it is not possible to achieve an understanding [episteme] of them’ (81b7), and I.31: ‘perceiving [aisthanesthai] must [ananke] be of particulars [kath’ekaston], whereas understanding [episteme] involves recognition of a universal [katholou]’ (87b37). Of course, Kant will take the knowledge of the ‘forms’ of thinking themselves to be something which is *independent* of all ‘individuality’, a move which Aristotle would not accept, insofar as all ‘forms’ are arrived at through abstraction from substances, which they then still essentially depend upon.

concept', and his 'in-esse' doctrine of true judgments), we find something quite close to the spirit of the 'characteristically modern' view introduced by Frege.<sup>17</sup> But this fact should not be altogether surprising, since Leibniz – like Frege and Quine – identifies logical categories with ontological categories, writing that 'the true logic' is 'scarcely different' from 'the true metaphysics' (cf., his 1678 letter to Countess Elizabeth(?), G iv.292).

Seeing how and for what reason Kant is dissatisfied with Leibniz's 'ontologization' of logic will give us insight into how and why Kant might equally be dissatisfied with contemporary Fregean thesis that the concept of an object is a *logical* concept. At the very least, if my reading is correct, then it would surely put substantial pressure on any interpretation which wishes to attribute to Kant something along the lines of the 'modern' analysis of either concepts or atomic judgments. Rather, we will have reason to think that Kant would take any logic such as Frege's – which does make use of singular terms, first-order variables, and an identity-predicate, and so purports to be a logic of thought about an 'object in general' – to be a *transcendental* logic. What is more, by noting the particular faults that Kant finds in Leibniz's project – namely, its failure to incorporate the

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<sup>17</sup> Hence we might have at least some reason for hesitation in regard to Charles Parsons' claim that 'the view that the most general notion of object has its home in formal logic [is an] outlook [that] seems to me a characteristically modern one and may not appear in full-blown form before Frege' ('Objects and Logic', 497). This only comes about with Frege because, in Parsons's view, 'speaking of objects just is using the linguistic devices of singular terms, predication, identity, and quantification to make serious statements', and it is only with Frege that we get a sufficiently rigorous formulation of the rules for the use of these devices (ibid.).

necessary sensible conditions of our dealing with individuals – we will be in a position to project on Kant’s behalf possible lines of criticism of the now-‘classical’ logic itself, that it consists in a form of Rationalism, and hence ‘transcendental realism’.

So, by drawing out the traditional ‘Aristotelian’ commitments encapsulated in Kant’s doctrine of concepts and of predication, we will be provided with a particularly perspicuous manner by which to further elucidate the *formality* of Kant’s logic, insofar as this is incorporated in the very notation (expressive resources) itself. Reflection on the expressive restrictions on Kant’s logic – i.e., of the domain of Kantian quantification to the universe of ‘concepts’, the correlative restrictions on substitution for the variables, and the absence of a first-order identity-predicate – helps to bring into stark relief the fact that Kantian formal logic simply does not have the power to represent any particular individual object (it abstracts from *all objects*), nor does it have the resources to represent the general forms of thought or judgment about individual objects (it abstracts from all *relations to objects*).<sup>18</sup>

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<sup>18</sup> It might be thought that a ‘short argument’ for why Kant’s formal logic will have no place for singular terms could pass through the premises that intuitions are best represented by singular terms and formal logic does not deal with intuitions. While there is surely something right to the thought that there is a connection between singular terms and intuitions, I will note below (§30) that there are significant difficulties in simply *identifying* Kantian intuitions with singular terms, as well as with taking them to be possible elements of judgments on a par with concepts.



Yet what will come to light is that Kant's commitment to these expressive restrictions is not the result of an unreflective acceptance of the 'lore' of the tradition, but rather is inextricably bound up with further substantive philosophical commitments on Kant's part concerning the nature of our mindedness – most centrally, that any account of our cognitive traffic with individuals will require reference *beyond* the understanding to sensibility, and *beyond* concepts to forms of intuitive representation.<sup>19</sup>

**§30** Let us turn more directly to Kant's understanding of a concept. I will show below that, on Kant's contrasting account, the formal-logical essence of a concept consists solely in what is *thought 'in'* the relevant conceptual representation, where this is one of Kant's technical expressions for the collection of further concepts (or properties or attributes) that together make up (or, in Kant's words: are 'contained in') the 'sense' or 'intension' of the concept. However, even here we will need to take caution, since formal logic abstracts all together from the relation of thought to objects, which means that we will need to

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<sup>19</sup> Here I agree with Hintikka, *Logic, Language-Games, and Information* (Oxford: Clarendon, 1973): 'If we follow Kant's terminology, we are thus led to say that [modern] quantifiers do not deal with general concepts only but contain an intuitive element. What we are accustomed to call the logic of quantification in its general form would not have been logic at all for Kant, for according to Kant *logic dealt with general concepts only*. Quantification theory, Kant would have been forced to say, hinges on non-logical, 'intuitive' methods. Of course, saying this is not much more than another way of saying that typically quantificational modes of inference would have been called by Kant mathematical rather than logical' (140; my ital.). See also chapter VIII of this work, entitled 'Kant Vindicated', in which Hintikka argues for 'the inevitability of synthetic elements in first-order logic' (174ff).

determine which sense of ‘intension’ or ‘sense’ might be available from such a point of view. As I have already intimated, and will demonstrate below, the meaning of ‘intension’ that Kant thinks *is* available from a formal-logical point of view is one in which intensions of concepts are explained, not as collections of properties *of objects*, but rather simply as collections of *meaningful contents as such*, where it is left open whether or not these contents find (or even purport to find) ‘realization’ in objects (or in other ‘things’ entirely).

In fact, in the remainder of this chapter we will see Kant outlining an alternate formal-logical, and altogether non-referential, sense of conceptual ‘content’, one based on hierarchical relations of *containment* among concepts. This point will turn out to be essential to our discussion in the next chapter (V), since in many ways Kant stands in agreement with Leibniz’s claim in the *Nouveaux Essais* that ‘the whole theory of the syllogism could be demonstrated from the theory *de continence et contentio*, of containing [comprenant] and contained [compris]’ (IV.17.8). By working out how the essence of concepts can in this way be delimited purely formally (non-referentially), in terms of such ‘containment’-relations, and combining such an analysis with the results from our previous exposition of the form of judgments, we should then be in a position to interpret *inferential* validity in an equally formal (non-semantic) fashion.

My hope, then, is that, by the beginning of next chapter, we will be in a position to synthesize the theory of conceptual containment-relations as such

discussed below, with the theory of judgmental form introduced in the previous chapter. Such a synthesis will provide an essential bridge to our investigation of Kant's doctrine of 'syllogistic', since it will give us an understanding of how, for Kant, the validity of inferential connection between judgments is *grounded upon* the formal-logical properties of possible conceptual containment-relations that judgments can express. In fact, at the beginning of the following chapter, we will see how the very same containment-relations provide the ground for the 'truth' of *analytic* judgments as well, thus tying up another loose end from the previous chapter's discussion of the relation between formal logic, judgment, and truth.

But before we try to identify what features or properties of concepts might be generic enough to belong to its definition within formal logic, it will be useful, first, to look at several of Kant's more well-known definitions of the notion of a 'concept'. We can begin with what is surely the most frequently cited definition, that from the 'Stufenleiter' of the Transcendental Dialectic (B376f). Here Kant locates 'concept [Begriff]' within a logical division of the 'genus [Gattung]' of 'representation in general [Vorstellung überhaupt]'. The genus of representation is first divided into 'representation *with* consciousness [mit Bewußtsein]', and (implicitly) 'representation *without* [ohne] consciousness'. The former species is

called ‘perception’, while the latter is left unnamed and undiscussed.<sup>20</sup> Perception, in turn, is divided into, first, ‘objective perception’, by which Kant means ‘perception which is referred to an object [sich auf den Gegenstand bezieht]’, and which Kant calls *cognition* [Erkenntniß], and, secondly, ‘perception which is only referred to the subject as a modification of its state [sich auf das Subject als die Modification seines Zustandes bezieht]’, or what Kant calls *sensation* [Empfindung]. Like representations without consciousness, subjective perception (sensation) is here left undiscussed (and so not further divided). Finally,<sup>21</sup> and most famously, the species of ‘cognition’ itself – or, more fully, objective perception with consciousness – is divided into *concepts* [Begriffe] and *intuitions* [Anschauungen].

Now, even though Kant identifies ‘concept’ here as a species of cognition (and (more strikingly) as a species of perception), we should make note of the fact that, as Kant allows for concepts (like judgments) to be at work in non-‘cognitive’ contexts (i.e., those not concerned with, or oriented towards ‘objective’ perception), the notion of a ‘concept’ cannot be *restricted* to the meaning it is given here. (The setting of the ‘Stufenleiter’ is, after all, not a text of formal logic, but

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<sup>20</sup> That Kant recognizes this as a possible species of ‘Vorstellung’ can be seen from passages in the *Anthropologie* (§5; 7:135-7) as well as from a letter to Marcus Herz in 1789 (May 26). (These were discussed briefly in II.§19.)

<sup>21</sup> Finally – at least for our purposes here. In the ‘Stufenleiter’ Kant actually goes on to divide ‘concept’ itself into ‘empirical’ and ‘pure’, and then ends by dividing ‘pure concept’ into ‘notion’ and ‘idea’.

an exercise in 'Transcendental Logic', or the special-theoretical logic of thought about 'nature'.) Even so, getting clear on what this term means in the context of cognition will be an important first step in understanding what a concept is 'in general'. And this, in turn, will require that we consider at some length the division of 'cognition' into 'concept' and 'intuition'.<sup>22</sup>

Considered as two species of 'cognition', then, concepts and intuitions correspond to the two ways in which, according to Kant, a perception can be 'objective', or can be related or referred to 'objects [Gegenstände]' or 'things [Dinge]'. First, while intuitions relate to objects *immediately* [unmittelbar], concepts relate to them *mediately*, 'by means of a mark [vermittelst eines Merkmals]'. Secondly, and of more immediate importance for our purposes, concepts and intuitions are also differentiated according to a *quantitative* dimension: we are told that intuitions are 'singular [einzeln]' representations, whereas the 'mark [Merkmal; nota]' by which a concept is (mediately) related to objects is something that 'can be *common* to several things [mehreren Dingen gemein sein kann]' (B377; my ital.). Implicitly, then, the singularity of an intuition has to do with the fact

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<sup>22</sup> Of course, given the fundamental role that this last division (and along with it, the division of the cognitive faculties into 'Verstand' and 'Sinnlichkeit') plays in almost every aspect of Kant's philosophy, it would be surprising if it were not of at least indirect importance in spelling out *logical* doctrines. At the very least, just as it is possible to determine in part the nature of the understanding by exclusion – or merely 'negatively', as Kant puts it (B92), by seeing what must be excluded from the understanding, since it pertains to sensibility – so too might we begin to determine what a concept is by seeing what must be excluded from its nature, and ascribed (instead) to intuitions. (This indirect analysis will be useful, even if we might also hope, in formal logic, to be able to analyze and characterize the nature of concepts in a more direct fashion.)

that it does not pick out the object (or objects) to which it is related by virtue of a common ‘mark’, but picks out its object(s) *uniquely*.

We will return in more detail to Kant’s understanding of ‘marks’ below, as well as to the question of whether or not there might be a broader notion of ‘thing’ (than ‘object’) to which a ‘mark’ can be ‘common’. First, however, we should note that, in some ways, the language here is potentially misleading, as these definitions can all appear to be phrased in ‘success’-terms: a concept is a representation which *does* (actually) relate to some object in one way, whereas an intuition is one which *does* (actually) relate to an object in another manner. It is important that this appearance be dispelled, since (to take just one example) the discussion in the Amphiboly quite clearly shows that Kant recognizes ‘empty’ concepts which (in fact or in principle) relate to no objects (but only represent, e.g., an *ens rationis* like the noumena) as well as ‘empty’ intuitive representations which do not present *any* object immediately (but only represent, e.g., an *ens imaginarius*, whether of the pure sort, like pure space or pure time (B347-8), or of an empirical sort, like a centaur).<sup>23</sup> Leaving to one side the precise status of these kinds of *entia*, or the precise sense of ‘emptiness’ which characterizes the thoughts

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<sup>23</sup> On this last point, cf., as well, the ‘Refutation of Idealism’: ‘it does not follow that every intuitive representation of outer things includes at the same time their existence, for that may well be the mere effect of the imagination (in dreams as well as in delusions)’ (B278). The general point at issue here obviously raises questions concerning the ‘intentional’ (representational) content of thoughts involving these kinds of *entia* – what Kant also calls ‘ein leeres Gedankending’ (B475; cf., B697, B394) – since in one sense the thoughts are ‘without’ objects, but in another sense, we are clearly thinking (of?) ‘something’ rather than *absolutely* ‘nothing’. I have tried to say something about this in the previous chapter (III, §24).

which 'involve' them, we need to be reminded of these difficult cases, simply in order to motivate the need to rephrase the explanations of 'intuition' and 'concept' accordingly, so that, for example, considered as a species of cognition, we might say that a concept is a representation which *purports* to relate to a plurality of objects by virtue of a mark that they *would* all have in 'common'.

Behind this, of course, the more essential motivation for my suggested broadening of the general definition of 'concept' (to something that '*purports* to relate' to objects) is a felt need to be sensitive to Kant's willingness to apply this term ('concept') to nearly anything for which it is not demonstrably *impossible* for the thing in question to present something potentially common to many other (possible) things (i.e., anything which is not self-contradictory), even if it is also neither demonstrable that it is *really possible* for the thing in question to actually apply to or present any (actual) things (cf., III, §24).<sup>24</sup>

In fact, Kant so adamantly insists upon this possibility – that what is presented must be something that *can* be found to be 'common' to many things –

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<sup>24</sup> Keeping this important caveat in mind, we can see that the logic manuscripts say roughly the same thing about the quantitative aspect of a concept, and its difference from an intuition. For instance, Jäsche's text states that, while '[a]n intuition is a singular [einzelne] representation (*repraesentatio singularis*)', 'a concept is a universal [allgemeine] representation (*repraesentatio per notas communes*)' (JL §1), such that '[a] concept is opposed to intuition, for it is...a representation of what is common [gemein] to several objects' (JL §1n1; 9:91). The other lecture notes consistently repeat this last point – e.g., *Wiener Logik*: a concept (*conceptus*) is defined as 'a *repraesentatio communis*, which is common to many things [die vielen Sachen gemein ist]' (24:904; cf 24:905). Cf, also (among other places) *Dobna-Wundlacken Logik*, 24:754. On intuitions, compare the Appendix to the 'Fortschritt' essay: 'Die unmittelbare Vorstellung des Einzelnen ist die Anschauung' (20:325).

as the essential or defining feature of a concept, that he refuses to call something a concept if it does *not* have this potential: ‘if a representation is not a *repraesentatio communis*, then it is *not a concept at all*’ (*Wiener Logik*, 24:908). As Jäsche’s text has it, ‘it is a mere tautology to speak of universal [allgemeine] or common [gemeinsame] concepts’ (JL §1n2 9:91). The *Dobna-Wundlacken Logik* gives the following as an example of something which fails to meet this criterion: ‘Socrates is not a *conceptus*’ (24:754) – the implication being, we might suppose, that Socrates himself is not something which has the capacity to be common to many (or any) other things, since he is rather a fully determinate, singular, unique *thing*.<sup>25</sup>

As a consequence, Socrates cannot be adequately represented through any concept. Moreover, as we shall see below, one of Kant’s main departures from Leibniz will be Kant’s denial that Socrates can be represented through a *collection* of concepts (any set of ‘marks’) either. Instead, Socrates can only be represented in his full determinacy through a representation which is as unique and determinate as Socrates himself – namely, through an *intuition*: a ‘*repraesentatio singularis*’ – has an *intuitum*, indicates it immediately, but is at bottom not a *conceptus*’

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<sup>25</sup> This is not as straightforward as it might seem from the present discussion. For one, as we will discuss below, Kant also acknowledges a singular ‘use’ of concepts, and (what seems to amount to the same thing) a singular ‘form’ of judgment. (Cf., also Parsons, ‘The Transcendental Aesthetic’.) In addition, in the same passage from the *Dobna-Wundlacken Logik*, Kant seems to speak of the ‘concept’ of ‘the individual Julius Caesar’: ‘a concept that has no *sphaera* at all, e.g., that of the individual Julius Caesar is = to a point’ (24:755). The thought might strike modern readers that Kant should here introduce something like a use/mention apparatus, such that, e.g., the *things* Socrates and Julius Caesar are fully determinate and not concepts, whereas the *concepts* ‘Socrates’ or ‘Caesar’ are representations which have singular use, but are in some sense indeterminate [unbestimmt].



(DWL 24:754). Jäsche's *Logik* makes this inference quite explicitly: 'Since only individual things [einzelne Dinge], or individuals [Individuen] are thoroughly determinate [durchgängig bestimmt], there can be thoroughly determinate [durchgängig bestimmte] cognitions only as *intuitions*, but not as *concepts*' (JL §15; 9:99).

At this point, however, several difficulties arise. First, insofar as Kant recognizes that we can have several distinct intuitions across time of one and the same individual, it will be difficult to see how each of these intuitions can nevertheless represent the individual itself with 'throughgoing determinacy', unless such determinacy is regimented to the time of the intuitions, or unless each intuition contains within itself (perhaps *virtualiter*, à la Leibniz) all of the actual determinations that the relevant individual has, has had, and will ever have.<sup>26</sup> The only other alternative would be to take the relevant 'individual' being represented in an intuition to be not an ordinary individual at all, in the sense of an 'Aristotelian' primary substance, but rather something closer to what is given in an Carnapian 'Elementarerlebnis': roughly, a time-slice perceived from a particular location in space.<sup>27</sup> This way of taking the singularity of the object of an intuition would clearly fit better with the fact that, as Manley Thompson notes, 'each

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<sup>26</sup> We might think as well of Husserl's notion of a 'Horizon' (cf., *Ideen*, §44; *Cartesianische Meditationen*, §19), which he takes to be contained in every perception, and which establishes temporal and conceptual links with an indefinite number of other perceptions.

<sup>27</sup> Compare Carnap's 1928 *Der Logische Aufbau der Welt*, §§67-68.

intuition is given on an occasion temporally distinct from that of every other and is thus, simply as intuition without regard for concepts, different from every other intuition'.<sup>28</sup>

Yet as Thompson points out, treating intuitions in this way would speak against the attempt by many of Kant's readers – Hintikka, Parsons, and Posy, to name just a few – to find in 'names' (such as 'Socrates') the linguistic correlate of intuitions.<sup>29</sup> For, in Thompson's words, either 'we take proper names as linguistic representations solely of our intuitions', but then 'we cannot speak of applying and reapplying the same name'; or, if we do wish to 'speak thus' (treat names as reapplicable), then 'we treat names as conceptual rather than intuitive representations', and then 'names can be applied, reapplied, and misapplied; so can concepts, but not intuitions' (op.cit., 328). Thompson himself goes on to argue that neither demonstrative pronouns ('this'), nor demonstrative adverbs ('here-now'),<sup>30</sup> nor *any other* linguistic expression will be sufficient to 'represent' an

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<sup>28</sup> 'Singular Terms and Intuitions in Kant's Epistemology', *Review of Metaphysics*, 26.2 (Dec. 1972), 314-343; here, 327-8.

<sup>29</sup> Cf., Hintikka, 'On Kant's concept of intuition (Anschauung),' in *The First Critique: Reflections on Kant's Critique of Pure Reason*, ed. T. Penelhum and J. J. Macintosh (Belmont, CA: Wadsworth, 1969), 38-52; 'Kantian intuitions', *Inquiry* 15 (1972), 341-345; and 'Kant on the Mathematical Method', *The Monist*, 51.3 (July 1967), 352-75. Cf., Parsons, 'Kant's Philosophy of Arithmetic', originally 1969, reprinted in his *Mathematics in Philosophy* (Ithaca: Cornell, 1983). Cf., Posy, 'Kant and Conceptual Semantics', *Topoi* 10 (1991), 67-78.

<sup>30</sup> An 'indexical' analysis of intuitions (as expressible via a 'this-such' nexus) is perhaps most famously given by Sellars in his *Science and Metaphysics* (London: Routledge, Kegan, & Paul, 1968) Ch. 1; cf., Hanna, *Kant and the Foundations of Analytic Philosophy*, who takes 'the most important feature' of intuition to be its 'essential indexicality', by which he means to refer to intuition's 'subject-centered and contextual – that is, actual or existential, environmental, spatiotemporal, or

intuition: 'If we ask what does constitute a linguistic representation of an intuition, the answer, I think, is simply that for Kant an intuitive representation has no place in language, where all representation is discursive' (op.cit., 333).<sup>31</sup>

I think something like this view has to be correct, though I cannot hope to defend it in full here. At the very least, Kant is quite clear, both that the 'form' of judgments is constituted by synthesis according to pure concepts (cf., KrV §10; see above §10), and that the 'material' of judgments consists in concepts (B322), which makes it hard to see what room is left within which intuitions might belong. Moreover, as Thompson notes (op.cit., 325), Kant repeatedly speaks of concepts being predicated of other concepts. In the very passage in which he defines a concept as a 'predicate of possible judgments', Kant says that, with respect to the judgment, 'All bodies are divisible', the 'concept of divisible' is 'here particularly related to [bezogen auf] the *concept* of body' (B94; my ital.). To my knowledge, Kant does not ever speak of an *intuition itself* functioning as either a subject- or a predicate-term in a judgment.<sup>32</sup>

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worldly – factors' (184). See as well, Howell, 'Intuition, Synthesis, and Individuation in the *Critique of Pure Reason*', *Nous*, 7.3 (Sept., 1973), 207-232.

<sup>31</sup> Since his initial essay, Parsons has been convinced by Thompson that at least names will not work as linguistic correlates; see his 'The Transcendental Aesthetic', *Cambridge Companion to Kant*, ed., P. Guyer (Cambridge: Cambridge, 1992), 62-100. In fact, in this essay, Parsons suggests that 'it would accord with Kant's general view that the manifold of intuition cannot acquire the unity that is already suggested by the idea of intuition as singular representation without synthesis according to concepts, that one should not be able to single out any portion of a judgment that represents in a wholly nonconceptual way' (66).

<sup>32</sup> In this respect, I side with Robert Pippin in his review of Henry Allison's *The Kant-Eberhard Controversy* (*Kant-Studien* 66.2 (1975), 247-50), and against Moltke Gram (*Kant, Ontology, and the*

Yet however this is resolved, what is agreed on all fronts is that, in whatever way we do come to represent individuals in thought – perhaps the most natural options are through what Kant calls the ‘singular’ function of unity in judgment (KrV §9), or the ‘singular’ use of a concept (JL §1n) – it will be necessary that these representations (judgments, uses of concepts) themselves bear an essential connection to intuitions, even if this relation does not take the form of representing the intuitions themselves through some discrete element of a judgment. Perhaps it is enough for the judgment to represent *that* we intend our judgment to bear a relation to some *object* that can be given in an intuition, but not to represent any *intuition* itself.

In any case, it appears, then, that at least one of the grounds for the Kantian division between concepts and intuitions is another distinction – and one which will ultimately turn out to be more fundamental – namely, the distinction that Kant makes between generalities and ‘singularities’, where the latter notion comprises both intuitions and (individual) things (though in different ways, to be

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*Apriori*) and Allison (as Allison presents his views in this work); see Pippin (op.cit.), 250. Compare, however, Kiesewetter’s 1791 *Grundriß einer allgemeinen Logik nach kantischen Grundsätzen*: ‘A judgment arises through the combination of several concepts or of a concept *with an intuition*’ (§23; my ital.). In the ‘Auseinandersetzung ad §23’, Kiesewetter elaborates: ‘When I say, e.g., ‘All men are mortal’, I state that the concepts ‘man’ and ‘mortal’ allow themselves to be united in a unity of consciousness; or when I say, ‘Caius is not a scholar’, I thereby say, *the intuition ‘Caius’* and the concept ‘scholar’ do not allow themselves to be united in a unity of consciousness’ (my ital.).

sure).<sup>33</sup> What is more, Kant appears to explicate the distinction between individuality and generality, at least as it is at work here, by reference to the notion of grades of *determination* (or ‘determinacy [Bestimmtheit]’): for something to be general means that it is in some degree indeterminate, whereas for something to be an individual thing means that it is in everyway (thorough-goingly) determinate. It is to this notion that we should now turn.

## B. Determinacy and Generality

§31 The centrality of determinacy is confirmed in a passage from the Transcendental Ideal (B599), in which Kant presents the basic contours of precisely this conceptual nexus – i.e., between ‘concept’, ‘thing’, ‘determination’ and so on. Given its importance for our topic, I will quote the passage at length:

Every *concept*, in regard to what is not contained in it [in ihm selbst nicht enthalten ist], is indeterminate [unbestimmt], and stands under the principle of *determinability* [Bestimmbarkeit]: that of *every two* contradictorily opposed predicates only one *can* apply to it [ihm zukommen können; my ital.], which rests on the principle of contradiction and hence is *a merely logical principle which abstracts from every content of cognition, and has in view nothing but the logical form of cognition* [my ital.].

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<sup>33</sup> To use terms drawn from Chapter II, while both the representational content of an intuition and the identity of an individual thing are unique, the uniqueness of the former pertains both to its ‘formal reality’ (its unique place in the succession of perceptions) and to its ‘objective reality’ (its unique perspective on space-time), while the uniqueness of the latter pertains solely to its ‘formal reality’. (Incidentally, the singularity/generality contrast is the topic of the whole section (§15) (as well as the surrounding ones) of the *Jäsche Logik*, from which the previous quote has been drawn.)

Every *thing* [Ding], however, as to its possibility, further stands under the principle of *thoroughgoing determination* [durchgängigen Bestimmung]; according to which, among *all possible* predicates of *things*, insofar as they are compared with their opposites, one *must* apply to it [zukommen muß; my ital.]. This does not rest merely on the principle of contradiction, for besides considering every thing in relation [Verhältniß] to two contradictorily conflicting predicates, it considers every thing further in relation to the *whole of possibility* [gesammte Möglichkeit], as the sum-total [Inbegriff] of all predicates of things in general [Dinge überhaupt]; and by presupposing that as a condition a priori, it represents every thing as deriving [ableite] its own possibility from the share [Anteil] it has in that whole of possibility. The principle of thoroughgoing determination thus *deals with the content and not merely the logical form* [my ital.]. It is the principle of the synthesis of all predicates which are to make up the complete concept of a thing [vollständigen Begriff von einem Dinge], and not merely of the analytical representation, through one of two opposed predicates; and it contains a transcendental presupposition [Voraussetzung], namely that of the material [Materie] of *all possibility*.... (B599-601)

There is, of course, quite a bit going on in these sentences, and we will have occasion to return to the passage several times throughout this chapter. For now, though, we can note, first, that Kant distinguishes concepts and things according to their respective ‘principles’. On the one side, Kant introduces the principle of *determinability*, which governs concepts, and which is (and rests upon) a purely *logical* principle,<sup>34</sup> since it abstracts from all content and deals only with the *logical form* of cognition (thinking). Hence, it is a *logical* fact about *every* concept, that it

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<sup>34</sup> In fact, a footnote links the principle of determinability to another logical law, namely *excluded middle*. “The *determinability* of every single *concept* is the *universality* [Allgemeinheit] (*universalitas*) of the principle of excluded middle between two opposed predicates; but the *determination* of a thing is subordinated to the *allness* [Allheit] (*universitas*) or the sum total [Inbegriff] of all possible predicates’ (B600n). Note the shift from the use of a formal-logical *function* (Allgemeinheit) (cf., KrV §9) to articulate the essential feature of concepts, to the use of a transcendental-logical *category* (Allheit) (cf., KrV §10) to articulate the essential feature of things.

possesses a degree of *indeterminateness*; it is a formal feature of every concept that it is in some sense *indeterminate* (or undetermined) [unbestimmt].<sup>35</sup> If something were not indeterminate in this regard, it could not be a concept.

All of these properties of concepts are meant to contrast with, on the other side, the status of *things*. This is evident from the second principle Kant introduces in the ‘Transcendental Ideal’ – namely, the principle of *thoroughgoing determination*. (Or more specifically, as he formulates the principle in the following paragraph, concepts *qua* indeterminate must be contrasted with any and every *existing* thing: ‘Everything existing is thoroughly determinate [alles Existierende ist durchgängig bestimmt]’ (B601).) Yet this implies that the principle of thoroughgoing determination does *not* present a *logical* fact about every (existing) thing, but is rather an *extra-logical* principle, insofar as its validity depends upon a ‘transcendental presupposition’ concerning the nature of the *content* or ‘material’ of cognitions – roughly, that all such content or material forms a *totality* which can itself be cognized. But because this totality itself is not a ‘thing’ (object) which can be ‘given’ to the mind in accordance with the conditions of the sensible faculty (it can never be ‘exhibited *in concreto*’ (B601)), Kant argues that the

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<sup>35</sup> Let us bracket for the moment the precise sense in which it is indeterminate – i.e., what Kant means by the phrase ‘in regard to what is not contained in’ a concept. The notion of conceptual containment will turn out to be one of the technical notions by which Kant articulates the (equally technical) ideas of a formal-logical representation of a concept’s ‘Inhalt’ (content, intension) and ‘Umfang’ (extension, domain). These ideas will be taken up in subsequent sections.

concept of such a totality represents for us an essentially ‘problematic’ concept (an ‘idea’).<sup>36</sup>

Kant then argues that the correlative notion of a possible cognition (objective perception) which adequately presented such thoroughgoing determinacy of any given ‘thing’ to the mind, is something which itself depends upon this presupposition. But then, as a consequence, it too is rendered ‘problematic’ as a notion:

What it [i.e., the principle of thoroughgoing determination] means is that in order to cognize a thing completely [vollständig zu erkennen] one has to cognize everything possible [alles Mögliche] and determine [bestimmen] the thing through it, whether affirmatively or negatively. Thoroughgoing determination is consequently a concept that we can never exhibit [darstellen] *in concreto* in its totality [Totalität], and thus it is grounded on an idea which has its seat solely in reason.... (B601)

This fact – that a fully determinate (‘complete’) cognition depends upon a ‘transcendental’ presupposition, the validity of which we cannot ‘cognize’ – makes the above passage from Jäsche’s text (JL §15) all the more striking, since there it is (apparently) claimed that *intuitions* can *in fact* give us a form of thoroughly determinate ‘cognition’ of a thing, even though Kant appears to have just stated that the very idea of such cognition is impossible to exhibit *in concreto*. Hasn’t the

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<sup>36</sup> For a discussion of ‘problematic’ concepts and the ‘problematic’ function of judging, see above, **III**, §24. Note that Kant is willing to acknowledge that this is (in some sense) a *necessary* presupposition about the content of our cognition, or that it is at least the case that ‘reason *prescribes* [vorschreibt]’ this principle ‘to the understanding’ as a ‘rule for its complete use’ (B601; my ital.).



Jäsche text told us that intuitions are precisely exhibitions of objective perceptions *in concreto*? Yet if we return to the Aesthetic's introduction of the notion of an intuition, we learn that the relevant sort of concrete intuitions – namely, *empirical* intuitions (of 'existing' things) – are such that, in some sense, what they present is (in the first instance) *not* a fully determinate individual thing, but rather an 'undetermined object [unbestimmte Gegenstand]' (B34).<sup>37</sup>

Now, I think that if this apparent incompatibility can be resolved, it will be by way of reflection upon the connection between the *determinateness* of a representation, the process of *determining* a representation, and finally Kant's understanding of the grades of *distinctness* [Deutlichkeit] that a representation can possess, though I can only sketch such a resolution here. As Jäsche's text has it, (JL Intro, §V), 'If we are conscious [bewußt] of the whole representation, but not of the manifold that is contained in it [in ihr enthalten], then the representation is indistinct [undeutlich]' (9:34). By contrast, then, if we are conscious of both the whole *and* that which is contained within it (its 'parts'), we can be said to have a *distinct* representation. If we apply this to the case of an intuitive representation, then we can see how it could be possible that, while every intuition gives us a

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<sup>37</sup> Here Kant calls the 'undetermined' object an 'appearance [Erscheinung]' (B34). Longuenesse (*Kant and the Capacity to Judge*, 21f.) incorporates this identification into an interpretation which systematically distinguishes between an intuition considered as an 'appearance' and the same considered as a 'phenomenon', such that the latter term denotes the intuition *qua* categorized and conceptualized (and so, 'determined'), drawing on a distinction made in Kant's 1770 *Inaugural Dissertation*, §5, between *apparentia* and *phaenomena*, even though she notes that Kant only appears to refer explicitly to such terminological correlation in the KrV at A248-9.

determinate representation of an individual as a ‘whole’ (so to speak), it does so only *indistinctly*, insofar as we do not yet have distinct consciousness of all of the determinations of this individual.<sup>38</sup> To this extent, the identity of the ‘object’ of the intuition is both ‘fixed’ (indexically) and yet remains (conceptually or descriptively) ‘undetermined’.

If we take the sufficiently determinate representation (cognition) of an individual to require distinct consciousness of all its ‘parts’, then we might well agree with the passage from the Dialectic, that such a completely distinct representation is ‘problematic’, to say the least. If, however, we take cognition of the individual to require only indistinct consciousness of the manifold contained in a representation of an individual, so long as we can *know* that what we have consciousness of is a ‘whole’ individual, then we could move closer to the view of Jäsche’s *Logik*.<sup>39</sup> The real question thus becomes whether or not, despite the potentially indistinct status of our apprehension of some ‘whole’, we can know that this whole gives us something that is actually thorough-goingly determinate, such that it is capable (in the end) of representing an individual. We know that

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<sup>38</sup> Compare the subsequent example given in *Jäsche Logik*: ‘I see the Milky Way as a whitish streak, for example; the light rays from the individual stars located in it must necessarily have entered my eye. But the representation of this was merely clear, and it becomes distinct only through the telescope, because then I glimpse the individual stars contained in the Milky Way’ (9:35). (One thinks here, of course, of Leibnizian *petites perceptions*.)

<sup>39</sup> The notion of ‘distinctness’ will become important for our later discussion of *conceptual analysis*, and especially the idea that the analytical containment-relations among concepts which ground the truths of analytic judgments need not be relations that are *immediately* available to consciousness (below, §38).

Kant means to deny that any merely *conceptual* representation can ever be capable of the representational determinacy necessary to provide a representation of a thing. But how can we *know* (be certain) that *intuitions* themselves actually enjoy this determinacy?

Though I cannot give it the treatment it deserves, I think that Kant's full argument for the determinacy of intuitions would have to rest upon the *immediate* connection they institute (in veridical cases) with an object, as well as the necessarily *passive* role that the faculty of judgment plays, such that it is simply *not up to us* how something appears, but rather something we suffer through ('live through [erleben]' to use Husserl's phrase).<sup>40</sup> In this sense, there is nothing, no feature of the content of the appearance, 'left open' by the intuitive transaction; *all* questions about the content of the appearance (what it 'contains') are completely settled, even if we are not distinctly conscious of all of their answers. This is to be contrasted with representations we simply 'think up', since not all such answers need be fixed – e.g., I seem to be able to imagine a dog without it being settled whether or not the dog is the first-born of its litter. But then, unless I can tie such a representation to an *intuition* of the same dog, then it is at least an open question whether what I have represented in my imagination is truly any *individual* 'thing', or rather something less 'determinate' than this.

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<sup>40</sup> Cf., Husserl, *Logische Untersuchungen* V, §2: 'The appearing of the thing [Dingerscheinung] (the experience [Erlebnis]) is not the thing which appears...The appearings themselves do not appear, they are lived through [erlebt werden]' (II.328).

This last point will become important below (§35), when I will return to the point introduced in the beginning of this chapter, that not only does Kantian logic not have the resources to represent any particular individual thing, but it doesn't even have the resources to represent the *form* of the representation of any individual thing, since for this, we would need to make reference to the general form of spatio-temporal determination. (Of course, merely specifying a location in space-time might likewise not be sufficient in itself to 'represent' an individual, since it is at least logically possible that more than one individual could 'be' at the same point in space at the same time.)

In any case, even if we do not yet have on hand the full argument for Kant's claim that intuitions actually can give us determinate representations of individuals, for present purposes we can simply treat the relevant thesis as something 'axiomatic' in Kant's system.<sup>41</sup> In other words, even if intuitions in the first instance might not be sufficient to give us thorough-goingly *distinct* cognition of an individual, it is clear that intuitions nevertheless do give us (indistinctly) the necessary means for a thorough-goingly *determinate* representation of an individual, and hence are absolutely necessary for *any* cognition of individuals, indistinct or otherwise. Similarly, even if we allow ourselves to leave to one side the fact that

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<sup>41</sup> I will also suggest below (§40) that Kant takes the principle of contradiction itself as 'axiomatically' valid. The discussion of the epistemic status of these sorts of principles, along with various other features of Kant's system which have been labeled by commentators as 'brute facts' – such as the particular set of logical functions and the particular forms of intuition that we possess – will be taken up in Chapter VI.

we are incapable of the concrete 'exhibition' of the validity of this conception of 'things' (i.e., we cannot have a completely distinct consciousness of any given intuition), it is at least clear that ('in principle') the constitutive features of concepts and things are ('ideally') to be distinguished according to *kinds of determinacy*: concepts are essentially indeterminate, whereas things are thoroughly determinate.<sup>42</sup> And what is absolutely essential for our discussion is Kant's claim that any attempt to construct a determinate representation by means of concepts alone will inevitably make use of an illicit 'transcendental presupposition' about the determinate existence of a totality.

§32 Of course, it is with claims like this that Kant is signaling his opposition to one of the fundamental theses of Leibnizian Rationalism, namely the thesis that we *know* that every individual thing *can* be represented 'conceptually', at least in principle. This conceptual yet fully determinate representation of an individual is

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<sup>42</sup> An important question concerning the nature of the movement from indistinct to distinct representation lies with the idea that it is a movement from consciousness of the whole to consciousness of its parts, since it is as of yet unclear what sense of 'part' is at issue, when we speak of 'parts' of an intuition. If I take, for example, my objective perception of the contents of my desktop, then all do the various inhabitants (pens, papers, computer, but also specks of dust and things even smaller) represent the relevant 'parts', or do they belong as 'parts' only *qua* immediately discernible members of my visual field (so that the dust-specks and their 'inner' (molecular) properties are not 'parts')? And what about the various spatial 'regions' of my visual field?

A second question concerns how it would be possible to gain 'determinate' representation of properties of things that involve essential temporal reference (e.g., 'became *F* after *G*'), especially to times prior or future to all of *my* possible intuitions. That is, how can this intuition *now* tell me *everything* about an individual that can persist through time and undergo changes (something I know thanks to the First Analogy)? (Again, the closeness to 'Leibnizian' questions is quite clear.)

what has come to be called a ‘complete individual concept’, on the basis of Leibniz’s discussion in his 1686 *Discourse on Metaphysics* §8.<sup>43</sup> It is, in turn, intimately connected with Leibniz’s other principle concerning the identity of individuals, namely the principle of the identity of what is conceptually indiscernible, which is articulated in *Discourse* §9: ‘it follows that it is not true that two substances can resemble each other completely and differ *solo numero*, and that what Saint Thomas asserts on this point about angels or intelligences (*quod ibi omne individuum sit species infima*) is true of all substances’ (G iv.433).<sup>44</sup>

In the ‘Amphiboly’, Kant claims that ‘for *intelligibilia*, i.e., objects [Gegenstände] of the pure understanding’, Leibniz’s ‘principle of non-discernibility (*principium identitatis indiscernibilium*) could surely not be disputed

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<sup>43</sup> From the *Discourse* §8: ‘the nature of an individual substance or of a complete being is to have a notion so complete [une notion si accomplie] that it is sufficient to contain and to allow us to deduce from it all the predicates of the subject to which this notion is attributed. [...] God, seeing Alexander’s individual notion [notion individuelle] or haecceity sees in it at the same time the basis and reason for all the predicates which can be said truly of him, for example, that he vanquished Darius and Porus; he even knows a priori (and not by experience) whether he died a natural death or whether he was poisoned, something we can know only through history’ (G iv.433).

<sup>44</sup> I say ‘intimately connected’, though in fact here Leibniz takes the principle of identity to ‘follow from [s’ensuit]’ the doctrine of the complete individual concept as expressed in §8, and reiterated in the summary of §9: ‘that each singular substance expresses the whole universe in its own way, and that all its events, together with all their circumstances and the whole sequence of external things, are included [compris] in its notion’ (G ii.12). At other times, Leibniz takes the principle of the identity of indiscernibles as an axiom (cf., his 1703 letter to de Volder (G ii.249)). At still other times, however, Leibniz takes the principle to ‘follow from’ still other theses – such as in the correspondence with Clarke – where Leibniz argues for the principle on the basis of the principle of sufficient reason, e.g., in connection to the necessity for a reason for divine preference, or why God chose to create every individual. For if there were ‘two states’ which ‘would not at all differ from one another’ save for spatial or temporal location, such that ‘the one would be exactly the same thing as the other, they being absolutely indiscernible’, then ‘consequently there is no room to inquire after a reason for the preference the one to the other’, since every place and time are identical (G vii.364).

[bestritten]' (B320). Of course, as we have seen, Kant thinks that we can give ourselves no determinate representation of such 'intelligibilia'; they must remain, for us, mere 'Gedankendinge', or 'objects' only in a very tenuous sense of belonging to the 'content' of a 'problematic' concept. What is of interest here, however, is that Kant thinks that this principle is not only 'disputable', but invalid, when applied to *all* objects whatsoever. That is to say, the brunt of Kant's criticisms is borne by Leibniz's further claim that this principle for concepts is valid in *all* domains which include representations of individual objects. Or, in Kant's words:

The principle of indiscernibles is really based on the presupposition that if a certain distinction is not to be found in the *concept* of a thing in general, then it is also not to be found in the *things* themselves; consequently *all* things are completely identical (*numero eadem*) that are not already distinguished from each other in their *concepts*. (B337; my ital.)

Of course, given Leibniz's commitment to purely conceptual representations of individuals (via the doctrine of the complete individual concept), Leibniz himself could actually agree to Kant's restriction of the principle of identity of indiscernibles to the conceptual sphere, though this would not represent a real restriction, since Leibnizian 'things' just are identifiable with their 'concepts'.

The real root of the dispute, then, lies in Kant's insistence that the human mind finds itself confronted with relations among representations that are neither demonstrably equivalent to conceptual relations, nor in any way reducible to these

relations – most notably, the arithmetical and geometrical relations which constitute the spatio-temporal field of experience. ‘Appearances’, or items which are presented within such a (‘phenomenal’) field, are hence ‘objects’ which are distinguishable (‘individuated’) by extra-conceptual means, such that it is possible that two such objects would share every conceptual determination, and yet still be distinguishable by their spatio-temporal relations.<sup>45</sup> To deny this possibility is, in Kant’s mind, to ‘intellectualize appearances’ (B326), or (what is the same thing) to take ‘appearances’ for ‘intelligibilia’ (B320). But this would be to treat the sensible things we intuit (the objects of our senses) as if they were mere ‘thought-things’, or, in Kant’s analysis, merely problematic concepts.

Of course, Leibniz might simply accept this estimation, and simply say: so much the worse for ‘mere appearances’. For Leibniz himself does not take ‘appearances’ to be ultimately ‘real’, for the features that are defined in terms of the spatio-temporal relations which constitute appearances (and, indeed, all relations as such) are not real ‘in themselves’. Rather, Leibniz views them as ideal.<sup>46</sup> The ‘items’ in question, then, since definable only in terms of relational properties, would not *really* count as individuals, and so would not be the sort of thing that would fall under the rubric of the principle of identity in the first place.

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<sup>45</sup> In Kant’s words, the conditions for ‘multiplicity and numerical difference’ in the field of appearances are ‘already given by space itself as the condition of outer appearances’ (B320).

<sup>46</sup> Even so, Leibniz does take it to be the case that differences at the level of space-time are reliable indications of (and, in principle, are reducible to) differences at the level of substances. (They are *phaenomena bene fundata*.) See quote below from *Nouveaux Essais*, II.27.1 (G v.213).



Hence, any attempt at a full adjudication of the dispute between Kant and Leibniz in this regard would require a complete analysis of Kant's arguments for the *irreducibility* of the ideal 'objects' and relations that populate the appearances to something non-relational. Unfortunately, we cannot attempt such an analysis here.<sup>47</sup>

What is of more interest for the present discussion is what we can learn from Kant's criticisms of Leibniz in this regard about *Kant's own understanding* of the difference between concepts and individuals. I have already claimed that in Kant's logic, the only principle of 'identity' at issue is a principle for the identity of *concepts*, and not one which treats of individual objects. What I want to emphasize here is that Kant self-consciously rejects any attempts, either to construct a representation of objects by means of the principle of concept-identity, or to apply the principle of identity of concepts to the objects of cognition themselves. Ultimately, Kant rejects these attempts because he takes them to rest on precisely that sort of illicit 'transcendent' presupposition about the existence of determinate *totalities* of concepts that we dealt with above (§31). Because of Kant's commitment to the necessary failure of all attempts to prove the 'objective validity' of the presupposition of the existence of a sum-total of all reality, Kant

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<sup>47</sup> For discussion of Leibniz and Kant on the question of the reducibility of relations, see Rae Langton, *Kantian Humility* (Oxford: Oxford, 1998). On Leibniz, see Chapter XII of Benson Mates', *The Philosophy of Leibniz* (Oxford: Oxford, 1986) which includes a nice appendix (or, as he calls it, a 'gallery') containing translations of many relevant Leibniz-passages.

will also deny that any merely conceptual representation can be proved to have the determinacy necessary to represent an individual ‘thing’. Hence, the notion of a complete individual concept is simply not something which can be demonstrated to have ‘objective validity’.

This denial is, in the end, of a piece with Kant’s insistence upon a fundamental division of the intellectual and sensible faculties, and his rejection of Leibniz’s classification of the deliverances of sensibility as simply of the same sort (albeit of a different ‘grade’ or ‘degree’) as those of the understanding.<sup>48</sup> Recall that, as far as human cognitive capacities are concerned, Kant insists that ‘we

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<sup>48</sup> From the Amphiboly: ‘Instead of seeking two entirely different sources of representation in the understanding and the sensibility, which could judge about things with objective validity only in conjunction, each of these great men [i.e., Leibniz and Locke] holds on only to one of them, which in his opinion is immediately related to things in themselves, while the other does nothing but confuse or order the representations of the first. (B327).

There is surely room to doubt whether Kant actually gets Leibniz himself in his target on this point, rather than the ‘Leibniz-Wolffian school’, since Leibniz too thinks that, from the point of view of the human mind, space and time represent ‘forms’ which are distinctive of our sense-experience. Leibniz actually holds as well that (aside from the concept of God) no merely conceptual determination of any individual can contain within itself the fact of the *existence* of this individual. Rather, Leibniz holds that existence-claims (besides those concerning God) are, in effect, ‘synthetic’, since they will always depend on some thing ‘beyond’ the contents of the concept itself, because existence is always conferred upon the concept of the individual (its ‘essence’) from without, by God’s volition or decrees (cf., *Nouveaux Essais* II.15.2; cf., as well his June/July 1686 letter to Arnauld (G ii.49), and *Theodicy* §7.)

Finally, Leibniz too admits that it is impossible for us to have knowledge of the principle of individuation of any given individual, since the very thought of individuality involves an ‘infinity’; rather, we have to simply ‘keep hold of it’, as he puts it in the *Nouveaux Essais* III.3.6 (though he doesn’t tell us there what form of apprehension this ‘keeping hold’ will take): ‘it is impossible for us to know individuals or to find any way of precisely determining the individuality of any thing except by keeping hold [garder] of the thing itself. For any set of circumstances could recur, with tiny differences which we would not take in; and place and time, far from being determinants by themselves, must themselves be determined by the things they contain. The most important point in this is that *individuality* involves [enveloppe] infinity, and only someone who is capable of grasping [comprendre] the infinite could have knowledge [connaissance] of the principle of individuation of this or that thing’ (G v.268).

cannot partake of intuition [Anschauung teilhaftig werden] independently of sensibility' (B92), because 'the understanding is not capable of intuiting anything' (B75). As a consequence, 'the understanding is therefore not a faculty of intuition' (B92), but is rather (as we have seen) the faculty of *concepts*. Yet only intuitions (if anything) can give us fully determinate representations to individuals. Hence, though the understanding as a type of 'spontaneity' is a 'faculty for bringing forth representations itself [das Vermögen, Vorstellungen selbst hervorzubringen]' (B75), it simply cannot of itself bring forth representations of the requisite determinacy to represent individuals (existing things).<sup>49</sup>

Yet it is not just 'determinacy' in general that the understanding cannot provide to its representations, but also determinacy of a very specific sort: namely, determinate representations of the *spatial* and *temporal* locations of individuals. Insofar as the understanding does not of itself determine its representations with respect to space and time, it leaves it completely open whether or not, say, these representations can find 'realization' at, say, multiple spatial locations at the same

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<sup>49</sup> Further discussion would need to show how these claims function in Kant's arguments in the Aesthetic that our understanding is unable to be responsible for our representations of space and time themselves, given their *singularity* (B39; B47). Any such discussions will be complicated, of course, by Kant's later admission, in a footnote to §26 of the B-Deduction, that the *unity* of space and time somehow '*presupposes* [voraussetzt] a synthesis' by the understanding, even though this 'unity' does not 'belong to' the '*concept* of the understanding' (B160n; my ital.). For a first attempt at a story about how the understanding could provide a unity through a synthesis *prior to* (or independently of) the deployment of a category (without deploying one of its pure concepts, but just as the capacity to judge 'as such'), see Béatrice Longuenesse's responses to Henry Allison and Sally Sedgwick in her 'Kant's Categories and the Capacity to Judge', *Inquiry* 43.1 (March 2000), 91-110.

time. As Kant argues in the Amphiboly, such a multiple realization would imply that the initial representation was not of *one* individual, but rather a general representation of something common to *many* things, since temporal co-existence at distinct spatial locations is sufficient to rule out two phenomena from being presentations of one and the same individual thing: ‘it is enough that they be intuited in different places at the same time in order for them to be held to be numerically different’ (B319-20).<sup>50</sup> But because Kant’s Amphiboly discussion makes it clear that the principles of individuation of ‘existing things’ – namely, those things which appear to us in ‘thoroughgoingly determinate’ fashion – are such as to make essential reference to features of space and time, and since the understanding of itself can say nothing as to whether any one of the ‘representations’ that it ‘brings forth’ from itself even has *any* relation whatsoever to space and time (think of the unschematized categories, or the Ideas), then it becomes even more evident why the understanding of itself cannot represent anything with sufficient determinacy so as to count as having represented something individual.

We will return to a comparison with Leibniz in both of the next chapters, since, despite Kant’s disagreement with Leibniz over the reach of formal-logical ‘knowledge’ (i.e., that it is restricted from making ontological pronouncements),

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<sup>50</sup> Kant repeats this claim later in the Amphiboly: ‘The difference in place already makes the multiplicity and distinction of objects as appearances without further conditions not only possible in itself, but also necessary’ (B328).

Kant has a high opinion of the logic textbooks of the Leibniz-Wolffian school, and is actually quite close to Leibniz (and the ‘Leibnizians’) – and with them, the rest of the ‘Aristotelian’ tradition – on the question of which conceptual relations are relevant for the construction of the syllogistic, as I will show in Chapter **V**. Perhaps even more significant, however, is Kant’s agreement with Leibniz on the appropriate construal of the relation between the laws of logic and that which they govern – i.e., the understanding; I demonstrate this agreement in Chapter **VI**.

For now, however, we have reached the relevant conclusion: since Kantian logic is the science of the understanding alone (taken in isolation), logic shares the limitations of its subject-matter, which entails that all aspects of an investigation into the nature of representations of determinate, individual things lie outside the jurisdiction of logic. That is to say, because formal logic is concerned solely with the understanding and what can be brought forth from it through the ‘analysis’ of its capacities (through the ‘Zergliederung des Verstandesvermögens selbst’ (B90)), then, insofar as the understanding cannot of itself produce representations of individuals, neither can formal logic deal with, or give us, representations of any determinate individual object. Nor can formal logic give us even the representation of the *form* of such cognition (of individual objects), since this form is something constituted by the conditions of thought’s relation to objects – it is,

in effect, the form of sense-perception – and the latter, as we have seen, is entirely bracketed from the point of view of formal logic.<sup>51</sup>

And to bring these conclusions back more directly to the specific topic of the present chapter, let me emphasize that, though the constitutive features of individual things can only be represented with recourse to extra-logical means (cf., the above discussion of Principle of Throughgoing Determination), at least one of the constitutive features of *concepts* is an *entirely logical* one – namely, determinability. This gives us a concrete feature of the essence of concepts which can be investigated and articulated entirely from *within* the science of logic. Hence, with the notion of determinability, our attempt to uncover Kant's understanding of the formal-logical essence of concepts has been given its first clue.

But can we spell out more directly, both what exactly 'determinability' consists in, and why exactly such a property is to count as merely 'logical'? In keeping with the sense of 'formality' introduced and elaborated in previous chapters, we would expect that determinability, as a logical aspect of concepts, can signify only something which can be explicated without appeal to the fact that concepts themselves must have 'content', where this ('content') is explained by taking the concept to enjoy a possible 'relation to objects' (B79). Of course, this

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<sup>51</sup> Again, see the more recent work on this front by Arthur Prior, Neil Wilson, and Sebastian Rödl, cited in previous footnotes.

should generalize to any and every aspect of concepts which can be investigated in the science of logic. This is to say that, in whatever way concepts are amenable to formal-logical treatment, such treatment will only be possible because they can be considered without reference to their object-relational content -- that is, purely *formally*.

We will see in the next section that our expectation is confirmed. This is due to the connection which Kant establishes between the determinability of a concept and the most well-known of a concept's features, and one which we touched upon above – namely, *generality* or universality [Allgemeinheit] of a concept.

### C. Conceptual Containment and the 'Porphyrian' Hierarchy

§33 To set the stage for the discussion of the generality of concepts, consider the following three remarks from Jäsche's *Logik*:

Since logic abstracts from all real or objective difference of cognition, it can occupy itself as little with the *matter* of judgments as with the *content* [Inhalt] of concepts. (JL §19; 9:101; my ital.)

Since general logic abstracts from all content [Inhalt] of cognition through concepts, or from all matter of thought, it can consider a concept only in respect of its form, i.e., only *subjectively*. (JL §5n1; 9:94)<sup>52</sup>

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<sup>52</sup> This last point again recalls our alignment in Chapter II (§18) of what is 'formal' in thinking with the 'subjective' reality of a representation, in contrast to its (possible) 'objective' reality.

[T]he matter of concepts is the *object* [Gegenstand], their form *universality* [Allgemeinheit]. (JL §2; 9:91)

What is important about these quotes, first of all, is that Kant takes concepts themselves to be things which can be divided according to ‘matter’ (or ‘content’) and ‘form’. Hence, the fact that we can also consider concepts themselves as a kind of ‘matter’ (when we consider them according to their role in judgments) does not need to threaten their status as a possible topic of formal logic in their own right. So far as logic is concerned, it will be enough if it can be shown that the formal features of concepts are such that it allows them to function as the ‘matter’ for the forms of judgment.

Second, we see that the central formal (‘subjective’) feature of a concept, its logical essence, is nothing other than its generality. This gives us further reason for wanting to elucidate the nature of generality appropriate to concepts, over and above a desire to further articulate the nature of conceptual determinability.<sup>53</sup> We have already secured at least a rough sense for what it means for a concept to be ‘general’ or ‘universal’: a concept is a ‘general [allgemeine]’ representation insofar as it purports to represent something which can ‘be common [gemein] to many things’. But what sort of ‘thing’ is at issue here, in Kant’s explanation of a concept’s generality?

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<sup>53</sup> On the connection between generality and determinability, compare what Kant says in the *Pölitx* lectures on metaphysics: ‘*Determinabel* heißt ein jeder Begriff, *insofern er allgemein ist*’ (28:552; my ital.). I will return to this point below (§35)



On the one hand, insofar as it is considered as a species of *cognition* (i.e., as an 'objective' representation), Kant would surely count *objects* among those 'things' which might be distinguished (though only partially) by the 'mark' represented by a given concept. But yet, on the other hand, if the notion of generality is to count as something sufficiently 'formal' so as to be a *logical* notion, then (to repeat) it should be able to be explicated without reference to objects.<sup>54</sup> On our interpretation, we would expect that, in order to successfully provide a formal account of the generality of concepts, Kant will need to give a non-semantic (non-object-referential) explication of the notion of 'being common to many things' – and so will need to find 'things' other than objects that can all share in common the 'mark' represented by a concept. As we will see in what follows, Kant does have such an explication to give. Rather than speaking of objects, Kant's account of the logical generality of concepts will be given in terms of their capacity to represent something that might be common to *other concepts*.

In fact, I will show in the present section that what Kant means by saying that the logical form of a concept is its generality is best understood in terms of what I will call the *Porphyrian* model of conceptuality.<sup>55</sup> As several recent

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<sup>54</sup> Or, rather, it *should be* so explicable, if the foregoing interpretation of the formality of logic is correct. The fact that it *is* explicable in this manner counts in favor of the interpretation.

<sup>55</sup> I name it thus because of the traditional denomination: 'Tree of Porphyry', which derives from remarks made in Porphyry's *Isagoge* – his 'Introduction', either to a Commentary on Aristotle's *Categories* (as Ammonius and Boethius thought), or simply to logic in general, as has been argued recently by Jonathan Barnes, in his 'Introduction' to his recent edition of *Isagoge, Porphyry's Introduction* (Oxford: Clarendon, 2003), xiv-xv. I suppose, however, it might as well be

commentators have suggested, orienting ourselves by way of this model is useful because it was the standard view for the logical articulation of the nature of conceptuality through much of the history of philosophy, from Aristotle up to Kant's time, and especially among his Wolffian predecessors.<sup>56</sup> But what is equally, if not more important for our present discussion is the fact that the Porphyrian model gives us historically pertinent, philosophical resources by which to contrast Kant's understanding of concepts with what is surely the dominant view at present – namely, the *Fregean* model of concepts that we sketched above (§29), as functions between individual objects and truth-values, and with predication itself construed as the 'saturating' of a concept with an object.<sup>57</sup> More specifically, the Porphyrian model gives us resources to portray the generality of

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called the Platonic model, given the method of division in the *Sophist* or the *Statesman*; see Kneales, *The Development of Logic*, 9f.

<sup>56</sup> For this kind of explication of Kant's understanding of concepts, see Jay Rosenberg, *Accessing Kant* (Oxford: Oxford, 2005), and Michael Wolff, *Abhandlung über die Principien der Logik* (Frankfurt: Klostermann, 2004). See also R. Lanier Anderson, 'It adds up after all: Kant's philosophy of arithmetic in light of traditional logic', *Philosophy and Phenomenological Research* 69.3 (Nov. 2004), and 'The Wolffian Paradigm and its Discontents', *Archiv für Geschichte der Philosophie*, 87 (2005), 22-74. See as well Willem de Jong, 'Kant's Analytic Judgments and the Traditional Theory of Concepts', *Journal of the History of Philosophy* 33:4 (Oct. 1995) 613-641, esp. §6. Anderson in particular does a good bit of historical legwork to tie Kant's doctrine of concepts to those of Christian Wolff, which helps to bring out just how much Kant belongs to this tradition. (NB: unless otherwise noted (or obvious from the context), 'Wolff' will mean 'Christian Wolff'.)

<sup>57</sup> Cf., Frege's 1891 'Funktion und Begriff': 'a concept is a function whose value [Wert] is always a truth-value' (15); 1892 'Über Begriff und Gegenstand': 'A concept – as I understand the word – is predicative. On the other hand, a name of an object, a proper name, is quite incapable of being used as a grammatical predicate. [...] The behavior of a concept is essentially [wesentlich] predicative' (193; 201). For references to Frege's use of the metaphor(?) of 'saturation', see below.

concepts *without* making the assumption that they relate to, or are being predicated of, individual objects.

Let me first introduce the basic elements of the picture of conceptuality that the Porphyrian model provides. The simplest way into this model is to consider the universe of concepts as being arranged according to the familiar taxonomic relation of *genus to species* (such as the one which we encountered above from the 'Stufenleiter', which was organized as genus: 'representation in general', species: 'representation with' and 'without consciousness', etc.). This relation can be viewed in two different ways. A genus is said to contain its species *under* itself, while the genus is said to be contained *in* those species it contains under itself. (So, the concept of 'cognition' contains 'intuition' and 'concept' *under* itself, whereas the concept of 'concept' contains 'cognition' *in* itself.) In turn, a species can function as a genus for its sub-species, by containing them under itself, just as a genus can function as species for a super-genus, by being contained under it, and so on. These ascending and descending orders of containment can be pictured as constituting a tree-like structure. Hence, the 'tree' of Porphyry.<sup>58</sup>

Now, it is clear that Kant takes concepts to be arranged (as nodes, so to speak) in precisely such a hierarchy (or inverted tree), one that is organized according to these familiar relations of 'genus' and 'species' (cf., JL §10). The

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<sup>58</sup> For discussion of the roots of such tree-drawings, despite the absence of any actual drawings in Porphyry's original text, see Jonathan Barnes's 'Commentary' to the *Isagoge* in *Porphyry's Introduction*.

location of the concept within this hierarchy is defined in terms of its connections to other concepts in both directions (upwards and downwards, or as ‘higher’ and ‘lower’) (cf., JL §9). Kant also quite clearly explains the nature of these connections in terms of the concepts in the hierarchy ‘*containing* [enthalten]’ one another.<sup>59</sup> The ‘higher’ concepts (genera) to which a given concept  $\alpha$  is connected (upwards) are said to ‘contain’  $\alpha$  ‘*under* [enthalten unter]’ themselves (as a species). Conversely, a given concept  $\alpha$  is said to ‘contain *in* [enthalten in]’ itself these higher concepts (that contain  $\alpha$  under themselves). (And in turn,  $\alpha$  can be contained in other concepts under itself, (typically) be contained under others higher up, and so on.)<sup>60</sup> Kant names the collection of (higher) concepts that are contained *in* a given concept the *Inhalt* of a concept, and those (lower) concepts that are contained *under* a given concept its *Umfang* (also, ‘Sphäre’) (cf., JL §§7-8),

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<sup>59</sup> Compare the early *Reflexion* 3890 (1766-68): ‘A given general concept contains [enthält] the particulars *under* itself and is *latior*; the particulars are *conceptus angustiores*. It is called *superior* with respect to the particulars, who are *inferiors*. It is contained *in* the lower ones, and contains less in itself’ (17:329).

<sup>60</sup> I say ‘typically’, since the possibility of *highest* concepts implies that the upwards relations of the tree do come to an end. The problem of the nature of the highest concepts is taken up below.

The following passage from the *Wiener Logik* gives a nice and concise expression to Kant’s views: ‘A concept is called a higher concept insofar as it contains others under itself, and *every* concept is consequently a higher representation of others, because it *always* contains many under itself. A lower concept is a concept that is contained under others. E.g., man is an animal. The concept of animal belongs to all men and to still more things, too[;] consequently man is a lower concept than animal’ (24:910; my ital.). (Note, again, Kant’s insistence upon ‘generality’ as a universal and necessary feature of concepts.)

and it has become common practice to translate these two terms as 'content' and 'extension', respectively.<sup>61</sup>

We must be careful here, however, not to be misled by Kant's use of 'Inhalt', and infer that, due to the formality of logic – i.e., due to the fact that it must 'abstract from all content [Inhalt] of cognition' (B79) – logic must *ignore* the fact that concepts can contain higher concepts 'in' themselves. For this containment-'in' sense of conceptual 'Inhalt' seems to be of a quite different sort from the sense given by Kant in those passages which articulate the formality of logic. This latter sense of content, that we are told to 'abstract from' when we are engaged in formal-logical reflection, is defined as 'any relation' of a concept (or 'cognition', generally speaking) to *objects* (B79). By contrast, the specification of the containment-'in' content of a concept takes place by indicating those higher *concepts* to which the concept is related, i.e., by their being contained (or, as Kant will also say, their being *thought*) 'in' the given concept. To keep the two sorts or

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<sup>61</sup> This is how J. Michael Young renders the terms in the Cambridge edition. In their earlier 1972 Dover edition, Robert Hartman and Wolfgang Schwartz render 'Inhalt' as 'intension'. To be more perspicuous, we might use angle-brackets to note that we are discussing the containment-'content' of a concept – i.e.,  $\langle \alpha \rangle$  would indicate the set of higher concepts ( $\beta, \gamma, \delta \dots$ ) that  $\alpha$  contains 'in' itself. By contrast, we might use curly-brackets to note that we are discussing the containment-'extension' of a concept – i.e.,  $\{ \alpha \}$  would refer to the set of lower concepts ( $\rho, \sigma, \tau \dots$ ) that  $\alpha$  contains 'under' itself. Hence, the containment-content of the concept 'perception' –  $\langle \text{perception} \rangle$  -- is something like: (representation, being accompanied with consciousness), while its extension –  $\{ \text{perception} \}$  – is (cognition, sensation...). As we will see, Kant takes containment relations to be *transitive*, so since, e.g., both  $\{ \text{cognition} \}$  and  $\{ \text{sensation} \}$  will belong to  $\{ \text{perception} \}$ , though they will both be at a lower level of the hierarchy; a similar expansion is possible for its containment-content. The importance of relative location on the hierarchy, and the indefinite extensibility of a conceptual extension (i.e., the '...' in the *Umfang* of 'perception'), will become evident in what follows.

senses of ‘content’ distinct, I suggest we introduce the following terminological convention: we can translate ‘Inhalt’, when it is used specifically to refer to the containment-‘in’ ‘content’ of a concept (i.e., the *concepts* which are contained ‘in’ it) as the *intension* of a concept. And with this terminological correlation, I intend to begin an explication what I meant in the previous sections by calling Kant’s logic ‘intensional’.

Yet there is an equal – or even more serious – threat of confusion which must be headed off concerning the sense of *extension* that is at issue in Kant’s analysis of concepts. As I explained it above, ‘extension [Umfang]’ is Kant’s label for the group of *concepts* which are contained ‘under’ a given concept. But if this is correct, then we must be sure to keep in mind that, like ‘Inhalt’, Kant’s understanding of the ‘Umfang’ of a concept is *also not defined* – at least in the first instance – *in terms of the objects* to which it can applied or related.

In fact, there is something of distinct philosophical importance involved here, in what might otherwise seem to be a merely terminological point. That is, in Kant’s use of ‘Umfang’, we find another mark of the fundamental divergence between Kant’s position and the familiar post-Fregean analysis of the logical essence of a concept. For if this is correct, then we will have to recognize that, in his use of the term ‘extension’, Kant clearly differs from more familiar contemporary understandings of this term, insofar as extensions of concepts are nowadays usually thought to consist precisely in the objects to which the concept

applies or is 'true of' (i.e., of which the concept can be predicated in order to form a true judgment).<sup>62</sup>

For an exemplary, if early, discussion of the contemporary point of view, consider the following straightforward statement of the meanings of 'intension' and 'extension' in §16 of J.N. Keynes' classic 1906 work, *Studies and Exercises in Formal Logic*.<sup>63</sup> Keynes discusses concepts under the heading of 'general names', and writes that every such name 'is the name of a real or imaginary class of objects which possess in common certain attributes' (22). Accordingly, there are two aspects according to which a general name can be considered: '(i) in relation to the *objects* which are called by it; or (ii) in relation to the *qualities* which belong to those objects' (22; my ital.). Keynes suggests that we understand (i) as referring us to the *extension* of the general name, while (ii) directs us to the name's *intension*, and

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<sup>62</sup> Compare along with the quote from Keynes below, Quine's remark in *Methods of Logic* (4<sup>th</sup> edition, Cambridge: Harvard, 1982): 'When we are minded to speak of classes, the class of all the objects of which a [general] term is true may, in keeping with a long tradition, be called the *extension* of the term', though Quine adds that 'it is ordinarily sufficient to know that a given term is *true of* this or that individual and false of the other, without positing any single collective entity called the term's extension', and notes further that some 'general terms' of set theory 'cannot have extensions', so construed (94). Unless otherwise noted, my own use of 'set', 'class', or 'collection' in what follows is meant to be non-technical.

<sup>63</sup> 4<sup>th</sup> edition (London: MacMillan, 1906). Each previous edition substantially revised its predecessor, appearing: 1<sup>st</sup>, 1884; 2<sup>nd</sup>, 1887; 3<sup>rd</sup>, 1894. For some discussion of the revisions of the sections discussed here, see Arthur Prior's (posthumously published) *The Doctrine of Propositions and Terms*, P.T. Geach and A. Kenny, eds. (Amherst: Massachusetts, 1976), 79f. Keynes goes on to note various further distinctions which he suggests logicians haven't always but should recognize among these two aspects of general names, so broadly construed, but in the case of those terms associated with 'extension', these all refer essentially to (existent, possible, encountered, etc.) objects.

with this, he states what has now become the common understanding of these terms.<sup>64</sup>

Now, what I want to argue for at present is that, just as (a) the containment-‘Inhalt’ of a Kantian concept need not be associated with qualities or properties of (or relations to) *objects*, but rather with whatever ‘nodes’ one finds when one moves from the concept ‘upward’ through the higher *concepts* which it contains ‘in’ itself – leaving to one side whether or not the given node (or the tree which contains it) is ever itself referred or applied to objects – so too (b) the containment-‘Umfang’, for Kant, is of a concept something the essence of which can be articulated *solely* in terms of whatever lower *concepts* are contained ‘under’ it.

Moreover, it is only by adequately appreciating this last point – and with it, the distance between Kant’s intended sense of ‘Umfang’ and now-standard uses of these terms – that we can achieve a correct interpretation of Kant’s understanding of formal logic in general. In particular, our understanding of ‘Umfang’ will have significant ramifications for how we interpret Kant’s doctrine of predication and quantification, especially his understanding of the ‘particular’

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<sup>64</sup> In case some are put off by Keynes’s description of a concept being that which ‘names’ objects that are ‘called by it’, we can note that Keynes then connects these relations between names, objects, and properties to a standard conception of the role of the name in predication: ‘the *extension* of a name then consists of objects of which the name can be predicated; its *intension* consists of properties which can be predicated of it’ (ibid., 22). The idea of ‘predicating’ properties *of* properties is akin to what Kant has in mind by relating concepts to concepts.



function of judgment ("Some  $\alpha$  is  $\beta$ "), and his treatment of the question of the so-called 'existential commitment' of the quantifiers in general.

§34 Unfortunately, as we will see in the present section, important nuances of Kant's views on this aspect of concepts appear to have escaped the attention of many of his recent commentators. It seems that much of the confusion concerning Kant's understanding of 'Umfang' stems from hasty, and/or historically insensitive, interpretations of the following sections from Jasche's *Logik*, which contains the most well-known explanation of a concept's 'Umfang':

Every concept, *as partial concept*, is contained *in* the representation of things [Dinge]; *as ground of cognition, i.e., as mark*, these things are contained *under* it. In the former respect every concept has an *intension* [Inhalt] in the other an *extension* [Umfang]. The intension and extension of a concept stand in inverse relation to one another. The more a concept contains *under* itself, namely, the less it contains *in* itself, and conversely. (JL §7; 9:95)

The more the things [Dinge] that stand under a concept and can be thought through it, the greater is its extension or *sphere* [Sphäre]. (JL §8; 9:96)<sup>65</sup>

In a broad sense, this repeats what we have said above: by being contained 'in' the representation of things, concepts can constitute the intension of the

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<sup>65</sup> Versions of these definitions appear in other records of Kant's logic lectures; cf., *Wiener Logik*: 'we can consider the *extension* [Umfang] and the *intension* [Inhalt] of a concept. The extension of a concept is a *sphaera*, and it is concerned with the multitude of things [Menge der Dinge] that are contained under the concept. We consider the concept as to intension when we look to the multitude of the representations [Menge der Vorstellungen] that are contained in the concept itself (24:911).

representation of these things; conversely, things can be contained ‘under’ a concept, and this gives the concept an extension. Yet, as we noted above, there are important occasions on which Kant strictly distinguishes individual, determinate ‘things [Dinge]’ from concepts. Perhaps because of this, one might be led to see, in the use of the word ‘thing’ here, an implication that Kant has in mind individual objects, *rather* than concepts.

That this would be too quick an inference emerges if we consider those passages found in the *Wiener Logik*, for instance, where Kant moves effortlessly between claiming that the ‘Umfang’ of a concept is concerned with a ‘multitude of things [Menge der Dinge] that are contained under a concept’ (24:911), and claiming that ‘every concept contains more *possible concepts* under itself [unter sich]’ (24:910). Here we have initial reasons for thinking that a Kantian ‘Umfang’ will not consist solely of ‘objects’, but also will contain concepts.

Now, a non-objectual conception of an ‘Umfang’ might be invisible to many present-day readers of Jäsche’s text, being predisposed as they are, given the now-standard use of the term, to take the ‘things’ which belong in the extension of a concept to be individual objects. Perhaps for this reason, Robert Hanna, for instance, in his *Kant and the Foundations of Analytic Philosophy*,<sup>66</sup> takes the Jäsche passage to provide support for the claim that a concept’s extension should be seen to include ‘the total collection of objects actually subsumed or notionally

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<sup>66</sup> Oxford: Clarendon, 2001.

subsumable under a concept' (51-2). In her *Kant and the Capacity to Judge*,<sup>67</sup> Beatrice Longuenesse likewise includes objects among the 'things' in a concept's extension. Longuenesse construes 'the standpoint of *extension*' in Kant as what is occupied when one undertakes 'the consideration of concepts inasmuch as objects are contained *under* them' (132), and she is quite clear that the '*extension* of concepts' consists of 'the objects thought under the concepts' (87).<sup>68</sup>

Now, to be fair, Hanna's view (op.cit.) is actually more nuanced, in that he does want to acknowledge that a Kantian 'Umfang' incorporates lower *concepts* as well, such that concepts should also be counted among the possible 'things' in a concept's extension – or, in Hanna's (somewhat unfortunate) translation of 'Umfang', should be counted in a concept's 'comprehension'.<sup>69</sup> Thus, along with what he calls an 'objectual' extension (130), which consists of 'the actual or

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<sup>67</sup> Princeton: Princeton, 1998; C.T. Wolfe, trans.

<sup>68</sup> Compare also Jay Rosenberg's *Assessing Kant*: 'Under 'Quantity', we consider *how many* of the objects falling under its concept the logical subject of a judgment might relate to.... Under 'Quality', we consider *how* a concept might be logically predicated of the objects picked out by a logical subject...' and so on (100; my underlining).

<sup>69</sup> This use of 'comprehension' for 'Umfang' is unfortunate, given the classical deployment of the French equivalent ('compréhension') by Arnauld and Nicole (in the 'Port-Royal' *Logique*) to stand for what must be correlated with Kant's 'Inhalt'. Bas van Fraassen ('Meaning Relations among Predicates', *Nous*, May, 1967) notes a similar 'unfortunate usage' of the term 'comprehension' – 'given the Port-Royal tradition' (163) – by C.I. Lewis (in Lewis's 'Modes of Meaning', *Philosophy and Phenomenological Research*, Dec, 1943). In fact, Lewis's use corresponds almost precisely to part of Hanna's: 'The *comprehension* of a term is, thus, the classification of all consistently thinkable things to which the term would correctly apply – where anything is consistently thinkable if the assertion of its existence would not, explicitly or implicitly, involve a contradiction' ('Modes of Meaning', 238). Cf., Hanna: 'For Kant, the comprehension of a concept is not restricted to the finite set of actual things subsumed under it by means of intuition, since it also includes the infinite set of possible things specified by the intension' (op.cit., 52n69). (Hanna himself is aware of this essay (cf., op.cit., 137n50), but does not explicitly acknowledge this parallel.)

possible objects instantiating a concept' (136), Hanna argues that every concept has a 'notional' extension, which is made up of 'every concept more specific than' the concept in question (130).<sup>70</sup>

In recognizing that an 'Umfang' should be understood to include lower concepts, Hanna is joined by Henry Allison, in his *Kant's Transcendental Idealism*.<sup>71</sup> Allison explicitly acknowledges that Kant intends to include concepts themselves among the relevant 'things' in an extension in the following passage:

A concept has a complex logical form, involving both an extension and an intension. Viewed extensionally, every concept has various other concepts contained under it. [...] Viewed intensionally, every concept contains other concepts within it as its component parts. (92)

Allison, however, is less clear than Hanna about his views on the possibility of other 'things' besides concepts belonging to a concept's Umfang. (To my knowledge, Allison never *restricts* the members in Kantian extensions to concepts.)

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<sup>70</sup> Hanna's position echoes an earlier distinction made by Peter Schulthess, in his *Relation und Funktion* (Berlin: de Gruyter, 1981): "Two modes of extension can be distinguished from one another: the extensional and the intensional. The *extensional extension* is the set of all the things that fall under a given concept, i.e., that are contained under the concept. The *intensional extension* is the set of all the concepts that are contained under a concept" (16). Unlike Hanna, Schulthess thinks there are difficulties that prevent Kant from countenancing *possible* objects in an extensional extension.

Rainer Stuhlmann-Laeisz also puts forward something like Hanna's view in his *Kants Logik* (Berlin: de Gruyter, 1976), in that he argues that both concepts and *intuitions* can be seen to belong to a concept's 'Umfang' (87), though, as I have argued above, it is not obvious that intuitions are the sorts of 'things' which can be brought 'under' a concept in predication. Kant does use the language of bringing intuitions or their manifolds '*under a concept*' (cf., B75; A245; B362), though this language seems, instead, to point to the synthetic *production* of an object via a concept, in the sense in which an object is 'that in the concept of which a manifold of a given intuition is united' (B137).

<sup>71</sup> 1st ed., New Haven: Yale, 1982.

By contrast, in his *Kant and the Exact Sciences*,<sup>72</sup> Michael Friedman does make such a restriction, arguing for the stronger claim that concepts are the *only* ‘things’ in a Kantian extension: ‘Kant’s notion involves a relation between a concept and other concepts – its species, subspecies, and so on – *rather than* a relation between a concept and the objects falling under it’ (68; my ital.). A version of this stronger claim is also put forward by Willem de Jong,<sup>73</sup> as well as in recent essays by R.L. Anderson,<sup>74</sup> in which Anderson insists, and does so precisely on the basis of the above-cited passages from Jäsche’s text, that ‘for [Kant], extensions in the logical sense are *always* sets of concepts, not objects (see JL, 9:95-100)’ (‘It adds up’, 508n17; my ital.).<sup>75</sup>

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<sup>72</sup> Cambridge: Harvard, 1992.

<sup>73</sup> ‘Kant’s Analytic Judgments and the Traditional Theory of Concepts’, *Journal of the History of Philosophy*, 33:4 (Oct. 1995), 613-641. In the main text of this essay, de Jong is somewhat more hesitant: ‘Although in introducing the notion of extension Kant sometimes refers to representations generally (i.e., concepts and intuitions), he never gives an example of an individual as included in the extension of a concept. It seems that Kant’s formulations do not allow one to decide this question definitively in the affirmative or negative’ (626). In a note criticizing Stuhlmann-Laeisz, however, de Jong is more direct: ‘Stuhlmann-Laeisz states that Kant’s notion of extension also includes individuals but – to my mind – on somewhat dubious grounds (cf. *Kants Logik*, 87-89). The contrast between intuition and concept (cf. the distinction between sensible and intellectual distinctness) which Kant always bears in mind seems to point rather in the opposite direction’ (626n32).

<sup>74</sup> ‘It adds up’, ‘The Wolffian paradigm’, both cited above.

<sup>75</sup> For a modern reader, then, this feature of Kant’s *Begriffslehre* points to the ‘intensional’ character of Kantian ‘extensions’. Cf., Anderson (op.cit.): ‘for Kant, even the *extension* of a concept (in the logical sense) is understood to be the group of *intensional concepts* contained under it, rather than the individual objects it applies to’ (512).

In this essay, Anderson goes on to suggest that Kant has a non-logical use of extension, which would include ‘individual objects or intuitions’ (512n28), and credits Longuenesse (in op.cit.) for bringing this point to the surface – i.e., that ‘Kant operates with two distinct senses (or kinds) of concepts *and of extensions*’ (my ital.). I confess that I can find no evidence for this latter claim (about extensions) in Longuenesse’s text (Anderson cites Longuenesse, op.cit., 47,

It seems, then, that we have three conflicting interpretive proposals among recent interpreters: the logical Umfang of a concept consists in objects alone, or objects and ‘lower’ concepts, or (finally) lower concepts alone. As I have already intimated, I think that, at least in the context of formal logic, the evidence is fairly straightforwardly on the side of the stronger claim put forward by Friedman, de Jong, and Anderson – namely, that the ‘Umfang’ of a concept, so far as logic is concerned, should be taken to consist *only* in lower *concepts*. Let me now begin to provide arguments in support for this conclusion.

A first, relatively short, argument to the conclusion that a Kantian ‘Umfang’ consists in concepts and *not objects* can be given on the basis of one of the logical laws stated in Jäsche’s *Logik*, concerning the relationship between ‘Inhalt’ and ‘Umfang’: ‘The Inhalt and Umfang of a concept stand in *inverse* [umgekehrte] relation to one another. The more a concept contains under itself, namely, the less it contains in itself, *and conversely* [umgekehrt]’ (JL §7; 9:95; my ital.).<sup>76</sup> Though this principle can be found at work (at least implicitly) in works written prior to Kant’s time, through its inclusion in Jäsche’s text, it has become

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50). Even so, Anderson’s suggestion that there might be a ‘broader’ yet ‘non-logical’ sense of ‘extension’ of a concept can be put to one side for the time being, since even in his view, this is *not* the sense of ‘extension’ under discussion in the Jäsche text, or in the science of logic itself. (Anderson repeats these points (about non-logical extensions and about Longuenesse’s alleged influence) in the companion essay, ‘The Wolffian Paradigm’, 27n10.)

<sup>76</sup> Cf., *Wiener Logik*: ‘The greater the extension of a concept, the smaller is its content, i.e., the less it contains in itself’ (24:911); *Dobna-Wundlacken Logik*: ‘The greater this [i.e., the concept’s sphere] is, the smaller is its content’ (24:755).

associated with Kant's doctrines enough so that C.S. Peirce will call this 'Kant's Law' in an 1867 essay.<sup>77</sup>

In any case, as every good Quinean will point out, we can see at once how the law cannot possibly be thought to hold if we are supposed to take an 'Umfang' to consist in the *objects* to which the concept is applicable, since it might be the case that concepts of differing intensional-'quantities' could still apply to the same 'quantity' of objects.<sup>78</sup> Consider concepts like 'president of the United States' and 'male president of the United States': these have *different* intensional-quantities, insofar as the idea of 'president' does not contain within itself the idea of 'male', and yet both concepts have the *same* quantity of objects (indeed, the

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<sup>77</sup> Cf., Peirce, 'Upon Logical Comprehension and Extension' (in *Proceedings of the American Academy of Arts and Sciences* 7 (1867), 416-432). Commenting on Peirce's label of the law, Peter Schulthess (*Relation und Funktion*) writes 'Kant was surely one of the first to provide this law with a kind of popularity... The law itself is, however, old, and already known to Porphyry' (17n9). We can see it as implicitly at work in Leibniz's writings; compare, for example, *Nouveaux Essais* IV.17.8: 'when I say *every man is an animal* I mean that all the men are included amongst all the animals; but at the same time I mean that the idea of animal is included in the idea of man. 'Animal' comprises more individuals than 'man' does, but 'man' comprises more ideas or more attributes [formalités]: one has more instances [exemples], the other more degrees of reality; one has the greater *extension*, the other the greater *intension*' (G iv.469; my ital.). It is from this remark that Leibniz concludes: 'So it can truthfully be said that the whole theory of syllogism could be demonstrated from the theory *de continente et contento*, of container and contained'. Kant's own account of the valid syllogistic forms likewise supervenes upon the hierarchy constructed from the 'containment'-theory, as we shall see in the next chapter (V).

<sup>78</sup> For a version of these sorts of worries about Leibniz's version of the intension-extension reciprocity thesis (cited in a previous note), see Chris Swoyer's 'Leibniz on Intension and Extension', in *Nous* 29.1 (1995): 96-114.

very same objects) falling under them.<sup>79</sup> Inverse proportionality would thus be compromised.

By contrast, this example does not pose the same kind of problem for an interpretation which restricts the extension to lower concepts, since it is evident that, by *adding* additional content (another ‘mark’), it is at least *prima facie* plausible to think that ‘male U.S. president’ *cannot* contain ‘female U.S. president’ *under* itself (or any other concept containing content (i.e., possessing an intension) that is incompatible with ‘male’). Yet the concept of ‘U.S. president’ *can* contain such a concept under itself (along with many others incompatible with ‘male’). Both ‘male...’ and ‘female...’ determinations of ‘U.S. president’ impose what we might call intensional restrictions what further concepts can be contained under their own respective ‘branches’ of the relevant conceptual hierarchy. It is for this reason that they will necessarily have ‘smaller’ *Umfänge*.

As a consequence of the inverse proportionality thesis, if two concepts have the same containment-content or intension, then they must have the same ‘Umfang’, and vice versa. That is, they become what Kant calls ‘reciprocal’ or ‘convertible’ concepts [Wechselbegriffe; conceptus reciproci] (cf., JL §12; *Wiener*

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<sup>79</sup> Compare Keynes’s examples (op.cit.), §23: ‘if *c* is dropped from the connotation, or *d* added to it, the denotation of the name will remain unaffected. We have concrete examples of this, if we suppose *equiangularity* added to the connotation of *equilateral triangle*, or *cloven-hoofed* to that of *ruminant*, or *having jaws opening up and down* to that of *vertebrate*, or if we suppose *invalid* dropped from the connotation of *invalid syllogism with undistributed middle* (37). I am indebted to Michael Kremer for discussion of the relevance of this argument.



*Logik* 24:912; *Dobna-Wundlacken Logik* 24:755).<sup>80</sup> In this sense, the *Reziprozitätsgesetz* provides a type of principle of 'identity' for concepts.<sup>81</sup>

But here again we can see how, if this thesis is coupled with the 'objectual' interpretation of a conceptual extension, it would necessarily follow that, if two concepts are such that they (whether accidentally or even essentially) *fail* to apply to any object, then they would necessarily have the *same* intension as well. In this regard, we might wonder in particular about 'Meinongian' examples, such as 'concepts' of what is mathematically impossible. I suspect that Kant would want to deny this sort of implication; 'round square', for example, does *not* have the same intension as 'round triangle', even though for neither concept can we furnish a corresponding object among the sum-total of possibilities to be found in

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<sup>80</sup> In this last text, the example given of 'Wechselbegriffe' is the 'necessary' and the 'unalterable'. Other examples of convertible concepts include, from the *Grundlegung*: 'denn *Freiheit* und eigene *Gesetzgebung des Willens* sind beides *Autonomie*, mithin Wechselbegriffe' (GMS 4:450; my ital.), and from the *Prolegomena* (§19): 'Es sind daher *objective Gültigkeit* und *nothwendige Allgemeingültigkeit (für jedermann)* Wechselbegriffe' (4:298; my ital.). It might be hard to see how in each case, both members in the pair of concepts have the same *intension*, without introducing further qualifications among senses of 'intension', such as those suggested by Keynes, such as 'conventional', 'subjective', and 'objective' intensions (see Keynes, *Studies and Exercises*, §17). For some discussion of reciprocal concepts as equivalent, see Anderson, 'It adds up after all', 507f. This point about convertible concepts is obviously relevant for an understanding of several classes of *analytic* judgments; we will turn to this in the next Chapter.

<sup>81</sup> This point is argued by Anderson, *opera cit.*. Thus when Jay Rosenberg, in his *Assessing Kant*, writes that 'general concepts do not individuate, i.e., that it is possible for *distinct* individuals to fall under all and only the *same* general concepts' (85), we should agree with him concerning the letter of his statement, though the context of the passage makes it clear that Rosenberg seems to think that *only* individuals fall under a concept. Yet the *Reziprozitätsgesetz* *does*, in a sense, 'individuate' general concepts, and with them, their *Umfänge*. (So it is not possible for two concepts to have all and only the same lower concepts under them and yet 'be' distinct.)

existence (in nature) (cf., Bxxxvi-n).<sup>82</sup> That is, even though Kant, for example, tells us that contradictory concepts are ‘empty [leer]’ insofar as they are without an object (B87, B122, B194, etc.), we might still suspect that he would allow that these are not *completely* empty, insofar as they can be further ‘determined’ so as to produce intensionally distinct concepts (e.g., ‘red round square’, ‘large red round square’, etc.).<sup>83</sup>

Here again we would then run up against another reason for carefully distinguishing between Kant’s two construals of ‘content’ – that is, between ‘relation to an object’ and ‘containment under higher concepts’. At the very least, we have run up against an argument for a purely *conceptual* interpretation of ‘Umfang’: because Kant is committed to the inverse proportionality of ‘Inhalt’ and ‘Umfang’, it makes little sense to read into Kant’s use of ‘Umfang’ our present-day understanding of ‘extension’.

**§35** In order to get ourselves in a better position to grasp the force of this conceptual (non-objectual, or what some have called (albeit somewhat

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<sup>82</sup> For Leibniz’s opinion, compare Mates (op.cit.): ‘One other point of controversy concerns whether or not Leibniz meant to allow what we might call ‘inconsistent concepts’, that is, such as contain as components some concept and its negation – for example, what might be represented by the phrase ‘black nonblack dog’. There are texts supporting both possibilities’ (67). Mates refers us to, on the one hand, Couturat’s *Opuscules* 513, 393, and G vii.293f, and on the other hand, to G iv.424, 450.

<sup>83</sup> By the language of ‘determination’, I mean here to foreshadow the tight connection we will establish below, between relations along the structure of the Porphyrian hierarchy and the notion of ‘determinability’ we discussed above.

confusingly) ‘intensional’) interpretation of a Kantian ‘Umfang’, it will prove worthwhile to look briefly at the pre-Kantian ‘early modern’ history of the use of this term and its conceptual predecessors. For such historical reflection will reveal that opinions about what is ‘contained under concepts’ are much less stable across the development of early modern logic than they are either in Kant’s logic (no objects, only concepts) or in the texts of present-day writers (no concepts, only objects).<sup>84</sup>

Even so, as Lanier Anderson notes, the generally ‘intensional’ character of Kant’s account of relations among concepts was ‘not unusual in early modern logic’ (‘It adds up after all’, 508n17).<sup>85</sup> In fact, the ‘modern’ way of drawing the relevant distinction – between extension and intension (what we have called above, containment-‘in’ content) – is most frequently said to find its proximate roots just a century before Kant, in the Port Royal *Logique ou l’art de penser*,<sup>86</sup> the famous logic textbook written by Antoine Arnauld and Pierre Nicole (1662-83),

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<sup>84</sup> In his ‘Upon Logical Comprehension and Extension’ (cited above), C.S. Peirce traces a similar instability in the 19<sup>th</sup> century understanding of these contrasting terms.

<sup>85</sup> This point is also acknowledged by Stuhlmann-Laietz (op.cit.), though on his interpretation Kant breaks with such a tradition insofar as he allegedly includes intuitions in a conceptual ‘Umfang’: ‘Mit dieser Auffassung vom Umfang eines Begriffes weicht Kant von der traditionellen Lehre vieler Logiker im 18. Jahrhundert ab. Diese bestimmen nämlich häufig – sofern sie das Thema der Begriffsextensionen überhaupt behandeln – als zum Umfang eines Begriffes gehörig genau diejenigen *Begriffe*, die ihm untergeordnet sind’ (88).

<sup>86</sup> Edited and translated by Jill Vance Buroker (Cambridge: Cambridge, 1996). Citations will be to the English pagination, though the translations will be my own.

although the Port-Royalists' treatment of their distinction between 'étendue' and 'compréhension' surely echoes earlier distinctions as well.<sup>87</sup>

In the first chapter of the first part of the *Logique* ('sur la première action de l'esprit, qui s'appelle *concevoir*') they write that, '[a]lthough everything that exists is singular [soient singulières], nevertheless, by means of abstractions we have just explained, we all have several sorts of ideas', and among these ideas are those that 'are capable of representing several things [plusieurs] equally' (57). Ignoring those which do so by 'equivocation', ideas which can 'represent several things' are called 'universal [universelles], common [communes], or general [générales]' (58). It is

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<sup>87</sup> This is Peirce's estimation ('Upon...'): 'it is correctly said that the doctrine taught by the Port Royalists is substantially contained in the work of a Greek commentator. [...] It would seem, indeed, that the tree of Porphyry involves the whole doctrine of extension and comprehension except the names' (§1, entitled 'That these Conceptions are not so Modern as has been represented'). A full history would have to look behind Port-Royal to the medieval distinction between 'significatio' and 'suppositio'. Roughly, the *suppositio* of a term is what the term 'stands for' (pro quo supponit), while the *significatio* of the term is what the term 'means'; the latter is (somehow) fixed by usage or custom, while the former varies with context. See Arthur Prior, *Formal Logic*, 2<sup>nd</sup> edition (Oxford: Oxford, 1962), 160f, and in his posthumously published *The Doctrine of Propositions and Terms*, P.T. Geach and A. Kenny, eds. (Amherst: Massachusetts, 1976), 71f. The Kneales (in *The Development of Logic* (Oxford: Oxford, 1962)) acknowledge that the Port Royal distinction 'may perhaps be intended to replace the medieval distinction of *significatio* and *suppositio*', but point out that 'it does not exactly correspond, since the comprehension of and the extension of a term are not properties of it, but rather sets of entities to which it is related in certain ways' (318).

Even so, and to anticipate a bit, the Kneales agree that, like 'the medieval assumption that both sorts of terms have *suppositio*', the Port Royal treatment of singular propositions as universal propositions in syllogism rests on 'an unhappy dodge which muddles the account of extension still further by blurring the distinction between singular and general terms' (319). In the similar position advanced by Kant, however, there is no 'dodge' at all at work, but rather an attempt to meet various philosophical demands of his *Erkenntnistheorie*. The connection between Kant's understanding of 'extensions' and the absence of 'singular terms' from his logic will be discussed below.

with respect to these 'universal ideas' that the famous distinction between 'comprehension' and 'extension' is introduced in the 6<sup>th</sup> chapter:

Now in these universal ideas [universelles] there are two things which it is most important to distinguish clearly, the *comprehension* [compréhension] and the *extension* [étendue]. I call the *comprehension* of an idea the attributes [attributs] that it contains in itself [enferme en soi], and that cannot be removed without destroying the idea. [...] I call the *extension* of an idea the subjects [sujets] to which this idea applies [convient]. These are also called the inferiors of a general term, which is superior with respect to them. For example, the idea of a triangle in general extends to [s'étend à] all the different species [espèces] of triangles. (59)

'Comprehension', so defined, is a clear ancestor of both Keynes' 'intension' and Kant's containment-'Inhalt': both are meant to pick out a set of properties or attributes associated with (contained in) the general term. Moreover, like Kant's 'Umfang', the Port Royal definition of 'extension' is clearly different from the one offered by Keynes, in that among the 'subjects' included in the extension are lower 'species', or 'inferior' concepts, contained under the general term. That is, for Arnauld and Nicole, the concept 'triangle' would include in its extension the species (concept) of 'right triangle'.

However, the context of the discussion clearly suggests that existent singular things will also be among the 'several things' which a general idea is said to represent. In addition, Arnauld and Nicole recognize a use of the term 'species' in which it 'applies only to ideas that cannot be genera', such as 'when an idea has under it *only* individuals and particulars' (my ital.) – this is what is called a

‘lowest species [espèce dernière], *species infima*’ (41).<sup>88</sup> In these cases, the extension will *only* include individual objects.

I will say more about the notion of a ‘lowest species’ below, but for now we can simply note that Arnauld and Nicole are not alone in taking ‘extension’ to apply indifferently to either individual objects or inferior species.<sup>89</sup> We find a second example of this broader notion of ‘extension’ in a text written shortly after the Port Royal *Logique* – namely, the 1726 *Logick, or the Right Use of Reason*, by the Locke-influenced English philosopher Isaac Watts. In his *Logick*, Watts explains the distinction in the aspects of a concept in essentially the same manner as the Port Royal authors: ‘[t]he *comprehension* of an idea regards all the essential modes and properties of it’, while ‘[t]he *extension* of a universal idea regards all the particular *kinds and single beings* [my ital.] that are contained under it’ (37). Here too Watts allows that the extension of, say, ‘bowl’ (to use his example) includes ‘a

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<sup>88</sup> The example given of an infima species is the idea of ‘the circle’, which ‘has under it [sous soi] only individual circles, which are all of the same species’ (41). Kant’s account of the individuality of mathematical ‘objects’ is quite complex. It seems that Kant takes these ‘objects’ to be more adequately described as *forms* of objects, yet he also claims that mathematical judgments take the singular form of judgment, and even allow us to consider ‘the universal’ in ‘the individual’ (cf., B742). (This will be touched upon below.)

<sup>89</sup> Which renders less persuasive the Kneale’s contention that ‘almost certainly the authors [of the Port Royal logic], if pressed on this point, would have said that they meant by ‘extension’ the set of individuals to which a general term applies’ (319). It may well be that ‘the confusion of their exposition seems to be due to their use of the word ‘inferiors’, which is itself metaphorical and unclear’ (319), but the perpetual replication of this ‘confusion’ (presumably by those who were in fact ‘pressed on this point’) makes it strange to ascribe implicit primacy to either aspect of their definition.

wooden bowl, a *brass* bowl, a *white* and a *black* bowl, a *heavy* bowl, etc., and all kinds of bowls, together with all the particular individual bowls in the world' (37).

Leibniz provides us with a third, and especially instructive, example of a pre-Kantian treatment of the relevant distinction. In a 1690's fragment commonly referred to by the title 'Some logical difficulties [Difficultates quaedam logicae]', Leibniz takes up the question of the nature of the 'existence'-assumptions built into the Aristotelian logic – in particular, in what sense is the 'existence' of  $\alpha$  and  $\beta$  presupposed in the judgment 'Some  $\alpha$  is  $\beta$ '. Here Leibniz argues for a distinctly 'intensional' interpretation of the 'being' of  $\alpha$  and  $\beta$  that is relevant to logical assessment.<sup>90</sup> Leibniz rejects a commonly held commitment of the traditional logic in which 'Every [omnis] laugher is a man' could be 'true even if no [nullus] man laughs', whereas 'Some [quidam] man is a laugher' is not true 'unless some [aliquis] man *actually* [actu] laughs' (G vii.211; my ital.).<sup>91</sup> He takes

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<sup>90</sup> Noted by (among others) G.H.R. Parkinson, 'Philosophy and Logic' (*Cambridge Companion to Leibniz*): 'Leibniz is here contrasting his own 'intensional' approach to the proposition with the 'extensional' approach. His reason for preferring the former is that concepts 'do not depend on the existence of individuals.' So if, for example, gold were a purely mythical metal, it would still be true to say that all gold is metal (C 53: PLP 20)' (201). ('PLP' refers to Parkinson's edition of Leibniz's *Logical Papers* (Oxford: Clarendon, 1966).) See also Parkinson, *Logic and Reality in Leibniz's Metaphysics* (Oxford, 1965), §§1.2-3; Hidé Ishiguro, *Leibniz's Philosophy of Logic and Language* (London: Duckworth, 1972); and Louis Couturat, *La Logique de Leibniz* (1901). Though Couturat (and Benson Mates after him) seems to require nevertheless (and wrongly) that the intensions at issue must have *actually* existent individuals in their extensions if various inferential principles are to be valid. I discuss in the next chapter (V) the interplay between the intensionalist interpretation of the existence-assumptions, the quantifiers, and principles of inference.

<sup>91</sup> Leibniz is actually focusing upon a form of *inference* which is commonly called 'conversion *per accidens*', most typically associated with the passage from 'All  $\alpha$  is  $\beta$ ' to 'Some  $\beta$  is  $\alpha$ ' (or from a universal affirmative judgment a particular affirmative in which the order of the terms involved is

this commitment to rest on the assumption that ‘the former speaks of possibles [possibilibus loquitur], the latter of actuals [actualibus]’, and then proposes an alternative interpretation of these forms which ‘remain[s] within the limits of the possibles [in terminis possibilium]’, or ‘in the region of ideas [in regione idearum]’, or (putting it a third way) by taking, e.g., ‘laughter’ ‘for a species of man [pro homo specie], not for an actual laughter [pro ridente actuali]’ (ibid.; cf., G vii.214).

A decade earlier in the fragment entitled ‘Elements of a Calculus’ (April 1679),<sup>92</sup> Leibniz tells us more explicitly that he ‘prefers to consider universal concepts [notiones], i.e., ideas [ideas], and their combinations [compositiones], as they do not depend on the existence of individuals [existentia individuorum]’ (C 53). This contrasts with the point of view found ‘in the scholastics [in scholis]’, who ‘consider, not concepts [notione], but instances [exempla] which are brought under [subjecta] universal concepts’ (ibid.). In the later fragment (‘Some logical difficulties’), Leibniz aligns himself instead with Aristotle, who (in Leibniz’s estimation) ‘seems to have followed the way of ideas [viam idealem secutus], for

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reversed). Arthur Prior (*Formal Logic*, 2<sup>nd</sup> ed. (Oxford, 1962)) gives us the general rules for conversion from Petrus Hispanus’ *Summulae Logicales*: ‘simpliciter  $fEcl$  convertitur,  $EvA$  per acci,  $AsO$  per contra, sic fit conversio tota’. We might note here that the simple rendering of this form of conversion in our predicate logic would produce an invalid inference-form, with the problematic interpretation being now the case in which there is neither anything which is A nor anything which is B, since ‘ $\forall x (Ax \supset Bx)$ ’ would then be true, but ‘ $\exists x (Bx \ \& \ Ax)$ ’ will be false. I will return to this point in the next chapter.

<sup>92</sup> In Couturat’s *Opuscules et Fragments Inédits de Leibniz* (Paris, 1903); ‘C’.



[Aristotle] says that animal is in [in esse] man, namely a concept in a concept [notionem notioni]' (G vii.215).

The 'Aristotelian' approach which prioritizes relations among *ideas* over relations among *individuals* is championed again in Leibniz's later (1705) *Nouveaux Essais* – a work which we know Kant read in 1769 (four years after its first publication). In this text (IV.17.8), Leibniz – or rather, his stand-in, Theophilus – admits that 'the common manner of statement concerns individuals', Aristotle's way of rendering *all* judgments is to 'refer [them] rather to ideas or universals', and Theophilus suggests furthermore that this way is to be preferred (G v.468). For example, instead of saying 'Rectangles are isogons (i.e. have equal angles), squares are rectangles, so squares are isogons', Leibniz's Aristotle will say: 'Isogon is in rectangle, rectangle is in square, so isogon is in square'. Theophilus contends that 'this manner of statement deserves respect; for indeed the predicate is in the subject, or rather the idea of the predicate is included [enveloppée] in the idea of the subject' (ibid.).

Again, it is worth acknowledging that this talk of judgment as an expression of *concept*-containment, or of relations between universals or ideas, is quite far from the familiar Fregean (object-concept) analysis of atomic judgments. But we should also note the connection between this talk of concepts 'being in' one another and two of Leibniz's most well-known doctrines – the predicate-in-subject ('in-esse') doctrine of truth, and a doctrine we have already touched on

above, that of the complete individual concept.<sup>93</sup> This latter doctrine, as we have seen (§32), is connected in turn in Leibniz's *Discourse* §9 to the principle of the identity of indiscernibles, which jointly entail, not only that every individual is identifiable with a special kind of concept, but that 'every individual is an *infima species*'. A 'lowest species' is a concept under which fall only things which cannot be distinguished by further features ('marks') that some of the things have or fail to have 'in common' with others of the same species; rather, that which falls under lowest concepts can only differ 'numerically'. (Imagine the bottom of Porphyry's tree.) But as Leibniz also claims here (*Discourse* §9) that no two individuals can differ *solo numero*, then each individual is, in effect, a sort of singleton *infima species*.<sup>94</sup>

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<sup>93</sup> Cf., again, Leibniz's 1686 *Discourse on Metaphysics* §8: 'Now it is evident that all true predication has some basis in the nature of things and that, when a proposition is not an identity, that is, when the predicate is not explicitly contained [compris] in the subject, it must be contained in it virtually. That is what the philosophers call *in-esse*, when they say that the predicate is in [est dans] the subject. Thus the subject term must always contain [enferme] the predicate term, so that one who understands perfectly the notion of the subject would also know that the predicate belongs to it' (G iv.433).

<sup>94</sup> As a way of summarizing the picture which emerges from Leibniz's way of apprehending and transforming the tradition, consider the following claim of Wolfgang Lenzen's, in his 'Leibniz's Logic' (*Handbook of the History of Logic*, vol. 3 (Amsterdam: Elsevier, 2004)): 'While normally one begins by quantifying over individuals on the first level and introduces quantification over predicates only in a second step, in the Leibnizian system quantification over *concepts* comes first, and quantifying over *individual(-concept)s* is introduced by definition only afterwards' (4). Leibnizian logic, like its Aristotelian predecessors, is committed in the first instance to there being concepts. It is only with the idea of a complete individual concept that 'quantification over' things which represent individuals becomes possible, though this remains a kind of *conceptual* quantification. Here compare again, Lenzen (op.cit): 'Leibniz's 'intensional' point of view thus becomes provably equivalent, i.e., translatable or transformable into the more common set-theoretical point of view, provided that the extensions of concepts are taken from a universe of discourse, *U*, to be thought of as a set of *possible individuals*. [...] What has to be kept in mind, however, is that an individual-term for Leibniz nevertheless is a concept, i.e., an

Hence just as with Kant's system, Leibniz's version of Rationalism is in the first instance only committed to there 'being' concepts, insofar as the only 'variables' that are recognized by his logic are those which can function as both subject and predicate in the traditional categorical syllogistic forms of judgment. Leibniz has no *primitive* place for object-variables or essentially singular terms.<sup>95</sup> Similarly, it is thoroughly 'intensional' in that the constraints on the items which populate its domain are the constraints on the logical possibility of 'ideas' or 'universals', and so the sense of the 'existence' or ontological commitment involved in quantification (especially the 'particular' quantifier 'Some') must be cashed out in these terms.<sup>96</sup>

We can see that roughly the same picture is in place if we turn to Kant's more immediate predecessors – most importantly, Georg Friedrich Meier. In Meier's 1752 *Auszug aus der Vernunftlehre* (the textbook Kant used for his logic lectures), the term 'extension' continues to be used in such a way as to comprise

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'intensional' entity which may contain (or be contained in) other concepts. Hence its extension must be conceived of as a *subset* – and not as an *element* – of the universe of discourse. E.g., the extension of the individual-concept 'Peter' is not the individual Peter but the *unit-set* containing exactly that individual' (75).

<sup>95</sup> Should we say, then, that Stoic logic, in the first instance, is committed to there 'being' propositions? Much like Frege is committed to there 'being' *Gedanken*, insofar as they can be quantified in indirect discourse constructions.

<sup>96</sup> Now, it is very likely that this treatment will take on a special ontological valence when we conjoin it with the thesis of the complete individual concept, since (as Leibniz notes frequently) there are further constraints on possibility – amounting to a new concept of 'compossibility' – once we bring into view the notion of the maximal or 'complete determination' which seems to characterize an individual concept, and with it, the universe (possible world) that it expresses. On the difference between possibility and compossibility, compare Leibniz's December 1714 letter to Bourguet (G iii.572f).

both concepts and individuals, but as with Leibniz, this conglomeration is given something of an *ontological* underpinning, due to the doctrine of individual concepts. For instance, in §262 of his *Auszug*, Meier explains an ‘Umfang’ of a concept (*sphaera notionis*) as ‘the collection of all the *concepts* that are contained under an abstracted concept [der Inbegriff aller *Begriffe*, die unter einem abgesonderten Begriffe enthalten sind]’ (16:560; my ital.). Yet two sections prior to this, Meier has allowed for ‘concepts that are not abstracted [Begriffe, die nicht abgesondert sind]’, which ‘are called singular concepts [heissen einzelne Begriffe] (*conceptus singularis, idea*)’, and gives as an example of such a concept (‘z.e.’), quite appropriately, ‘Leibniz’ (§262; 16:551). In this way, like Leibniz before him, Meier can allow ‘Leibniz’, or an individual *qua* singular concept, to belong to the extension of another concept, while still claiming that every extension consists of all the *concepts* which are contained under a given concept.<sup>97</sup>

Now, we have already seen above that Kant rejects Leibniz and Meier’s Rationalist thesis that individual things can be adequately represented by concepts, due to the essential difference in *determinacy*. But what is striking is that Kant also rejects *in general* the possibility of a lowest species, which would contain

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<sup>97</sup> Again like Leibniz (and like Arnauld and Nicole before him), Meier also recognizes concepts that contain *only* individuals (for Meier, individual concepts) under themselves – these were Leibnizian *infimae species*, though Meier reserves the term ‘species’ for such concepts (cf., §261). In Meier’s lexicon, concepts which also contain *non*-individual (‘abstracted’) concepts under themselves are entitled *genera*. ‘An abstracted concept, which comprises [begreift] only singular concepts under itself, is called a *species*, but one which also contains [enthält] abstracted concepts under itself will be labeled a *genus*’ (16:559-60).

individuals 'immediately' under itself. This in itself represents a striking departure from a prominent commitment in the Porphyrian tradition.<sup>98</sup> A note in Jäsche's text (JL §11n) provides a quite clear expression of Kant's views on the matter:

In the series of species and genera there is no lowest concept (*conceptus infimus*) or lowest species, under which [worunter] no other would be contained, because such a one cannot possibly be determined [bestimmen]. For even if we have a concept that we apply *immediately* to individuals [my underlining], there can still be specific differences in regard to it, which we either do not note, or which we disregard. Only *comparatively for use* [Gebrauch] are there lowest concepts, which have attained this significance, as it were, through convention, insofar as one has agreed not to go deeper here. In respect to the determination [Bestimmung] of species and genus concepts, then, the following universal law holds: *There is a genus that cannot in turn be a species, but there is no species that should not be able in turn to be a genus.* (9:97)

Kant himself puts forward the same claim in the Appendix to the Transcendental Dialectic:

Hence every genus requires [erfordert] different species, and these subspecies, and since none of the latter once again is ever without a sphere [Sphäre], (a domain [Umfang] as a *conceptus communis*), reason demands in its entire extension [Erweiterung] that no species be regarded as in itself the lowest [unterste]; for since each species is always a concept that contains within itself [in sich enthält] only what is common [gemein] to different things [Dinge], this concept *cannot* be thoroughly determined [nicht durchgängig bestimmt sein können], hence it *cannot* be related to an individual [nicht auf ein Individuum bezogen sein können], consequently, at every time

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<sup>98</sup> Cf., Kneales, *The Development of Logic*. 'It will be remembered that in medieval representations of Porphyry's tree individuals such as Socrates, Plato, and Brunellus were often mentioned at the bottom of a table in which all the other entries were general terms' (319; cf. 232).

[jederzeit] it *must* [müsse] contain other concepts, i.e., subspecies, under itself [unter sich enthalten]. (B683-4; my ital.)

Hence, though Kant recognizes that we have instituted conventions for the use of certain concepts as if they were ‘lowest’ concepts, this is not something that actually reflects the *logical* structure of the conceptual hierarchy itself.<sup>99</sup> Rather, from the point of view of logic, because the Umfang of any given concept consists solely in the collection of lower concepts contained ‘under’ the concept, and because the lower bound of such a collection *must* be indefinitely extensible, there is no way *within the resources of the hierarchy itself* to represent individual objects as being included in the logical Umfang of a concept. Every ‘entry’ (so to speak) must stand for something essentially ‘general’, in the (now more familiar) sense of being essentially *determinable*.<sup>100</sup> Or as Kant puts it in the same passage from the *Dialectic*,

every concept can be considered as a point, which, as the standpoint of an observer, has its horizon, i.e., a multiplicity of

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<sup>99</sup> About the distinction between the concept itself and the concept as we conventionally use or apply it, compare the *Wiener Logik*: ‘The *conceptus infimus* cannot be determined. For as soon as I have a concept that I apply to *individua*, it would still be possible for there to be still smaller differences among the *individua*, although I make no further distinction’ (24:911; my underlining).

<sup>100</sup> The lowest species itself is called ‘lowest’ because the move downward through the hierarchy from itself to those things which it contains ‘under’ itself does not occur through further *conceptual* (qualitative) differentiation among those things it contains, but rather on account of the pure *numerical* difference between these things. Now, the Amphiboly discussion of ‘two drops of rain’ which share *all* of the same ‘inner determinations’, yet occur at the same time in two separate spatial locations, might suggest that, in some sense, Kant nevertheless does allow for the possibility of conceptual identity between representations accompanied by merely numerical distinctness. But note that this would be again to take relevant ‘extension’ to be populated by the existent *objects* (raindrops) rather than by further conceptual determinations.

things [Menge von Dingen] that can be represented and surveyed, as it were, from it. Within this horizon a multiplicity of points [Menge von Punkten] must *be able to be given to infinity* [ins Unendliche angegeben werden können], each of which in turn has its narrower field of view; i.e., every species contains subspecies in accordance with the principle of specification, and the logical horizon consists *only* of smaller horizons (subspecies), but *not of points that have no domain* [Umfang] (*individuals*). (B686; my ital.)

Such remarks about the indefinite extensibility of a concept's Umfang stand in striking contrast with what Kant says about the 'quantitative' limitations on a concept's *intension* – that is, the limitations on what can be contained *in* a concept. Consider the following passage from the Transcendental Aesthetic:

Now one must, to be sure, think of every concept as a representation that is contained in an infinite set [Menge] of different possible representations (as their common mark [gemeinschaftliches Merkmal]), which thus contains these *under itself*, but no concept, as such, can be thought as if it contained an infinite set of representations *within itself*. (B40)

As we shall see in the next Chapter, this last point marks one of the most significant of Kant's departures from the Rationalist tradition, for it entails a rejection of the possibility of representing *all* (true) judgments as expressions of 'containment-in' relations among concepts, or what has traditionally been called *analytic* judgments.<sup>101</sup> As we have just touched upon, one of Leibniz's cardinal theses had been that all true judgments are 'analytic' in the sense that the

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<sup>101</sup> Cf., among others, Schulthess, *Relation und Funktion*: 'Das rationalistische Denken ist ein bloß logisches, begriffliches, dessen Aussagen alle analytisch sind. [...] Kant zuweist allen Aussagen der rationalistischen Metaphysik den Status von bloß logischen (analytischen), weil sie alle nur auf dem Satz des Widerspruchs gründen' (60-1).

predicate-concept is contained in the subject-concept, even if it would take an infinite analysis of the containment-content of the subject-concept to show this to be true. (Compare the quotes above from Leibniz's *Discourse* §8, concerning the predicate in-esse doctrine of truth.)<sup>102</sup>

By denying the possibility of such potentially infinite intensions regarding concepts of space and time, Kant all but closes the door on the intelligibility of endless 'analysis' as a possibly sufficient model for the 'content' of a given concept or a judgment, since there would thus be no way to construe, e.g., obscure empirical-historical truths as expressions of something already 'contained in' the subject-concept of such a judgment, if it is possible that we would have to make reference to a (potentially) infinite number of other concepts pertaining to, e.g., previous moments in history in order to fully comprehend its content with compete determinacy. Yet without such a possibility, it becomes impossible to see how any one concept could contain within itself the endless 'marks' which would be necessary to distinguish one individual thing from every other actual

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<sup>102</sup> This is a bit too imprecise, since (at least) Leibniz recognizes the principle of the 'best' or the *principle of sufficient reason* as the 'ground' for some truths; that is, the ground for *why* certain things are contained 'in' the subject-concept, and why it would be contradictory for them not to be so contained. See as well the note above, about *existence* not being contained in the essence of an individual's concept (save God's). Still, the basic 'in-esse' structure as stated is universally applicable, which has, of course, raised notorious difficulties with Leibniz's doctrines of contingency and freedom.



(not to mention possible) thing. And this has the effect of rendering opaque the very notion of a *complete* individual concept.<sup>103</sup>

Or at least, it has this direct effect within Kant's system, since Kant himself does take spatial-temporal location to be among the necessary criteria for object-identification, and argues as well that these sorts of properties are *essentially* intuitive and not conceptual determinations of an individual object. These, then, are the basic grounds for Kant's denial that any conceptual determination can offer a 'complete' identification of any individual 'object'.<sup>104</sup>

But with the recent dialogue we have staged between Leibniz and Kant, we have arrived once again at the notion of an *analytic judgment* – a topic for which we had issued a promissory note at the end of the previous chapter, on the grounds that we had yet to give an adequate account of what it is to be a concept as such, and what it is to 'think' something 'in' a concept. For both of these accounts would be necessary to make sense of judgments which 'say nothing except what

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<sup>103</sup> With the impossibility of an infinite intension in mind, compare the discussion of the sum-total of all reality from *Transcendental Ideal*: 'the representation of the sum total of all reality [is] a concept that comprehends all predicates as regards their transcendental content not merely *under* itself, but *within* itself; and the thoroughgoing determination of every thing rests on the limitation of this *All* of reality, in that some of it is ascribed to the thing and the rest excluded from it' (B605). (I suppose that the restriction on infinite intensions doesn't itself imply that the idea of the sum-total is itself impossible, since there might well turn out to be only a finite amount of possible predicates; this is also my reason for qualifying the force of Kant's denial over and against the predicate-in-subject and individual concept doctrines.)

<sup>104</sup> Of course such reasons would be intimately connected with the denial of the possibility of infinite intensions, if the possibility of *any* representation of infinity (including an infinity of 'marks') must ultimately be cashed out in terms of *mathematical* construction (and not generated from mere 'thought' alone). On the distinction between mathematical and transcendental concepts of the infinite, see the Antinomy (cf., B458f).

was already actually thought [schon wirklich gedacht]' in a given concept, as Kant puts it in the *Prolegomena* §2 (4:266).

Yet even now that we have much more of Kant's account of concepts on the table, as our focus so far has been on Kant's notion of 'Umfang', we have hitherto concentrated our investigation primarily upon the features of the 'downward' development of the conceptual hierarchy – most importantly, that it is indefinitely extensible. What we must do in the next chapter is turn our gaze in the opposite 'upward' direction of containment, to the nature of a conceptual 'Inhalt', and so to the containment-'in' relation. For it is only with a richer story about the intension of a concept that we will be able to say something more concrete about Kant's understanding of both the nature of, and the limitations inherent in, the *analysis* of a conceptual intension, and so finally say something more concrete about the judgments which express these conceptual analyses – i.e., analytic judgments.

Such an investigation will also allow us to raise questions concerning the possibility of an 'upper' bound on the Porphyrian tree of concepts. That is, we must now take up the question of the possibility of *highest* concepts (*summa genera*), which would equally be the concepts with the largest 'Umfang' and the smallest 'Inhalt'. We have already noted that Kant thinks that there exist 'highest concepts' in the domains of nature and freedom ('object' and 'act of free choice',

respectively; see §7). But we have said nothing about which 'operations' might allow us to 'ascend' to such highest points.

Hence, by taking up all of these (and related) issues, we will be able to complete our above investigation into the nature of *concepts as such*, and fill out the particular sense that Kant gives to his claim that the logical essence of concepts consists in their generality and determinability. And further reflection upon the containment-'in' aspect of conceptuality will provide us with the ground for the 'truth' of *analytic* judgments as well, thus synthesizing these themes from Kant's doctrine of concepts with the previous chapter's discussion of the logical essence of judgment.

But having surveyed both the logical forms of judgment, and the logical structure of conceptual containment relations, we will also be in a position to give an account of Kant's doctrine of *inference*. For, as I shall show in what follows, Kant is in essential agreement with Leibniz's claim in the *Nonveaux Essais*, that 'the whole theory of the syllogism could be demonstrated from the theory *de continente et contento*, of containing [comprenant] and contained [compris]' (IV.17.8). And what is more, we will see how the 'theory of the syllogism' itself can be delimited purely *formally* (non-referentially), in terms of (partial) schematic 'depictions' of the universal and necessary patterns that constitute the containment-relations of the Porphyrian hierarchy of conceptuality 'as such'.

## CHAPTER V

### Conceptual Analysis and Inferential Articulation

#### A. Division, Abstraction, and Analysis

§36 The most famous aspect of Kant's 'logical' doctrines is surely the fact that he takes the principle of contradiction to be sufficient as a ground for the truth of a certain class of judgments – namely, *analytic* judgments. Some have taken this suggestion to mean that Kant would take all of the axioms of truth-functional logic to consist in 'analytic' judgments in this sense, but then have been at a loss to see how the traditional 'syllogistic' forms could be derived from this principle alone. This is then taken to be a failing on Kant's part, since these readers suppose that Kant also meant to claim that the principle of contradiction is sufficient, not only for the derivation of all analytic truths, but of all 'logical' truths as such. Yet this is to overlook several crucial aspects of Kant's doctrines. First of all, as we saw in **III**, Kant means to treat 'contradiction' in the first instance at the level of *predicative* opposition – between *acts* of affirming and

denying concepts of one another – and not as indicative of the opposition between the truth-values.<sup>1</sup> Secondly, we have Kant himself claiming that *other* principles besides that of contradiction are necessary within logic. As he puts it in a logic *Reflexion* from the late 1770's or early 1780's, 'the principle of contradiction is a formal *principium* of *propositions* [Sätze], not of *inferences* [Schlüsse]' (R3213, 16:714).

In the first sections of this chapter, then, I want to develop an account of analytic judgments which builds off of both our treatment in Chapter **III** of the form of predication in judgment and our treatment from the last Chapter (**IV**) of the Porphyrian containment-hierarchical understanding of 'conceptuality as such'. Throughout, as before, I will be concerned to keep in view the extent to which Kant's account of both 'analytic truths' and 'inferential validity' are purely formal.

I will then turn in later sections to show how it is this containment-structure *in general* – and not just the aspect which is governed by the principle of contradiction – that underwrites Kant's doctrine of inference. In the later parts of the chapter, I further enrich this 'synthesis' of the doctrine of concepts and judgments that we will have achieved in our treatment of analytic judgments by

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<sup>1</sup> To take a recent example of a misreading on this front, in his *Problems from Kant* (Oxford: Oxford, 1999), James Van Cleve claims that the relevant 'official or formal contradictions in the hard objective sense' are those statements with the logical form ' $p \ \& \ \sim p$ ', and hence 'analytic' judgments to be those of the form ' $\sim(p \ \& \ \sim p)$ ' – on the grounds that Kant defines analytic judgments as those whose 'denial' results in a contradiction – and then goes on complain that 'not even the paradigm of analyticity, 'all bachelors are unmarried', has an opposite that is contradictory' in this 'formal sense' (20).

extending the results to an account of Kant's conception of formal inference, especially as it has been encoded in the syllogistic figures (what Kant calls 'mediate' inference) and in the accompanying doctrine of *conversio* ('immediate' inference). To this end, it will be necessary to show how Kant's analysis of the logical 'Moments' (especially 'quantity', 'quality', and 'relation') all come together in his understanding of various syllogistic and conversion-principles.

In this section and the next, I want to turn to the two key operations which will serve as a bridge between these two doctrines (judgment and concept-containment) and the idea of conceptual analysis – namely, the operations of logical *division* and *abstraction*. We can reorient ourselves a bit by recalling a notion which we have already touched upon briefly in Chapter I (§7) – namely, the notion of a *summum genus*. There it was pointed out that Kant identifies a separate 'highest concept' for each system of material philosophy – i.e., one for the metaphysics of nature and another for that of freedom:

A deduction of the division [Einteilung] of a system, i.e., a proof of its completeness [Vollständigkeit] as well as its continuousness [Stetigkeit] – namely, that the transition from the divided [eingeteilte] concept to the members [Glieder] of the division in the whole series of sub-divisions occurs without any leap (*divisio per saltum*) – is one of the most difficult conditions for an architect [Baumeister] of a system to fulfill. Even what the *highest divided concept* [oberste eingeteilte Begriff] for the division into *right* [Recht] and *wrong* [Unrecht] (*aut fas aut nefas*) is, calls for thought [hat seine Bedenklichkeit]. This concept is the *act of free choice* in general [Act der freien Willkür überhaupt]. The teachers of ontology begin similarly with *something* [Etwas] and *nothing* [Nichts] as the highest,

without being aware that these are already members of a division, and so in addition lack the divided concept, which can be nothing other than the concept of an *object in general* [Gegenstand überhaupt]. (MS 6:218n)

In the Amphiboly, Kant repeats this claim concerning ontology – albeit under the more modest name of the ‘analytic of the understanding’ as a component of ‘transcendental philosophy’:

Before we leave the Transcendental Analytic behind, we must add something that, although not in itself especially indispensable, nevertheless may seem requisite for the completeness [Vollständigkeit] of the system. The highest concept with which one is accustomed to begin a transcendental philosophy is usually the division [Einteilung] between the possible and the impossible. But since every division presupposes a divided concept [einen eingeteilten Begriff voraussetzt], a still higher one must be given, and this is the concept of an *object in general* (taken problematically, leaving undecided whether it is something [Etwas] or nothing [Nichts]). (B346; my ital.)<sup>2</sup>

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<sup>2</sup> Kant continuously refers to ‘object in general’ as the highest concept in the realm of cognition: in addition to the discussion in the Amphiboly, the logic lectures as well as the (so-called) *Metaphysik Pölitz* lectures include several references to this point. Cf., *Metaphysik Pölitz*: ‘The highest concept of the whole of human cognition is the concept of an object in general [Object überhaupt], not of a thing and a non-thing [Unding], or of something possible and something impossible; for these are *opposita*. Any concept which has an *oppositum* therefore always requires a still higher concept which contains [enthält] this division [Einteilung]. Two *opposita* are divisions of a higher object [Object]. Therefore the concepts of ‘possible’ and ‘impossible’, or of ‘thing’ and ‘non-thing’, are in no way the highest concepts of human cognition’ (28:543).

The *Wiener Logik*, by contrast, identifies ‘something’ as the highest concept: ‘Now we can think of a series of genera, and species,, among which some will have to be *genera superiora*, until we finally come to a *genus summus*, namely, something’ (24:911). Similarly, the *Dobna-Wundlacken Logik* gives as ‘the highest [concept]: being [Wesen], thing [Ding] (24:754), but then later records the ‘*genus summum*’ to be ‘object in general [Gegenstand überhaupt]’, or ‘object [Objekt], where one has not determined [bestimmt] at all what’ (24:755).

As Kant immediately points out, ‘the categories are the only concepts that relate to objects in general [sich auf Gegenstände überhaupt beziehen]’, which means that only they can offer ‘guidance [Anweisung]’ in the correct division of the highest concept ‘object’ into the species ‘something’ and ‘nothing’ (B346).<sup>3</sup>

As we have already noted, Kant gives a parallel discussion of the categories of *freedom* in the second *Kritik*. There we are told, on the one hand, that these categories ‘have an obvious advantage’ over the ontological categories ‘inasmuch as [the latter] are only forms of thought which, by means of universal concepts, designate [bezeichnen] only indeterminately objects in general [unbestimmt Objecte überhaupt] for every intuition possible for us’ (5:65). By contrast, the categories of freedom ‘are directed to the determination of a free choice [Bestimmung einer freien Willkür]’ (5:65), and ‘do not have to wait for intuitions in order to receive meaning [Bedeutung]; and this happens for the noteworthy reason that they themselves produce [selbst hervorbringen] the reality [Wirklichkeit] of that to which they refer [sich beziehen] (the disposition

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<sup>3</sup> In the *Metaphysik Pölitz* we also find Kant making the following distinction with regard to ‘object’ and ‘something’: “Something [Etwas]’ means [bedeutet] any object of thinking; this is the *logical* ‘something’ [das logische Etwas]. The concept of an object in general [Object überhaupt] is called the highest concept of all cognition. One also calls an object [Object] a ‘something [Etwas]’, but not a *metaphysical* ‘something’, rather a *logical* ‘something’” (28:544; my ital.); ‘*Aliquid in logico sensu* is the object [Object] of thinking, and this is the highest concept’ (28:552). In these passages, Kant is willing to call any ‘object’ a logical ‘Etwas’, or an ‘*aliquid*’ in the logical sense of the term – which, to use a distinction introduced earlier (§24), is weak enough to include any ‘content’ of categorially determinate judgments, even merely ‘problematic’ ones (of mere ‘Gedankendinge’) – while the ‘metaphysical’ sense of ‘something’ (presumably) builds into the judgment an assertion of the *reality* of the object. (I insert the qualification of ‘categorially determinate’, since without the deployment of categories, *nothing* would qualify as a ‘thought of an object’.)



[Gesinnung] of the will)' (5:66).<sup>4</sup> Yet on the other hand, it is clear that the categories of freedom, like those of nature, are related to, or themselves designate, the 'highest concept' of the metaphysics of morals – namely, an act of free choice. And, after having presented the table of categories of freedom, Kant again remarks that 'a division [Einteilung] of this kind, drawn up in accordance with principles, is very useful in any science, for the sake of thoroughness [Gründlichkeit] as well as intelligibility [Verständlichkeit]' (5:67).

Hence Kant takes the highest concepts of ontology and morals to be 'object' and 'free choice', respectively. It is from these highest concepts that (in the ideal case) all other concepts of the ontological and ethical systems are to be 'deduced' via a process Kant calls *division* [Einteilung]. Before we say more about this process, however, we might note the following important questions which immediately arise, given our previous containment-theoretical account of concepts, concerning the relative status of any individual *category* (pure concept), or even of the whole collection of them, over and against each allegedly 'highest' concept. For, first, we might wonder whether the categories collectively articulate the 'content' of each highest concept. But then, if the general account of containment-'Inhalt' sketched in the previous chapter were to apply to here as well, then this would imply that the categories are contained *in* the concept of

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<sup>4</sup> Recall that the higher faculty in general (Verstand überhaupt) has been identified in the first *Kritik* as a 'das Vermögen, Vorstellungen selbst hervorzubringen' (B75).

‘object’ and of ‘free choice’ (i.e., they constitute their ‘intension’), meaning that the categories would have to be located ‘higher’ than ‘object’ and ‘free choice’ on the hierarchy, and so would need to contain each (respective) highest concept *under* themselves.

To take this route, however, would thereby defuse the original claim of ‘object’ and ‘free choice’ to be the absolutely *highest* concepts. So then should we conclude that ‘free choice’ and ‘object’ are higher than each of the categories, and contain the categories under themselves, as different (‘pure’) ways in which the concept of an ‘object’ or a ‘free choice’ can be ‘determined’? To put the question another way, are the ‘moments’ of categories themselves *divisions* of these highest concepts?

A second sort of question that arises here concerns the possibility of relations between the two hierarchies constructed from these distinct *summa genera*. For instance, can one and the same concept belong to *both* hierarchies? Or can the hierarchies overlap at any point?<sup>5</sup> And are these the *only* two hierarchies, or would Kant admit that there might be other ‘highest concepts’, and so other

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<sup>5</sup> It is worth pointing out that the section of the KpV in which Kant introduces the ‘categories of freedom’ is entitled ‘on the concept of an object [Gegenstand] of pure practical reason’, which he defines as ‘the representation of an object as a possible effect [Wirkung] through freedom’ (5:57); hence it is evident that ‘acts of free choice’ are not completely *disconnected* from ‘objects’ (see §23). Yet the question remains whether such an ‘act’ is a *type* of ‘object’, or vice versa. Or, put another way, the question remains whether the concept of an ‘act’ contains *in* itself (in its intension) the concept of an ‘object’, or vice versa.

domains of material philosophy? (This seems altogether unlikely, given Kant's frequent claims to architectonic 'completeness'.)

Third, is there a 'highest' concept within *formal* philosophy itself? And where are we to locate the concepts dealt with in *Vorstellungstheorie*, such as 'Begriff', 'Anschauung', 'Urteil'? Are they either a type of 'object' or a type of 'free choice', or rather do they belong to an altogether *distinct* hierarchy, one organized around the 'highest' concept of 'Vorstellung überhaupt' (as the *Stufenleiter* suggests)?<sup>6</sup>

Finally we might raise the still further question of the concept of a 'sum-total of reality' that we met with in the previous chapter: do all hierarchies draw the 'reality' of their concepts from one and the same 'sum-total'? This is especially pressing, since, in passages such as the one quoted above from the second *Kritik*, Kant *contrasts* the source of the reality which is connected with the 'object'-hierarchy (i.e., what is provided through transactions in sensible intuition) with the reality which is connected to the 'free act'-hierarchy (i.e., something which is generated from the categories themselves (from pure reason alone)).<sup>7</sup>

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<sup>6</sup> As we have had occasion to note, Kant does write, at one point (in the Second Analogy), that 'one can, to be sure, call everything, and even *every representation* [jede Vorstellung], insofar as one is conscious of it, an object [Object]' (B234; my ital.).

<sup>7</sup> In connection with this last question, it is again worth noting Kant's frequent use of 'reality' in a specifically *practical* sense. Cf., KpV 5:48, 56; KU §88; 'Fortschritt', 20:300; *Religion* 6:5.

Perhaps there is a notion of ‘Realität’ which is broader than either that of natural or practical ‘reality’?<sup>8</sup>

Though these are all clearly important issues, we must leave them unresolved for the time being, and turn instead, first, to one fairly straightforward, but significant, consequence of such a picture: *no particular* ‘highest concept’ can belong to *formal logic*. Or rather, logic can only treat of the bare *concept* of a ‘highest concept’ as such. Or to put this more precisely, logic can only treat of what can be derived from the highest concept of its peculiar subject-matter, the highest concept in the domain of ‘Verstand überhaupt’: namely, the *synthetic unity of apperception*.

As we have seen (cf., **III §25**), apperceptive unity ‘is the highest point to which one must affix all use of the understanding, even the whole of logic’ (KrV, §16: B134n). The concept of a synthetic unity of apperception is the concept of the unity which pertains to meaningful, sensical *judgments* as such (whether they be theoretical, ethical, poetical, etc.). It is the unity which pertains to possible acts of ‘saying’ something of something else. What is of interest for our discussion now is that it is this sort of unity which is presupposed by the *analytical* unity of apperception that ‘pertains to all common [gemeinsame] concepts as such’

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<sup>8</sup> This sort of need for generic categories perhaps suggests another reason for distinguishing transcendental logic *stricto sensu* from ‘Transcendental Logic’ as a pure-special logic of thought about nature. (See above, **II, §12.**)

(B133n), since it provides the generic characterization of that out of which concepts are ‘formed’:

A representation that is to be thought of as common [gemein] to a *variety* [verschiedenen] must be regarded as belonging [gehörig] to those that in addition to it also have something *different* [etwas Verschiedenes] in themselves; consequently they must antecedently be conceived in synthetic unity with other (even if only possible representations) before I can think of the analytical unity of consciousness in it that makes it into a *conceptus communis*. (B133-4n)

Thus it is by reflection upon the manner in which things can ‘belong together’ in a ‘judgment as such’ (synthetic unity) that Kant takes the very concept of ‘concept as such’ (analytical unity) to be available for investigation. Here we have a further clue in our quest for an account of analytic judgments, a clue which I will exploit in a moment.

The important point for now is that, on its own ‘hierarchy’ (if it can be said to have one), logic can include only these sorts of ‘concepts’ – i.e., those which can be derived directly from reflection upon the ‘highest concept’ of logic, such as, e.g., the concept of ‘concept as such’, the concept of ‘belonging together’ in various ‘forms’ of synthetic unity (i.e., the logical functions of judgment), the concepts of being ‘higher’ or ‘lower’ concepts, and so on.<sup>9</sup> (We might recall here Kant’s description of the understanding as ‘das Vermögen, Vorstellungen *selbst*

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<sup>9</sup> Again, the most sustained attempt to retrace or reconstruct the derivation of the logical functions of unity from the (bare) concept of apperceptive unity is surely Klaus Reich’s *Die Vollständigkeit der kantischen Urteilstafel* (Berlin, 1932; 2<sup>nd</sup> ed., 1948).

hervorzubringen’ (B75; my ital.)<sup>10</sup> Correlatively, logic can only treat of the concept of a conceptual hierarchy *as such*, insofar as this too represents something which can be derived from the concept of a concept. (Here we are perhaps bordering on paradox.) Yet logic must treat of the notion of a generic hierarchical structure without taking into account any determinate ‘material’ that the concepts might represent.

As a consequence, the principles and properties which govern and characterize concepts as such cannot be tailor-made to any specific conceptual hierarchy, but must be sufficiently ‘generic’ so as to apply to any and all possible hierarchies. It is worth emphasizing in particular that *neither* the concept of ‘Gegenstand überhaupt’, *nor* the hierarchy which it generates, *belongs to formal logic as such*. Instead, such a hierarchy represents the systematic articulation of the science of ‘object überhaupt’, namely, *ontology* (or in Kant’s new register: the ‘mere analytic of the pure understanding’ (B303)). This fact will become important in later sections, though one can already see how such a distinction is closely related to a distinction that we have been tracking through our investigation – namely, that which Kant draws between a (pure) *general* and *special* logic. To recapitulate

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<sup>10</sup> Compare as well *Über eine Entdeckung* (8:221). In the thought that our capacity for understanding can provide itself with a kind of ‘logical’ content, we might find material, perhaps, for something like contemporary ‘autonomous’ strategies in the construction of a deductive system, in which syntactic expressions are taken as names of themselves; see Carnap, *Logische Syntax*, §4 and §§41-42. As Alonzo Church notes (*Introduction to Mathematical Logic* §08): ‘in the terminology of the Scholastics, use of a word as a name of itself, i.e., to denote itself as a word, was called *suppositio materialis*’ (61n134).

something which has been argued at length in previous chapters, we might say that formal logic, as general logic, consists in the study of conceptuality *as such*, while the study of a *particular* or special ('besondere') conceptual hierarchy, one that is organized around a specific 'highest concept' would fall (appropriately) to a special logic (e.g., of 'nature' or of 'freedom').

§37 There is something in these remarks about *summa genera*, however, which is of even more immediate relevance to our previous discussion of the properties of generality and determinability and their role in the logic of concepts. This is the technical notion that we noted Kant is using in the above passages to signify with the process of derivation of lower concepts from such highest concepts: namely, that of *division* [Einteilung]. This notion is immediately relevant to our present concerns because it gives a further specification of what is involved in the act of 'determining [bestimmen]', and so of what role acts of determination have within the Porphyrian model of conceptuality discussed in the previous Chapter. That is, the idea of division gives us more information about what function determination has within a hierarchy constructed out of containment-in and -under relations, and organized around a highest concept.

Kant's understanding of this notion is summarized nicely in the following explanation from Jäsche's text (JL §110):

Every concept contains a manifold *under* itself insofar as the manifold agrees [übereinstimmt], but also insofar as it is different [verschieden ist]. The determination [Bestimmung] of a concept in regard to everything possible that is contained under it, insofar as things are opposed [entgegengesetzt] to one another, i.e., are distinct [unterschieden] from one another, is called the *logical division* [Einteilung] of the concept. (9:146)<sup>11</sup>

Recall that the general notion of a concept's being 'determinable [bestimmbar]' has already been partially explained (in the passage from the 'Transcendental Ideal' (B599f), discussed above, **IV**, §31) by reference to those concepts which are not contained 'in' itself (i.e., are not a part of its containment-'Inhalt'), but rather might be contained 'under' itself. If we wish to begin the process of 'determining' the concept with respect to those concepts which are not contained 'in' it, then we face a choice as to which way we might go as we look 'downward' (so to speak), since we are faced with a 'manifold' of possible, further 'marks' that we can add to the content that we would then think, in thinking the new collection of concepts.

Of course, in typical cases, due to the Principle of Contradiction, some 'marks' will have already been ruled out, since they will be 'opposed' to what is already contained 'in' the original concept.<sup>12</sup> This is not true, however, in *all* cases, since the special case of a 'highest' concept, there is literally *nothing* which is

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<sup>11</sup> Cf., R3791 [1766-68]: 'divisio est vel logica, quatenus varia tanquam contenta *sub* aliqua notione superiori spectantur' (17:293).

<sup>12</sup> Cf., B190: 'For the contrary [Widerspiel] of that which as a concept already lies and *is thought in* the cognition of the object is always correctly denied...?'



‘opposed’ to what is contained *in* this concept. Kant makes such an argument in the *Metaphysik Pölitz*: ‘Each concept that has an *oppositum* always requires a higher concept which contains this division. Two *opposita* are divisions of a higher object’ (28:543).<sup>13</sup> Perhaps surprisingly, then, in some sense *there is no ‘concept’,* e.g., of a ‘*non-object*’, since there would have to be an even ‘higher’ concept which contains both ‘object’ and ‘non-object’ under itself.<sup>14</sup> Because of this, the highest concepts are also the ‘emptiest’ concepts in terms of their *intension*; they contain next to nothing ‘in’ themselves. On this point, compare the following remarks from the *Wiener Logik*:

I can set forth the *conceptus summus*, because there must be a concept in which I can omit *everything* [my ital.]. [...] Now since in the case of the highest concept I have to omit so much that what remains to me is only what is common [gemein] to *all* things, this concept therefore contains *the least of all* [my ital.] in itself. (24:911-12)

Calling these concepts ‘empty’ also helps to give sense to the *Wiener Logik*’s further claim that, ‘from the highest concept, consequently, the lowest ones are determined [bestimmt]’ (24:912). Hence, when a concept (like ‘object in general’)

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<sup>13</sup> It is for this reason that neither ‘possible’ and ‘impossible’, nor ‘thing’ and ‘non-thing’ can be the ‘highest’ concepts: ‘Also kann der Begriff vom Möglichen und Unmöglichem, oder von einem Dinge und Undinge gar nicht der oberste Begriff der menschlichen Erkenntniß seyn’ (28:543).

<sup>14</sup> This raises interesting questions about how to classify those things which we might wish to say are non-objects – such as concepts themselves, capacities, or ‘acts’. I suspect that Kant would most likely classify these (alongside of the forms of intuition or beings of reason [entia rationis]) as types of ‘Nothing’, from the point of view of ontology – cf. the Amphiboly’s ‘Tafel des Nichts’ – though, with regard to concepts in particular, this would then raise questions concerning whether Kant should be seen as a nominalist or conceptualist or realist in the debates concerning the status of ‘universals’.

is ‘determined’, the result thereby is the acquisition of additional ‘content’ (in its intension); as Jäsche’s *Logik* has it, ‘the members of the division contain *more* in themselves than does the divided concept’ (JL §110 9:146).<sup>15</sup>

Moreover, due to the Principle of Determinability, the division will only be able to occur through the addition of one member of whatever pairs of opposing marks remain ‘outside’ of the given (‘divided’) concept’s intension at each step of determination. This is true *in* each step, even though it is possible at the outset (prior to the step) for a given concept to be ‘determined’ in both directions. In fact, as the *Metaphysik Pölitz* states, ‘to determine is nothing other than to posit [setzen] one of two *opposita*’ (28:552).

Strictly speaking, then, a *logical* division occurs (and so with it, the possibility for logical determination) only by the association of a concept with exactly two opposing lower concepts: ‘every true disjunction can only be *bimembris*, and logical division is also *bimembris* (JL §77n2, 9:130). As the *Reflexionen* make especially clear, division which fails to be dichotomous is merely *empirical* division: ‘All polytomy is empirical. Dichotomy is the only one which is apriori and from principles’ (R3026 [late 1770s], 16:622).<sup>16</sup>

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<sup>15</sup> This is different from the logical *definition* of a concept. In a definition, the quantity of the sphere [Sphäre] of the definition and the *definitum* must be the same: ‘the definition and the *definitum* must be convertible concepts [Wechselbegriffe] (*conceptus reciproci*), and hence the definition must be neither broader [weiter] nor narrower [enger] than its *definitum*’ (JL §107, 9:144).

<sup>16</sup> Cf. R3022-27, R3067, & R3107. (R3030 [1780s] is especially straightforward in this regard: ‘Logical division is *partitio*, because all of the members of the division are in pairs’ (16:623).

Now, this last point puts a certain amount of pressure on my suggestion above that the categories could represent the ‘division’ of their highest concept. Clearly they are meant to bear an apriori relation to this concept, and yet this connection does not take the form of a dichotomous partition.<sup>17</sup> Or at least it does not, if we take the fourfold arrangement on the Table to be sufficiently revealing of the appropriate lines of division. At various places, however, Kant suggests that there is, in fact, a ‘higher’ dichotomy of the pure concepts – namely a division into ‘mathematical/dynamical’ – which would then in turn be dichotomized into ‘Quantity/Quality’ and ‘Relation/Modality’, respectively. (See, for example, the discussion in the Principles (B199f).) From the point of view of pure general logic, these ‘Moments’, too, are then themselves divided into pairs, all of which would then fulfill the requirements of logical division. (Of course,

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<sup>17</sup> This question – concerning the type of derivation of the categories from the concept of an object in general, if it is not according to the operation of apriori logical ‘division’ – is typically neglected by commentators. George Schrader, for instance (in his ‘Kant’s Theory of Concepts’ *Kant-Studien* 49 (1957-8)), does not even mention the problem when he takes up the question of the ‘derivation’ of the categories (268f), though he does recognize that there is some problem lurking in this area: ‘But just how we move from the pure and undifferentiated unity of apperception to the four types of categorial judgment or to the twelve specific categories is not at all clear’ (268). As Schrader’s proposed ‘progression’ indicates, he does not sufficiently differentiate between the ‘highest’ concept of *logic*, namely ‘unity of apperception as such’ (the bare ‘I think  $x$ ’), from which the forms of judgment are derived, and the ‘highest’ concept of *ontology*, the *objective* unity of apperception (‘I think  $x$  as involving a reference to an object’), from which categories are derived (and which, on my reading, is another way of designating the concept of ‘thought of a Gegenstand überhaupt’).

from the point of view of *transcendental* logic, we come to see a special ‘third’ way of understanding each Moment.)<sup>18</sup>

In any case, the ‘Stufenleiter’ does represent a more straightforward example of such a continuous<sup>19</sup> process of logical (and so, dichotomous) division of a concept: the concept ‘representation as such’ is the relevant ‘divided’ concept, or the concept to be determined. With each step down the ladder, we get a more ‘determined’ (and ‘determinate’) concept – a concept that ‘contains’ more ‘in itself’ – since (along each branch) we have added one of an opposed pair of marks (e.g., ‘being accompanied with consciousness’, ‘not being accompanied with consciousness’), neither of which were already contained ‘in’ the original concept. Because, at each step, the process of determination is faced with a choice between opposing ‘marks’, Kant takes the process as a whole – i.e., the tracing out of the determining process down both sides of the opposition – to amount to the division (or partition) [Ein-teilung] of the concept. The original ‘higher’ concept that is being ‘determined’ through this process is what Kant calls the *divided*

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<sup>18</sup> On this, see Kant’s 1783-4 letters to Johann Schultz, especially the letter of February 17, 1784, which gives us the following ‘clue’ as to what additional ‘content’ is ‘contained’ in the third category: ‘although the third category does certainly arise out of a uniting of the first and second, it does not arise out of there mere conjunction [Zusammennehmung], but rather out of a *connection* [Verfknüpfung] *whose possibility itself constitutes a concept*, and this concept is a particular category. [...] [I]t always contains [enthält] something more than the first and the second alone or taken together, viz., the *derivation* [Ableitung] of the second from the first’ (10:366-7).

<sup>19</sup> In fact, Kant’s typical use of the term ‘Stufenleiter’ is precisely in contexts which concern the law of *continuity* [Stetigkeit] of in various contexts: in nature, that of all genera and species (all essences [Wesen]) (cf., B696; B721); in a moral context (‘zwischen Uns und Gott’), cf., *Religion* 6:65n; R6050 [1780s] 18:435; concerning our capacities for reasoning (‘vom klügsten Menschen bis zum dümmsten Thiere’), cf., *Streit der Facultäten* 7:70.

[eingeteilte] concept, and the various marks ('lower' concepts) that provide the additional determinations are called the *members* [Glieder] of the division (JL §110, 9:146).<sup>20</sup>

For what are perhaps obvious reasons, Kant takes the process of logical division to be associated the *disjunctive* form of judgment: a disjunctive judgment is one in which the members of a division are 'subordinated' [untergeordnet] to the divided concept (JL §23, 9:104; cf., B98). Writing about the use of such judgments as the major premise of a disjunctive syllogism, Kant states that the disjunction itself 'contains a logical division [Einteilung] (the division [Teilung] of the sphere [Sphäre] of a general concept)' (B604). Given what we have just seen, a disjunction is only strictly logical when it takes the form of a dichotomy (dilemma), but in every case, the 'members' of the disjunction are 'taken together [zusammengenommen] as parts [Teile] of the sphere of a cognition, each the complement [Ergänzung] of the other toward the whole [zum Ganzen] (*complementum ad totum*)'; taken together, 'they are equal [gleich] to the sphere of the first' (JL §29 9:107).

Thus, the division must be *exhaustive*. The 'logical determination [Bestimmung]' of the concept then takes place when one 'restricts [einschränkt]'

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<sup>20</sup> In general, in his theory of logical division, Kant appears to stay quite close to Meier; cf., *Auszug*, §285: 'Die logische Eintheilung der Begriffe (*divisio logica*) besteht in einer deutlichen Vorstellung aller niedrigern Begriffe, die einander entgegen gesetzt sind, und die unter einem und eben demselben höhern Begriffe enthalten sind. Dieser höhere Begriff heisst der eingetheilte Begriff (*divisum*), und die niedrigern Begriffe, die Glieder der Eintheilung (*membra dividenda*)' (16:612-3). Kant too makes the connection between 'distinctness' and 'division'; see below.

the concept to one ‘member’ or ‘part [Teil]’ of the division of its extension that is expressed through the disjunction (B604-5). And, as we have seen, this determination must occur at the *exclusion* of all of the other possible ‘additions’ to the ‘content’ of a concept that one might make by proceeding downward through the hierarchy: ‘All the members of the disjunction but one, taken together, constitute the contradictory opposite [Gegenteil] of this one. Here there is a dichotomy, then, according to which, if one of the two is true, the other must be false, and conversely’ (JL §77n1 9:130).<sup>21</sup>

We are now in a position to show how this treatment of division and determination can help us make sense of Kant’s understanding of conceptual analysis, and with it, analytic judgments. Yet before we do so, I want to make sure that three points related to logical division have been sufficiently emphasized. First, the specific aspect of the concept that is being ‘divided’ is its *Umfang* or *Sphäre*. Second, the process of division occurs through progressive determination of a given concept’s containment-relations with other concepts, such that the intension of each of the members of the division (i.e, each of the members of the divided concept’s extension) consists in the original intension plus an *additional* mark. Third, such determination of (or addition to) conceptual intensions is an

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<sup>21</sup> These features of division raise further questions concerning the possibility that the categories represent the division of the highest concept, because though Kant clearly holds that they provide *exhaustive* determinations of these concepts, it is hard to see how they can engender the right sort of *exclusivity*, especially across ‘Titles’, insofar as one and the same object can be, say, both a unity, something real, a substance, and something actual (existent).

operation which cannot be grounded solely upon the concept to be divided, but requires that we go *outside* what is contained in the divided concept and compare it with some further thing.

§38 Hopefully this last point calls to mind Kant's well-known discussions of the conditions for something's being a *synthetic* judgment. In any case, let us now finally transition directly to this other fundamental logical operation that can be performed with concepts – namely, the *analysis* [Zergliederung, Analyse, Auflöslung] of a concept. We can begin by quoting at length the relevant passages from the 'Introduction' to the KrV (B-edition §IV) and the 'Preamble' to *Prolegomena* (§2 et seq), in order to get a preliminary sense for how Kant's conception of analyticity will be grounded in our current topic:

In all judgments in which the relation of a subject to the predicate is thought (if I consider only affirmative judgments, since the application to negative ones is easy) this relation is possible in two different ways. Either the predicate B belongs to the subject A as something that is (covertly) contained in [enthalten in] this concept A; or B lies entirely outside [ganz außer] the concept A, though to be sure it stands in connection [Verknüpfung] with it. In the first case I call the judgment *analytic*, in the second *synthetic*. [...] One could also call the former *judgments of clarification* [Erläuterung], and the latter *judgments of amplification* [Erweiterung], since through the predicate the former do not add [hinzutun] anything to the concept of the subject, but only decompose [zerfallen] it by means of analysis [Zergliederung] into its component concepts [Teilbegriffe], which were already thought in it (though confusedly [verworren]); while the latter, on the contrary, add to the concept of the subject a

predicate that was not thought in it at all, and could not have been extracted [herausgezogen] from it through any analysis. (B10-11)

Analytic judgments say nothing in the predicate except what was already actually thought in the concept of the subject, though not so clearly nor with the same consciousness. If I say: All bodies are extended [ausgedehnt], then I have not in the least amplified [erweitert] my concept of body, but have merely resolved [aufgelöst] it, since extension [Ausdehnung], although not explicitly said of the former concept prior to the judgment, nevertheless was actually thought of it; the judgment is therefore analytic. By contrast, the proposition: Some bodies are heavy, contains something in the predicate that is not actually thought in the general concept of body; it therefore augments [vergrößert] my cognition, since it adds [hinzutut] something to my concept, and must therefore be called a synthetic judgment. (*Prol.*, 4:266-7)

Bracketing the notion of a synthetic judgment entirely for the time being, we can see that the *analysis* of a concept makes ‘explicit [ausdrücklich]’ the concept’s *intension*, or what is contained (or ‘thought’) *in* the concept, even if ‘not clearly’ and only ‘confusedly’. Analytic judgments ‘bring to light [erläutern]’ this content by stating these containment-in relations. In this way, analysis makes ‘*distinct* [deutlich]’ our consciousness of what is thought ‘in’ these concepts; to ‘analyze [zergliedern] that concept’ just is (i.e.) ‘to become conscious of the manifold that I always [jederzeit] think in it’ (B11). As Jäsche’s *Logik* (§V) has it:

*distinctness* [Deutlichkeit] *in concepts*...rests on the analysis of the concept in regard to the manifold that lies contained within it. [...] Now if we break up [lösen auf] the concept...into its individual constituent parts [einzelne Bestandteile], we make it distinct [deutlich] for ourselves through this analysis. (9:35)



Kant calls the expression of the results of analysis the *exposition* of a concept.<sup>22</sup>

Now, we can surmise that, since analysis has to do with the transformation of the degree of consciousness we have in relation to a conceptual intension, Kant will proceed to treat analyticity itself (i.e., the doctrine of analytic judgments and the ground of their ‘truth’) from within a robustly ‘intensional’ context. As we shall see below, this suspicion will be confirmed, and hence entails that any attempted ‘refutation’ of Kant’s position from within the strictures of an extensionalist point of view will, to say the least, beg questions about the fundamental nature of the subject-matter of logic.<sup>23</sup>

Yet, to connect analysis more immediately to our previous discussion, we can see that *analysis* is in effect the *inverse* of the process of logical *division* of a concept: the first (analysis) dissolves a whole into its parts by identifying what is (already) contained ‘in’ (or above) a concept, while the second (division) collects and organizes additional parts into a whole by specifying what is contained ‘under’

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<sup>22</sup> Cf. JL §105: ‘The *expounding* [Exponiren] of a concept consists in the connected (successive) representation of its marks, insofar as these are found through analysis [Analyse]’ (9:143). Cf., also JL §98. The *Reziprozitätsgesetz* (cf., §34) would seem to imply that the exposition is *identical* to the concept, and likewise that two concepts with the same exposition are actually identical, etc.

<sup>23</sup> See, for example, L.W. Beck’s critical ‘Remarks on the Distinction Between Analytic and Synthetic’, *Philosophy and Phenomenological Research*, 9.4 (June 1949), 720-727. Beck argues against J. Wild and J.L. Coblitz, who give an ‘extensional’ class-inclusion interpretation of concept-concept predication, such that ‘[t]he only clear meaning they can attach to the word ‘includes’ lies in its spatial connotation. But we shall see that the spatial connotation makes it possible for them to reduce Kant’s account to nonsense. [...] [W]hen Kant says, ‘S includes P’, he means that P is included in the concept of S and not that all the members of P are included among the members of S. Kant is using the word ‘includes’ in an intensional sense. He means that P is the genus of S, its intension is less than the intension of S, and its intension can be found by the analysis of the intension of S’ (720-1).

(or below) a concept, though ‘outside’ of it. This point is expressed also nicely in Jäsche’s *Logik*:

To take apart [teilen] a concept and to divide [einteilen] it are thus quite different things. In the taking apart [Teilung] of a concept I see what is contained *in* it (through *analysis* [Analyse]), in the division [Einteilung] of the concept I consider what is contained *under* it. Here I divide the sphere [Sphäre] of the concept, not the concept itself. (JL §110n1, 9:146)<sup>24</sup>

Hence, from these three passages, we can note that, unlike analysis,<sup>25</sup> division is something that involves the ‘amplification’ or ‘augmentation’ of a concept through a kind of ‘synthesis’ with another ‘content’ not already contained within its intension – although this is a merely ‘conceptual’ addition of one concept with two opposing paths or branches ‘downwards’ from itself in the hierarchy. This is not yet, to be sure, the full-fledged synthesis that is the subject-matter of metaphysics, which requires that we unite two concepts in a ‘third thing’.<sup>26</sup> But in any case, by going through such a process of division, and noting the different

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<sup>24</sup> Cf., R3029 [1780s]: ‘*Divisio sphaerae, non conceptus* (– ist von *analysis* unterschieden)’ (16:622).

<sup>25</sup> Cf., JL §V: ‘By thus making it distinct, however, we add [setzen hinzu] nothing to a concept; we only explain [erklären] it’ (9:35). Compare this to the comment about *synthetic* judgments: ‘if I say: ‘All bodies are heavy’, then the predicate is something entirely different from that which I think in the mere concept of a body in general. The addition [Hinzufügung] of such a predicate thus yields a synthetic judgment’ (B11). Compare also the first ‘remark’ at JL §VIII on the difference between *analytic* and *synthetic* marks: ‘The former [analytic marks] are partial concepts [Teilbegriffe] of my *actual* concept (marks that I already think therein), while the latter are partial concepts of the merely *possible* whole [ganze] concept (which is supposed to *come to be* through a synthesis of several parts [Teile]). The former are all *concepts of reason*, the latter can be *concepts of experience*’ (9:58). Cf., ‘analytic’ vs. ‘synthetic’ distinctness at JL 9:63.

<sup>26</sup> In this regard, it might even be seen as merely ‘fictional’ synthesis through arbitrary determination – cf., R2890 [1760-68]: ‘The subordination of concepts emerges either analytically through abstraction or synthetically through fiction [durch die fiction]’ (16:563).

lines of addition (of further ‘determination’) that one can make to the content (intension) of concepts, what is made ‘distinct’, Kant claims, is our consciousness of the *extensions* of these concepts: ‘the distinct [deutliche] consciousness of their extension [Umfang]...is furthered through logical *division* [Einteilung] of them’ (JL §98, 9:140; my ital.).

Here we have reason, then, to introduce Kant’s distinction between a *logical* predicate, on the one hand, and a *real* predicate, or what Kant calls explicitly the ‘determination [Bestimmung] of a thing’ in the ‘Transcendental Ideal’:

Anything one likes can serve as a *logical predicate*, even the subject can be predicated of itself; for logic abstracts from every content [Inhalt]. But the *determination* [Bestimmung] is a predicate, which goes beyond the concept of the subject and enlarges [vergrößert] it. Thus it must not already be included [enthalten] in it. (B626)

Implicitly then, when either we predicate the subject-concept of itself, *or* we predicate of the subject-concept *what is ‘already included in it’*, the predicate concept in each case is functioning as a predicate *only* in a ‘merely’ *logical* sense of the term – namely, the sense in which *anything* which is in the position of ‘ $\beta$ ’ in ‘ $\alpha$  is  $\beta$ ’ can be called ‘the predicate’, no matter what its ‘content’. When we take notice of the ‘content’ of the two concepts, however, we can distinguish between either of these two acts of predication, on the one hand, and one in which the ‘content’ of the predicate would ‘go beyond’ and ‘enlarge’ the ‘content’ of the subject. In this latter case, the predicate-concept represents a *real* predicate, because it serves as a

real ‘determination’ of the subject-concept. This follows from what we have said above about what occurs when we predicate one or the other members of the division of a concept of the divided concept itself: we further *determine* it, with a ‘real’ predicate. It is equally evident that the predication involved in an analytic judgment is not ‘real’ predication, nor is it ‘determinative’ predication. This is something Kant makes clear in the so-called ‘Duisburg Nachlass’ from 1773-75: ‘ $\beta$  must be a determination [Bestimmung] of  $\alpha$ , and not an analytical predicate [kein analytisches Prädikat]’ (R4674; 17:645).

I will return to the correct description of the sort of ‘predication’ that is involved in analytic judgments in a moment, but before we close our discussion of the contrast between ‘analysis’ and ‘division’, let me introduce as well the ‘operation’ which Kant thinks takes us in the opposite direction along the containment-hierarchy. That is, if division is a process of synthetic *progression* (‘downwards’) through possible *additions* to the content of a given concept, then the ‘articulation’ of the intension of a concept itself in analysis represents the possibility for a *regression* (‘upwards’) <sup>27</sup> through *subtraction* of elements in the intension of a concept. With this picture in mind, then, we can introduce another important operation on concepts that Kant recognizes, since the process of

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<sup>27</sup> Cf., R3890 (1766-68): ‘*Logica divisio. Progressus per synthesis, regressus per analysis*’ (17:329).

subtraction from a given intension is precisely what Kant calls *abstraction* [Absonderung].<sup>28</sup>

Here, however, we must heed Kant's constant caution against misusing this term, since by subtracting or abstracting in relation to a given intension, we do not thereby arrive at some new entity or concept, but rather retain the *same* concept, only considered in abstraction from some of the constituent concepts in its containment-Inhalt (cf., JL §6 9:95; DWL 24:753-4; WL 24:907-8; etc.). To take the example of abstraction given by Jäsche (JL §6), we begin with the concept of 'scarlet cloth'. If I 'think only of the red color', then I 'abstract from' the component concept 'cloth', and if I 'abstract from this too' and 'think the scarlet as [als] a material stuff [Stoff] in general', then what Kant wants to say is that the very *same* concept (of 'scarlet cloth') will have acquired a more abstract *use* [usus] (a use *as* representative of 'material stuff in general'). This is to contrast with any claim that, in abstraction, we arrive at a wholly new concept (say, of 'material stuff in general') out of the original concept. We do not abstract *something* [abstrahere aliquid; Etwas], but rather we abstract *from something* [ab aliquo; von Etwas] that we know through analysis is contained in the concept's intension, in order to *use* the concept for some other purpose.<sup>29</sup>

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<sup>28</sup> Compare the early [1755-58] Reflexion R2885: 'Absonderung ist subtraction' (16:559).

<sup>29</sup> For some, this description of abstraction will point in the direction of Kant's doctrine of the possibility of the synthetic a priori judgments in mathematics – in which a 'concrete' figure can be thought in abstraction from some of its 'content', so as to allow it to stand for the figure 'in general' – and will harken back to the dispute between Locke and Berkeley about abstract,

This gives us at least one important hint about how Kant views concept-formation or acquisition, since it would seem to suggest that he does *not* hold a picture in which we form *new* concepts through simple abstraction from (concrete) representations of individuals.<sup>30</sup> Rather, through abstraction we are only able to use given concepts *as if* they were more abstract than they are. This implies that we must *already* possess the more abstract concepts for which these given ones are being used as stand-ins.<sup>31</sup>

Unfortunately, I cannot pursue this thread here, for now we must focus upon the operation which gives us guidance in such ‘abstractive’ uses of concepts in the first place – namely, the *analysis* of the containment-‘Inhalt’ of a given concept. In particular, I want to turn (finally) to the judgments which express the results of such an analysis, i.e., *analytic judgments*, as well as to the precise connection that Kant takes these judgments to bear to the fundamental formal-logical principles of identity and contradiction. In fact, we shall see below that

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general ideas. But what is more important for the present account is the possibility that the doctrine of abstraction will give us a foothold from which to explain how we could ever come to ‘know’ those special sorts of ‘generalities’, namely, the logical forms of judgment. Do we take up a concrete representation of a judgment and think of it *as* a judgment ‘in general’? I take up this question in the following chapter (VI).

<sup>30</sup> Compare, in this regard, the difference that Peter Schulthess (*Relation und Funktion*) marks between what he calls ‘intensional’ and ‘extensional’ abstraction: ‘in an intensional logic abstraction is understood as subtraction, because it pulls out (subtracts) a mark from the *concept* of a thing. ‘Abstraction is subtraction’ (R2855). In an extensional logic, abstraction is not a subtraction of a mark from afrom a concept, but rather an action which, through the comparison of many *individuals*, pulls out a mark which is common to them all’ (36n4; my ital.). Cf., also R.L. Anderson, ‘It adds up after all’, 508f.

<sup>31</sup> On my reading then, and despite appearances to the contrary (in e.g., Jäsche’s *Logik* §6n1), Kant would not fall afoul of Geach’s criticisms of ‘abstractionism’ as marshaled in *Mental Acts* (London: Routledge & Kegan Paul, 1971), §§6-11.

Kant actually makes implicit use of another principle as well, concerning concept-*substitution*, which will prove essential to his doctrine of ‘truth’ of analytic judgments – though this will also give us reason to think that the ‘truth’ at issue is itself of a very peculiar sort.

### B. Identity, Contradiction, and Substitution

§39 Let us first take a bit of stock. We have thus far surveyed those doctrines which form the basis for Kant’s understanding of the logical structure of conceptuality. I have argued that these doctrines are best interpreted as setting forth a version of what I called a ‘Porphyrian’ model of concepts, in which the universe of concepts forms a tree-like structure, organized according to relations of genus and species, and ‘anchored’ at the top to a *conceptus summus*, but open-ended at the bottom, since (*in principle*) lacking any *infima species*. We then spent some time reconstructing Kant’s version of this model, drawing largely upon his remarks concerning notions such as ‘containment’, ‘determinability’, ‘generality’, ‘analysis’, and (logical) ‘division’.

We have also noted throughout that a given concept  $\beta$  could be considered according to two different aspects – first, with respect to what ‘higher’ concepts (genera) were contained ‘in’  $\beta$ , in its *Inhalt*, and second, with respect to which ‘lower’ concepts (species) were contained ‘under’  $\beta$ , in its *Umfang*. Any given concept, then, ‘belongs’ to two different sorts of collections: first, it belongs to

the *Inhalt* of each concept it contains under itself, and second, it belongs to the *Umfang* of each concept that it contains ‘in’ itself. Put another way, in the first case, a concept is connected with other concepts to form an *Inhalt*; in the second, it is connected with other concepts to form an *Umfang*.

At several points in his writings, Kant uses the sign for addition ‘+’ to represent a ‘connection [Verknüpfung]’ of concepts that constitutes the *Inhalt* of a concept, and I will follow him in this usage. For instance, in a *Reflexion* from the 1760s, Kant gives the following as an equivalent representation of the analytic judgment ‘All bodies are extended [ausgedehnt]’: ‘To everything  $x$  which the concept of body ( $\alpha + \beta$ ) applies [zukommt], the concept of extension [Ausdehnung] ( $\beta$ ) applies as well’ (R3127, 16:671; cf., JL §36n1, 9:111).<sup>32</sup>

As we saw at the end of the previous chapter, an analytic judgment is one in which ‘the predicate  $B$  belongs to the subject  $A$  as something that is (covertly) *contained in* this concept  $A$ ’ (B10; my ital.). (In the previous example from the *Reflexion*,  $A$  is ‘body’ and  $B$  (our ‘ $\beta$ ’) is ‘extension’.) To make the inclusion of  $\beta$  in  $A$  overt, Kant replaces the simple expression ‘body’ with a representation that expresses the *Inhalt* of ‘body’: ‘ $\alpha + \beta$ ’. Once we make this substitution, we can then see straightaway how this judgment does not ‘add anything to the concept of the subject, but only break[s] it up by means of analysis [Zergliederung] into its component concepts [Teilbegriffe], which were already thought [gedacht] in it

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<sup>32</sup> I have changed Kant’s own italic Roman letters to Greek lower-case, for regularity.



(though confusedly)' (B11). Hence the legitimacy of such judgments is grounded on the fact that the analysis [Zergliederung] of the *Inhalt* of the subject-concept (here, 'body') will show us that it consists in (at least) two 'higher' concepts (' $\alpha + \beta$ ').<sup>33</sup>

As we also noted in more recent sections, Kant associates the 'addition' of conceptual *Inhalte* with the process of logical *division* [Einteilung]. The logical division of a concept consists in the partition of the *Umfang* of a concept, such that the indefinitely many concepts not contained 'in' a concept's *Inhalt* will be arranged according to opposites, and branches will be drawn to each in the pair, and then to the next, and so on, *ad infinitum*. (Again, there are no lowest species; the 'material' for further division never runs out.) All of these other concepts will be contained 'under' the original divided concept along some branch, and so will in turn include this concept in their *Inhalte*.

Conversely, in the analysis of a given concept  $\gamma$ , we display which 'higher' concepts  $\gamma$  contains in its *Inhalt* by representing them in a concatenation such as ' $\alpha + \beta$ '. We saw above that Kant calls this successive elaboration of the 'marks' contained in the *Inhalt* of a concept the 'exposition [Erörterung; expositio]' of a

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<sup>33</sup> I say 'at least' because in the *Dohna-Wundlacken Logik* Kant suggests, in a discussion of 'Analysis' – as the act in which 'I seek out marks in the concept that I already have' – that, in the case of 'body', its 'exposition' will show us that there are three concepts ('extended', 'composite', and 'divisible') which 'lie in it already' (24:757).

concept.<sup>34</sup> Finally, the concept  $\gamma$  belongs ‘under’ whatever concepts are included in the string of ‘marks’ linked together by ‘+’-signs. So, in our previous example of the analysis of ‘body’ ( $\gamma$ ), the presence of ‘extended’ ( $\beta$ ) in the exposition of the concept ‘body’ ( $\alpha + \beta$ ) shows that ‘body’ belongs to the *Umfänge* of both the concept ‘extended (thing)’ and whichever concept ‘ $\alpha$ ’ stands for; that is, ‘body’ is a ‘member [Glied]’ of their *Umfänge*.

It will also be important to recall that, for Kant, the partition instituted by logical division is a *dichotomous* one. That is, logical division consists in the exclusive and exhaustive partition of an *Umfang*. Thus, for any concept  $\alpha$ , its logical division will consist in the creation of exactly *two* ‘lower’ concepts, each of which will belong ‘under’  $\alpha$ , but which stand in ‘contradictory opposition [Entgegensetzung]’ to one another (cf., JL §111n, etc.). This, in turn, helps us to highlight a second restriction on logical division, one which was mentioned though not fully thematized in our discussion of the principle the determinability [Bestimmbarkeit] of concepts (B599; cf., **IV**, §31). This principle tells us that it is only with respect to any concept  $\beta$  not *already* contained ‘in’  $\alpha$ ’s *Inhalt*, that either  $\beta$  or its ‘contradictory opposite’ – something which Kant designates by the prefixing of ‘non-’ to a concept (so, here, non- $\beta$ )<sup>35</sup> – can ‘apply to [zukommen könne]’  $\alpha$ .

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<sup>34</sup> Cf., again, JL §105: ‘The expounding [Exponiren] of a concept consists in the connected (successive) representation of its marks, insofar as these are found through analysis’ (9:142-3).

<sup>35</sup> Cf., 1755 *Nova dilucidatio*: ‘the opposite [oppositum] is expressed by the little word *non*, and its cancellation [remotio] is likewise expressed by the little word *non*’ (1:389).

The reasoning behind this restriction is as follows: suppose  $\delta$  is already contained in  $\alpha$ . Hence the *Inhalt* of  $\alpha$  consists in something of the form ' $\delta + \Gamma$ ', where ' $\Gamma$ ' stands for some collection of additional 'higher' concepts. Now suppose  $\delta$  were to serve as the vehicle for the logical division of  $\alpha$ . Then the *Umfang* of  $\alpha$  would have to be divided into two mutually exclusive and exhaustive lower concepts, the *Inhalte* of which would consist in ' $\alpha + \delta$ ' and ' $\alpha + \text{non-}\delta$ ' respectively. But since, as in the above example involving 'body', the ' $\alpha$ ' in these new expressions can be exchanged for the exposition the *Inhalt* of  $\alpha$  – i.e., ' $\delta + \Gamma$ ' – then the *Inhalt* of these lower concepts can be represented by ' $\delta + \Gamma + \delta$ ' and ' $\delta + \Gamma + \text{non-}\delta$ ', respectively. The latter 'concept' consists in something that violates the Principle of Contradiction [Satz des Widerspruchs], which states that 'no predicate pertains to [kommt zu] a thing which contradicts it' (B190; cf., 'Falsche Spitzfindigkeit' §6, 2:60), since non- $\delta$  and  $\delta$  contradict one another. We have already seen that Kant takes such 'concepts', which purport to consist in the 'connection' of some other concept ( $\delta$ ) with its logical 'opposite' (non- $\delta$ ), to be logically *impossible*, such that contradiction 'entirely annihilates [gänzlich verneinte] and cancels them out [hebt sie auf]' (B190).

This shows in a straightforward manner that the rules governing '+' in Kant's formal logic are not equivalent to those governing '+' in arithmetic.<sup>36</sup>

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<sup>36</sup> This is true as well of Leibniz's systems of 'real addition' (cf., G vii.236-247, esp. vii.246), as well as of Boole's system in *The Laws of Thought*, II.9.

There is, of course, nothing ‘impossible’ about summing a given number  $+N$  with its ‘quantitative’ opposite  $-N$ , even if the result will still be a form of ‘nothing [nichts]’ (0). Moreover, this result can form ‘part’ of a whole, as in the case of ‘ $+N + -N + M$ ’, whose final result will simply equal ‘ $M$ ’. In formal logic, however, the presence of *logical* opposites  $\beta$  and non- $\beta$  in the exposition of an *Inhalt* ‘cancels out’ the *whole* (‘concept’), such that, as Kant puts it in his early 1763 essay, entitled ‘An attempt to introduce the concept of negative magnitudes in philosophy’, the result of this sort of ‘logische Verknüpfung’ is ‘absolutely nothing, a negative, unrepresentable nothing [gar nichts (nihil negativum irrepraesentabile)]’ (2:171). (The arithmetical ‘nothing’ is, by contrast, said here to be merely a ‘privative, representable nothing [nihil privativum repraesentabile]’ (2:172).)<sup>37</sup>

It is worth bringing to the fore as well the fact that Kant tacitly accepts something like the following rule of substitution:

*Concept-Inhalt* Substitution: Assume  $\gamma$  is a concept and ‘ $\alpha + \beta$ ’ expresses the *Inhalt* of  $\gamma$ . Then ‘ $\gamma$ ’ and ‘ $\alpha + \beta$ ’ are intersubstitutable.

We can see the ground for such a rule if we recall the criterion that must be met if two concepts are to be intersubstitutable – or, in Kant’s terms, the criterion which must be met if two concepts  $\alpha$  and  $\beta$  are to be counted as ‘convertible concepts

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<sup>37</sup> As Leibniz and Boole also note, a similar divergence from arithmetic can be seen in the operation of *self*-addition, since ‘ $\alpha + \alpha$ ’ is merely equivalent to ‘ $\alpha$ ’.

[Wechselbegriffe; conceptus reciproci]:  $\alpha$  and  $\beta$  are intersubstitutable if they have the ‘one and the same [einerlei] *Sphäre*’ or *Umfang* (JL §12, 9:98; JL §107, 9:144). If a concept and its *Inhalt* are intersubstitutable, then it must be because they are each concepts which have the same ‘sphere’.

Hence the rule for *Inhalt*-substitution derives its force from a more general rule of substitution:

*Concept-Concept* Substitution: Any two concepts,  $\alpha$  and  $\beta$ , are intersubstitutable if and only if  $\alpha$  and  $\beta$  have the same sphere (*Umfang*).

Yet it seems to follow straightforwardly enough that a concept and the concatenation of the marks (‘component concepts’) contained in its *Inhalt* do indeed pick out one and the same ‘sphere’, since with each ‘+’, we arrive further down the ‘tree’ of concepts, each time arriving at a concept whose sphere has undergone a further restriction in ‘size’ until we arrive at a sphere that is identical to the concept in question – remembering all the while that the sphere (*Umfang*) of a concept consists in those ‘lower’ *concepts* contained ‘under’ it in the conceptual hierarchy.

Note, however, that because of the exclusivity involved in the process of logical division, we can be confident that there is *exactly one* route downward from the highest concept to any given location on the conceptual hierarchy. Hence, if we reverse the point of view, and consider those concepts located ‘above’ a given spot occupied by two ‘convertible concepts’, then we can see at once that this

same one route confers the same *Inhalt* upon both concepts. Therefore, two concepts with exactly the same *Umfang* must necessarily share the same *Inhalt* as well, and Kant's 'official' rule for concept-concept substitution is equivalent to one which reads:

*Concept-Concept* Substitution: Any two concepts,  $\alpha$  and  $\beta$ , are intersubstitutable if and only if  $\alpha$  and  $\beta$  have the same *Inhalt*.

Now, as we shall see, and as many readers might suspect, there are problems which might arise from an unrestricted use of this substitution-principle. In particular, many contemporary readers might be worried that unrestricted use of such a substitution-principle will be in danger of leading to all sorts of invalid inferences, especially in so-called 'intensional' contexts.<sup>38</sup> And while Kant's logic, I have argued, is itself an intensional logic, and these principles of substitution ('equivalence') are themselves thoroughly 'intensional', it is not clear that Kant has anything like a well-worked out position for, e.g., *de re* vs. *de dicto* ascriptions of concepts.<sup>39</sup> In any case, the containment-connection between

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<sup>38</sup> We might bring to mind the problematic inferences which have been found to surround the following four principles, which I take from Edward Zalta's *Intensional Logic and the Metaphysics of Intentionality* (Cambridge: MIT, 1988): 1. Existence-committal ('Existential') generalization (from ' $\alpha$  is  $\beta$ ' to "There exists some  $x$  that is  $\beta$ "); 2. Identification-committal ('Existential') generalization (from ' $\alpha$  is  $\beta$ ' to "Some (existent or otherwise)  $x$  is  $\beta$ "); 3. Substitution in modal or epistemic contexts ("Substitutivity", from 'necessarily,  $\alpha$  is  $\beta$ ' to 'necessarily,  $x$  that is identical to  $\alpha$  is  $\beta$ '); and 4. Extensionalification ("Strong extensionalism", from 'necessarily, all and only  $\alpha$  is  $\beta$ ' to 'necessarily,  $\alpha$  is identical to  $\beta$ '). (Zalta introduces such *problemata* in his (op.cit.), Ch.1.)

<sup>39</sup> Though we might find the elements of such an account in Kant's distinction between the 'subjective origin' of certain cognitions, as either historical and rational cognition, or 'free' cognition *ex principiis* and 'mechanical' cognition *ex datis* (cf., JL §III, 9:22f).

*Inhalte* has been (*ex hypothesi*) laced through and through with necessity. Perhaps, then, it is at least less obvious that these principles will mislead us in all such notorious contexts.

§40 Aside from a substitutivity principle, what other principles does Kant put forward as basic, and how are they related to the structures which define the containment-relations? One such principle is the principle of contradiction. This principle has already been put to use in an earlier chapter (III) to help elucidate the notion of judgmental *quality*, and as well as more recently in our explanation of logical division. It is now time to give it its proper place as one of the fundamental principles of Kant's logical system.

The first thing to note, as we did in our earlier discussion, is that the 'opposition' in question is not one which initially arises at the level of the semantic assessment of whole judgments – i.e., one which obtains between the truth-values. Rather, the relevant 'opposition' is the *predicative* opposition between affirming and denying concepts of one another. This is evident from Kant's treatment of the principle in the *Transcendental Analytic*, where he states the principle as: 'no predicate pertains to [kommt zu] a thing which contradicts it' (B190). A similar formulation can be found in his 1762 essay on the syllogism, where Kant puts the principle as follows: 'to no subject pertains [competit] to a predicate opposed to it [ipsi oppositum]' (2:60).

Since, as we have seen, Kant designates the contradictory opposite of anything  $\alpha$  by ‘non- $\alpha$ ’, then we can say that non- $\alpha$  never pertains, or belongs to  $\alpha$ , and vice versa. As the copula is taken by Kant to express such a generic relation of belonging or pertaining, then, according to this principle, judgments of the following form will always be correct: ‘ $\alpha$  is not non- $\alpha$ ’. And as this principle – like all ‘principles’ – is ‘indemonstrable’,<sup>40</sup> we can call the principle of contradiction expressed in this form an ‘axiom’ of predication.<sup>41</sup>

Throughout his work, Kant takes the principle of contradiction to be closely related to another indemonstrable ‘axiom’, what Kant calls the principle of ‘agreement [Einstimmung]’ or ‘identity [Identität]’: ‘to any subject pertains a predicate identical to it [ipsi identicum]’ (2:60). The most obvious application of this rule will be to what Kant calls ‘tautological’ propositions, by which he means those of the form: ‘ $\alpha$  is  $\alpha$ ’, in which the ‘identity of concepts’ involved in the

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<sup>40</sup> Cf., JL §33: ‘Immediately certain judgments are *indemonstrable* and thus are to be regarded as elementary propositions [Elementarsätze]’; JL §34: ‘Immediately certain judgments a priori can be called *principles* [Grundsätze], insofar as other judgments are proved from them, but they themselves cannot be subordinated to any other. On this account they are also called principles [Principien] (beginnings)’ (9:110).

<sup>41</sup> Here I use ‘axiom’ in a modern sense, since technically, according to Kant’s own usage, it would be more appropriate to call the principle of contradiction an ‘acroama’, as it is an indemonstrable principle which ‘can be expressed only through concepts’, whereas ‘axioms’ are indemonstrable principles which can be ‘exhibited in intuition’ (JL §35, 9:111). This is behind the claim that Jäsche records in §36n1: ‘analytical principles are not axioms because they are *discursive*’ (9:111).

We might wonder whether Kant’s views are closer to ‘axiomatic’ conceptions of logic or ‘natural deductive’ understandings. Though it is at least arguable that Kant’s views shares elements with both, I agree with Mary Tiles’ judgment, in her ‘Kant’s Logic’ in *Handbook of the History of Logic*: ‘In modern terminology it is...fair to say that Kant is much closer to a natural deduction approach to logic than to either an algebraic or axiomatic approach’ (99n5). Hence, the ‘axioms’ here are ultimately to be interpreted as valid deductions with zero-premises.



subject-concept and the predicate-concept is ‘explicit [ausdrücklich]’ (JL §37, 9:111).<sup>42</sup> This, then, provides us with the following rule, our second ‘axiom’: judgments of the form ‘ $\alpha$  is  $\alpha$ ’ will always be correct.

Now, throughout his writings, Kant is not always clear about distinguishing between these two principles; or, rather, he will often refer to both by the single principle of contradiction.<sup>43</sup> By contrast, his early 1755 *Nova dilucidatio* argues that a principle of identity (which actually consists in the following pair of principles: ‘whatever is, is’, and ‘whatever is not, is not’) is actually *prior* to the principle of contradiction. (See section I, proposition II (1:389ff.)) The close affinity between these two principles is perhaps less surprising if we recall that the Amphiboly links ‘agreement [Einstimmung]’ and ‘opposition [Widerstreit; ‘conflict’]’ as the complementary logical concepts of comparison which correspond to affirmative and negative judgments. Perhaps we

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<sup>42</sup> The example given in this section of Jäsche’s text is: ‘der Mensch ist Mensch’. Later (JL §44n), we find ‘Einige Menschen sind Menschen’ being called ‘ein tautologische Satz’ (9:115). Kant gives another example of a tautology, this time in the form ‘if  $\alpha$  is  $\beta$ , then  $\alpha$  is  $\beta$ ’, in his 1795 *Zum ewigen Frieden*: ‘Man thut Keinem Unrecht..., wenn man nur Keinem Unrecht thut: folglich ist es leere Tautologie’ (8:350).

<sup>43</sup> In this he shares Leibniz’s tendencies; cf., ‘Animadversiones in partem generalem Principiorum Cartesianorum’ (1692): ‘The first of the truths of reason is the principle of contradiction, or, what comes to the same thing, that of identity’ (G iv.357). It is interesting, in light of Kant’s claims from Kant’s *Nova Dilucidatio*, to compare Kiesewetter’s *Grundriß*, §18: ‘This basic principle [Grundsatz] is called the principle of identity [Einstimmung] and of contradiction [Widerspruch] (*principium identitatis et contradictionis*). Whichever of the two principles one wishes to take as basic [zum Grunde legen], the other one can then be derived [ableiten] therefrom’. Kiesewetter gives the following reason for calling the principle of contradiction the basic principle: ‘because at the same time it expresses necessity through the negation of the opposite [Verneinung des Gegenteils]’ (i.e., the negation of the opposite of necessity) (ibid.). As the Anmerkung to §18 tells us, ‘something is necessary, whose opposite is impossible’; hence the negation of an impossibility is a necessity.

might just as well ascribe to Kant a belief in something like Geach's oft-repeated Thomistico-Aristotelian slogan: *eadem est scientia oppositorum*.<sup>44</sup>

What is more important is that, once we deploy our principle of concept-*Inhalt* substitution, then we can see that both axioms (identity and contradiction) can be extended to cover less trivial cases. For instance, the substitution principle guarantees that the following pairs of judgments are equivalent, for any concept  $\gamma$ , whose *Inhalt* consists in ' $\alpha + \beta + \dots$ ': (1) ' $\gamma$  is  $\alpha$ ' and ' $\alpha + \beta + \dots$  is  $\alpha$ '; (2) ' $\gamma$  is  $\beta$ ' and ' $\alpha + \beta + \dots$  is  $\beta$ '; and (3) ' $\gamma$  is ...' and ' $\alpha + \beta + \dots$  is ...'. Because, in each case, we get something of the form ' $x + \dots$  is  $x$ ', we then can see that these are all correct judgments by virtue of the law of identity (agreement). And through similar applications of the rule of substitution, we can see that, given a concept  $\gamma$  as defined above, judgments in each of the following forms will always be correct by virtue of the law of contradiction (opposition): ' $\gamma$  is not non- $\alpha$ ', ' $\gamma$  is not non- $\beta$ ', ' $\gamma$  is not non-...?'

This extension via substitution is clearly necessary if we are to see how these two principles are supposed to be 'sufficient [hinreichend]' (B190) to let us cognize the 'truth' or 'correctness' of judgments which turn out to be 'analytic', but whose concepts are such that, when presented in unanalyzed manner, do not straightaway seem to provide us with instances of these general rules. Kant

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<sup>44</sup> Geach furnishes this slogan in many publications; cf., in his *Logic Matters* (Berkeley: California, 1980), 'Law of Excluded Middle' (79), and 'Assertion' (266).

himself clearly relies upon the possibility of such an extension of the principles of identity and contradiction in the afore-quoted passage from the *Analytic of Principles*. There Kant claims, first, that ‘the concept itself must necessarily be affirmed [bejaht]’ of ‘that which as a concept *already lies and is thought in* the cognition of the object’, and secondly, that ‘the contrary of that which as a concept *already lies and is thought in* the cognition of the object is always correctly denied [verneint]’ (B190; my ital.). In each case, ‘that which lies and is thought in’ the given cognition is nothing other than its conceptual *Inhalt*, though possibly represented in an obscure fashion. The passage from implicit or ‘non-explicit [nicht-ausdrückliche; implicita]’ identity or contradiction to explicit can only be achieved through the successive substitution of *Inhalte* for concepts on the side of the subject, until the predicate or its opposite shows up in the representation of subject-concept.<sup>45</sup>

The above account makes good sense, I think, of the following passage from the unpublished manuscripts connected to Kant’s 1793-5 essay on the progress of metaphysics in Germany since the time of Leibniz and Wolff (*Welche Fortschritte*). This passage is of particular interest for our purposes since, in it, Kant is concerned to *distinguish* analytic judgments in general from what he calls ‘identical’ judgments and what we saw Jäsche call ‘tautologies’:

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<sup>45</sup> Leibniz had already suggested a similar account of the justification of (implicit) ‘identity’ judgments by way of such a progressive substitution process. See his *Specimen calculi universalis* from 1679-86(?) (Gvii.218ff), as well as his letter to De Volder, April 1702 (G ii.239) and a fragment entitled ‘Dialogus’ from August 1677 (G vii.191).

Judgments are *analytic*, we may say, if their predicate merely presents clearly [klar] (*explicite*) what was thought, albeit obscurely [dunkel] (*implicite*), in the concept of the subject; e.g., any body is extended. If we wanted to call such judgments ‘identical’ [identische], we should merely cause confusion [Verwirrung]; for judgments of that sort contribute nothing to the distinctness [Deutlichkeit] of the concept, something which all judging must yet aim at, and are therefore called empty [leer]; e.g., any body is a bodily (or in other words a material) entity [ein jeder Körper ist ein körperliches...Wesen]. Analytical judgments are indeed *founded* upon identity [*gründen sich auf der Identität*], and can be resolved into it [darin aufgelöset], but they *are* not identical, for they require analysis [Zergliederung] and thereby serve the elucidation [Erklärung] the concept; whereas by identical judgments, on the other hand, *idem per idem* nothing whatever would be elucidated [erklärt]. (20:322)

And though Kant here makes implicit reference only to the principle of identity and the theorems which we derived from this principle by way of the substitution-rule, he goes on to say later in the same passage that ‘all analytical judgments...are founded entirely upon [sich gänzlich gründen auf] the principle of contradiction’ (20:323), and we can assume that he must have in mind those derived theorems concerning contradiction as well.

But what is important about the passage is, first of all, that, even as they are to be distinguished from one another, both tautological and ‘resolved’ analytic judgments alike find the ‘ground’ of their ‘truth’ or ‘correctness’ in the very same simple axioms and theorems.<sup>46</sup> But this simply makes even more evident that the

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<sup>46</sup> In fact, in a *Reflexion* from the 1773-5 Duisburg Nachlass, Kant writes that ‘analytical predicates are identical and tautological’ (R4764, 17:645).

‘identity’ (agreement) at issue in the case of non-tautological analytic judgments is one which concerns only the ‘Teilbegriffe’ of subject-concept (allowing, for the moment, each concept to count as one of its own ‘component concepts’), and so is not the identity of intersubstitutivity (of ‘Wechselbegriffe’) we met with above, which was cashed out in terms of the strict identity of *Umfänge* (and hence, *Inhalt*). Rather, this sort of ‘identity’ or ‘agreement’ can take the form of *either* a complete *or* partial ‘overlap’ of the component concepts ‘thought in’ each of the concepts. (Kant is not saying that, for instance, in the judgment ‘A body is extended’, the concept ‘body’ is strictly identical to (intersubstitutable with) the concept ‘extended’, but instead that what is thought in ‘extended’ is also thought in ‘body’.)

In their simplest form, then, Kant’s two basic axioms state that judgments of the form ‘ $\alpha$  is  $\alpha$ ’ and ‘ $\alpha$  is not non- $\alpha$ ’ are always ‘true’ or ‘correct’. Before we get too far along, however, we must ask: what is the meaning of ‘is’ in these forms? I said above (repeating a discussion from the end of chapter **III** (§28)) that the copula (typically) expresses the affirming or denying of a belonging- or pertaining-relation between two concepts. Yet now that we have explored the dual aspects of conceptual containment-relations (‘in’ and ‘under’, via *Inhalte* and *Umfänge*), we are now very much alive to the fact that there is no ‘one’ belonging-relation. Because of this, being denoted by the single word ‘is’, the copula too must be infected with the same sort of duality. It is not enough, then, to say that

the copula expresses the logical ‘combination [Verbindung]’ of concepts in a judgment, for this ‘combination’ can clearly take two forms. That is, it would seem that any judgment of the form ‘ $\alpha$  belongs to  $\beta$ ’ can either be read as saying that  $\alpha$  belongs among those concepts which make up the the *Inhalt* of  $\beta$ , or as saying that  $\alpha$  belongs among the concepts which constitute the *Umfang* of  $\beta$ .

Perhaps we might regiment our language by introducing a separate copula for the intensional and extensional belonging relations.<sup>47</sup> But what is hard to see is how a judgment of the form ‘ $\alpha$  is  $\alpha$ ’ could be true on *either* reading of the copula. First of all, it is difficult to see how it could be the case that a concept  $\alpha$  could be included in its own *Inhalt*, for then (according to the principles of the

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<sup>47</sup> We might introduce instead notation for specifying whether we are talking about the intension or the extension of the concept itself. (Cf., above, footnote to §33.) Taking the latter route, we might write, e.g., ‘(body)’ to express the ‘Inhalt’ of the concept ‘body’, and ‘{body}’ to pick out its ‘Umfang’. Kant himself shows recognition of this sort of duality latent in predication in his early 1762 essay on syllogistic inference (*Falsche Spitzfindigkeit*). In §1 he treats the following two sequences of judgments as equivalent ways of expressing the same inference:

- 1a. Being a spirit [ein Geist sein] is a mark [Merkmal] of being rational [Vernünftige];
- 2a. Being rational is a mark of the human soul [menschliche Seele];
- 3a. Being a spirit is a mark of the human soul.
  
- 1b. Everything rational [alles Vernünftige] is a spirit,
- 2b. The soul of humans is rational,
- 3b. Therefore, the soul of humans is a spirit. (2:48)

We might say that, in the (a)’s, the judgment is being read ‘inhaltlich’, while in the (b)’s, it is being taken ‘umfänglich’. In effect, Kant equates sentences of the form ‘Being- $\beta$  is a mark of being- $\alpha$ ’ with those of the form ‘All  $\alpha$  is  $\beta$ ’. ‘Everything  $x$  which has  $\beta$  as a mark, has  $\alpha$  as a mark as well’ is equivalent to ‘everything  $x$  which is  $\alpha$ , is  $\beta$  as well’. Or, to use the notation introduced above: ‘ $\beta$  belongs to  $\langle\alpha\rangle$ ’.

containment-structure) this concept would have to be identified with some concept  $\alpha^*$  'higher' than itself, that  $\alpha$  contained 'in' itself. But then if  $\alpha^*$  were truly 'higher', it would have to contain less in its *Inhalt*, due to the law of reciprocity. Yet it is supposed to be identical to  $\alpha$ . Hence a contradiction.

The same law will give rise to an inverse problem if we try to take seriously the thought that  $\alpha$  could contain itself 'under' itself. And it would seem that both of these problems can be iterated indefinitely, as this process sets off the following regress:  $\alpha^*$  too would have to both 'be' itself, and be identified with a higher (and lower) concept  $\alpha^{**}$  that it contained in (and under) itself, as something higher (and lower), and so on up (and down) the \*'s, all of which would need to have an *Inhalt* (*Umfang*) that is both identical to and broader (narrower) than that of  $\alpha$ .

One solution, focusing on the first form of the problem, might be to take the first step in the exposition of every concept ' $\alpha$ ' to be something of the form ' $\alpha + \emptyset$ ', where ' $\emptyset$ ' stands for 'nothing', since, in a sense, there is nothing besides  $\alpha$  (nothing beyond itself) included in itself which constitutes its own *Inhalt*. Saying that  $x$  belongs to the *Inhalt* of  $\alpha$  just means that  $x$  shows up in at least one of the stages of successive (though equivalent) concatenation-expositions of the concept's *Inhalt*. Since, on the current proposal, every concept would then show up in the first round of exposition (' $\alpha + \emptyset$ '), it can count as belonging to its own *Inhalt*. Of course, Kant himself doesn't seem to say anything in this direction,

doesn't even seem to be aware of the problems which might emerge from the combination of the law of identity with the law of reciprocity. This is so, even though Kant is clearly aware of the 'dual aspect' of the copula and of predication.<sup>48</sup>

A final problem which we might note is one which will arise once we try to extend these principles to take into account the *quantity* of judgments, by considering such forms as 'All  $\alpha$  is  $\alpha$ ' and 'Some  $\alpha$  is  $\alpha$ ' (with respect to identity), as well as 'No  $\alpha$  is non- $\alpha$ ' and 'Some  $\alpha$  is not non- $\alpha$ ' (with respect to contradiction). For here we will be forced to sort out Kant's views on the so-called 'existential import' of such judgments, asking whether or not, e.g., 'All  $\alpha$  is  $\alpha$ ' but especially 'Some  $\alpha$  is  $\alpha$ ' (or even ' $\alpha$  is  $\alpha$ ', for that matter) will still count as 'true' or 'correct' if there 'are' *no*  $\alpha$ 's, in the sense of there being no *objects* truly characterized by  $\alpha$  in 'existence', or among the 'sum-total of (real) possibilities'.

Here too, we can foreshadow a bit, first, by recalling the formality of pure general logic: it does not concern itself with questions concerning the relation of the intellect or 'thinking' (concepts, judgments) to objects. Hence it would seem that it should not concern itself with the difference between concepts or judgments which *do* relate to existing objects, and those which *do not*. Instead, it should restrict itself to formulating rules and principles which are applicable to all thought whatever, in all of its possible forms, regardless of whether or not it

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<sup>48</sup> See previous footnote.



applies (or even purports to apply) to ‘existing’ objects, or ‘non-existing’ objects, or anything else. This is behind Kant’s restriction of possible substitution into the variables in his logical forms to substitution of ‘concepts’, where these are treated in such a way as to not make essential reference to their applicability to objects – either through complete determination ‘downwards’ in the hierarchy (since there are no *infima species*), or through their direct application to intuition-dependent representations, since we have bracketed this relation entirely.

A full treatment of quantity will also require us to see how Kant will deal with the ‘singular’ function of judgment, since we have already seen that Kant (like the tradition before him) will assimilate such forms *within formal logic* to the universal form (cf., KrV §9). But a more pressing point has to do with the general status of what I have been calling the ‘axioms’ of Kant’s logic. This is a point which picks up on a thread we left behind in **III**, in our discussion of *truth*. For here again, in the absence of concern for ‘relation to objects’, we are faced with the question of the appropriateness of discussing these axioms – and with them, logical principles in general – as things which are *true*. And hence, we must also face the question of the appropriateness of ‘truth’ as a characterization of *analytic* judgments, if such ‘truth’, we are told, is ‘sufficiently’ grounded upon these formal-logical principles *alone*.

§41 Let us look more carefully at what Kant himself says about the nature of the ‘truth’ of analytic judgments.<sup>49</sup> Does he say, for instance, that explicit identity judgments of the form ‘ $\alpha$  is  $\alpha$ ’ are true because they ‘correspond’ to some object? Or, more generally, does he take the truth of analytic judgments of *any* kind to consist in the fact (or entail) that they ‘correspond’ to an object?

We can begin to address these questions by turning to one of the more straightforward uses of ‘truth’ in the context of analytic judgments, in the passage from the Transcendental Analytic of Principles from which we have been quoting through the previous sections. In this passage, as was intimated above, Kant claims that the usefulness of general-logical law is not merely *negative* (‘to ban falsehood and error (insofar as it rests on contradiction)’), but (infamously) suggests in addition that ‘the general though merely negative criterion of all truth’ – captured in the principle of contradiction [Satz des Widerspruchs] – is something ‘one can make a *positive* use out of’, and even use ‘to cognize truth’ in the special circumstance that the judgment at issue is analytic:

*if a judgment is analytic*, whether it be negative or affirmative, its truth must always be able to be cognized sufficiently in accordance with the principle of contradiction. For the contrary [Widerspiel] of that which as a concept already lies and is thought in the cognition of the object [Object] is always correctly denied, while the concept

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<sup>49</sup> For a recent discussion of some of the issues that surround this question, see Timothy Rosenkoetter, ‘Are Kantian analytic judgments about objects?’, presented at the Central APA, Chicago, 2005, and forthcoming in the *Proceedings of the 10<sup>th</sup> International Kant Congress* (Berlin: de Gruyter, 2007).

itself must necessarily be affirmed of it, since its opposite [Gegenteil] would contradict the object [Object]. (B190-1)<sup>50</sup>

With Kant's use of 'object' here, however, we would seem to have a case in which someone was 'daring' to use general logic to 'judge of objects', something prohibited by Kant earlier in the *Analytic*: 'nobody can dare to judge of objects and to assert anything *about* them merely with logic without having drawn on antecedently well-founded information about them from outside of logic' (B85; my ital.).

Or at least this would seem to be the case, on the assumption that the 'truth' of an analytic judgment should be construed on the model of material (objective) truth. Paton, for one (in *Kant's Metaphysic of Experience*), takes this

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<sup>50</sup> In his *Problems from Kant*, Van Cleve's suggestion that this 'contradiction definition' differs from the earlier 'containment definition' we quoted from *Prolegomena* §2 (18ff). Van Cleve claims, for instance, that if 'All ABCD is A' is analytic under the containment-definition, so too should its contrapositive 'All non-A is non-(ABCD)' therefore count as analytic. But Van Cleve counters: 'clearly one might think of something as non-A without ever taking any thought of B, C, or D, and therefore not of non-(ABCD). Nor need non-(ABCD) be part of the definition of non-A' (19). Later Van Cleve concludes that the 'containment definition does not' classify this as an analytic judgment, though the 'contradiction definition' would classify it thus (21). Now, for one thing, the appeal to 'definitions', as L.W. Beck has shown in his 'Kant's Theory of Definition' (*Philosophical Review*, 65.2 (Apr., 1956), 179-191), is not relevant here: 'definition would be a sufficient, though not necessary, condition for analytic judgment' (189). Secondly, though the idea makes sense, given Van Cleve's truth-functional understanding of contradiction, the attempt to pull apart the 'contradiction' definition from the predicative 'containment' definitions would simply be unintelligible from Kant's perspective, since Kant takes the contradiction definition and the containment definition to *both* rest upon the very same foundation – namely, the opposition-relations involved in the dichotomously branching structure of the containment-hierarchy, which are expressible through acts of negative predication. This can be seen most clearly in this same passage from the 'System of Principles', where Kant first defines the principle of contradiction as the principle that 'that no *predicate* pertains to a thing that contradicts it', and then rephrases the principle as 'the contrary of that which as a concept *already lies and is thought in* the cognition of the object is always correctly denied' (B190; my ital.). (This entails as well that there is simply no good reason to think that the containment definition would not, while the contradictory definition would, classify Van Cleve's contrapositive as analytic.)

assumption to be Kant's own, on the basis of precisely the passage cited above (from B190).<sup>51</sup> More generally, in Paton's eyes, that 'an analytic judgment is assumed to be about an object, and not merely about a concept' is 'implied merely in the fact that an analytic judgment can be true, since for Kant truth is always correspondence with an object' (I.214n3). In other words, Paton argues from Kant's definition of 'truth' as 'correspondence of a cognition with its object' (from B82) to the conclusion that analytic judgments must correspond with their objects since Kant uses the word 'true' in relation to them.

Now, in Chapter **III** we have already treated two uses of 'truth' which cannot be easily made to fit the object-correspondence model – namely, 'transcendental' truth and 'formal' truth. In the former case, the so-called 'object' of agreement was the set of *conditions* for being a representation of a possible

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<sup>51</sup> Paton also cites B764: 'analytic judgments do not really teach us anything more about the object than what the concept that we have of it already contains in itself, since they do not expand cognition beyond the concept of the subject, but only elucidate this concept'.

MacFarlane ('Frege, Kant, and the Logic of Logicism') also subscribes to this interpretation, and references Paton in the process of his exposition: 'Although we need not look beyond the concepts themselves to know the truth of an analytic judgment and can therefore abstract from their relation to objects (A258/B314), analytic judgments are still judgments about *objects*, not concepts (cf. Paton 1936, 214n3). Without 'relation to an object' they would not be judgments at all' (51n38). As I show below, the B314 passage mentioned by MacFarlane actually appears to contradict this interpretation. Moreover, insofar as *every* judgment is an item which is 'logically true' (in the sense outlined in **III**, as instances in which the understanding is 'in agreement with itself'), then there seems no reason why, among this class, there could not be some special forms of self-agreement, forms which do not demand anything extra, such as the enjoyment of a 'relation to an object' (i.e., 'transcendental truth'). Indeed, judgments which are *essentially* 'problematic' seem to provide us with Kantian examples of judgments which fail to enjoy 'objective reality', and yet there are surely analytic judgments which can be made about the Transcendental Ideas. (For instance, since according to the *Grundlegung*, 'Freiheit', 'Selbstgesetzgebung' and 'Autonomie' are 'Wechselbegriffe', then judgments such as 'Selbstgesetzgebung ist Autonomie' must be counted as analytically 'true'.)

object of experience, for a representation's possession of 'objective reality'. In the latter case, Kant's discussion of the 'agreement' that obtains between our capacity for understanding and its own essential (constitutive) principles – or put another way, its agreement *with itself* – can be forced to fit the general scheme for 'truth' only if we take the 'object' of the relevant act of judging to be capacity for judging itself. For these reasons we can worry that any argument from the mere use of the word 'truth' in a given context to 'object-relatedness' will inevitably be less conclusive than Paton makes it sound.

Paton himself admits that, in the case of analytic judgments, '[s]uch truth is, however, a very dubious kind of truth; it depends on the supposition that there is an object corresponding to the subject-concept' (ibid.). But even with this qualification on the table, Kant gives us reason to reject such an interpretation in the following passage from the chapter on 'Phenomena and Noumena':

[A]n analytic assertion [Behauptung]...is occupied only with that which is already thought in the concept, [and] leaves it undecided whether the concept has in itself *any relation to objects* [an sich selbst auf Gegenstände Beziehung habe], or only signifies [bedeute] the unity of thinking in general (which entirely abstracts [völlig abstrahirt] from the way in which an object might be given). (B314; my ital.)

The upshot of this statement, I take it, is the following: an assertion can be 'analytic' – and hence shown to be 'true' by virtue of the principles of contradiction and identity alone – *regardless* of whether or not we assume that

‘there is an object corresponding to the subject-concept’, or whether we assume that the concept has in itself a relation to objects at all. If this is correct, then the sense of ‘truth’ which characterizes analytic judgments cannot be ‘material (objective)’ truth.

Kant makes this point more straightforwardly in the 1773-5 Duisburg Nachlass. There he contrasts one form of judgment, in which ‘ $x$  is therefore the determinable [das Bestimmbare] (*object*), which I think through the concept  $\alpha$ , and  $\beta$  is its determination [Bestimmung]’, with a second form of judgment in which ‘the  $x$  falls away, since it should signify the object that would be thought through  $\alpha$ ; but because  $\beta$  is compared *merely with the concept*  $\alpha$  and is already determined through it, therefore the rest in  $x$  is insignificant’ (R4674, 17:645; my ital.).<sup>52</sup> The first form is clearly a *synthetic* judgment, insofar as the judgment involves a ‘determination’ of the subject-concept by the predicate-concept and so a ‘real’ predication (cf., §37). The second form, by contrast, gives us a description of merely ‘logical’ predication, and so a case of an *analytic* judgment, something made evident from the fact that Kant contrasts this case of judging with the synthetic case, by noting that in the synthetic case, ‘ $\beta$  must be a determination [Bestimmung] of  $\alpha$ , and not an *analytic* [analytisches] predicate’ (ibid.; my ital.). And note what Kant claims about the evaluation of merely ‘logical’ predication: to

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<sup>52</sup> The German reads: ‘das  $x$  fällt weg, denn es soll das object bedeuten, was durch  $\alpha$  gedacht wird; weil aber  $\beta$  *blos mit dem Begriff*  $\alpha$  verglichen wird und dadurch schon bestimmt ist, so ist das übrige in  $x$  gleichgültig’.

establish its ‘truth’, we do not need to make any reference to what possible ‘objects’ might be characterized by the relevant concepts, but *only* need to ‘compare’ the concepts themselves and their logical *Inhalte*; the ‘*x* falls away’.

Let me pick up on Kant’s choice of expression in the quote from the ‘Phenomena and Noumena’ chapter, which is quite suggestive, in relation to our above discussion: an assertion still counts as analytic even if it merely ‘signifies the unity of thinking in general’, where this is meant to *contrast* with the assertion having any ‘relation to objects’.<sup>53</sup> It would seem strange to then go on to take ‘the unity of thinking in general’ to itself *be an object* to which the given judgment stands in a relation of agreement. Yet that (roughly) is what would be required of an interpretation of analytic judgments as ‘true’ of an object.

It would seem more natural to model the ‘agreement’ at issue in analytic judgments on the ‘agreement’ at issue in ‘logical’ or ‘formal’ truth – as that which is achieved when the understanding brings about any act at all. The truth of analytic judgments could then be taken as a special case of formal truth, in which the ‘ground’ of such truth is nothing other than the necessary structure of every conceptual hierarchy ‘as such’.<sup>54</sup> It is a case of our understanding merely expressing ‘agreement’ *with itself*, and in particular with the principles which are

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<sup>53</sup> The particular ‘unity of thinking’ that Kant has in mind might be the ‘analytical unity of consciousness’ that we saw above (§36) constitutes the very ‘unity’ of a concept as such – this unity takes a representation and ‘makes it into a *conceptus communis*’ (B133-4n).

<sup>54</sup> Cf., *Wiener Logik*: ‘For logic does not ask where concepts come from, but how they can be *formed* [geformet] and *ordered* [geordnet] in accordance with the laws of the understanding’ (24:905; my ital.).

constitutive of the sphere of possible acts of conceptualization in the first place. The ‘truth’ of any such judgment is a truth which depends just on the judgment’s being an instance of a schema that simply expresses the relations which Kant takes to necessarily constitute any and every possible conceptual hierarchy. And the schema itself will be merely an expression of either the axioms of identity and contradiction, or a theorem derived via substitution-principles.

When we make analytic judgments we are engaging in activity which consists essentially in nothing more than ‘thinking’ representations that are simply concretizations of these logical principles. In effect, we do what might be done regardless of whether we had any other faculty besides our intellect. Here the ‘essence’ of the given thought ‘agrees’ only with our capacity for thinking – with the mere ‘unity of thinking in general’ (B314). Its ‘content’ is not essentially different from our thinking of the ‘formal’ expression as presented in the axiom, insofar as the ‘materialized’ thought stands as an arbitrary ‘case’ of this general form.<sup>55</sup>

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<sup>55</sup> There is a question about how we know in the first place what is in the ‘content’ of a given concept, so as to then know when we are making analytic judgments involving it. Yet if e.g., ‘body’ does in fact contain ‘extension’ in its *Inhalt*, then Kant is committed to the claim that, in principle, ‘Bodies are extended’ can be reformulated so as to make the analytic nature of the judgment explicit (thereby showing that the essence of this thought is merely a concretization of ‘ $\alpha + \beta$  is  $\beta$ ’). This says nothing about the *epistemic* relation of any particular subject to this judgment, or whether we will inevitably recognize this fact by simply ‘looking’ at the concepts, or through some ‘introspection’ upon our own (‘occurrent’) mental states. This is true, even though, as many (e.g., Jonathan Bennett, Alberto Coffa) have bemoaned, Kant does cast his discussion of analyticity in what are *prima facie* ‘psychological’ terms (such as defining the *Inhalt* of  $\alpha$  as what I ‘think in’  $\alpha$ , etc.). For Bennett’s criticisms, see his *Kant’s Analytic* (Cambridge: Cambridge, 1966), §2; Coffa makes similar complaints in *The Semantic Tradition from Kant to Carnap*



Of course, all intellectual activity must *at least* be consistent with these fundamental logical principles, or else it couldn't so much as count as acts of thought. As Kant puts it in the Principles, judgments which 'contradict themselves' are 'in themselves (even without regard to the object) *nothing*' (B189; my ital.), 'contradiction entirely annihilates and cancels them' (B190), such that 'no cognition can be opposed to [the principle of contradiction] without annihilating itself' (B191). Or more straightforwardly, as Kant puts it in his reply to Eberhard, 'whatever conflicts with this principle is obviously nothing (*not even a thought*)' (8:195; my ital.). We will return to this in the next chapter (VI).

What we can't say is that the mere fact of something's being consistent with the necessary conditions for intellectual activity says anything at all about its

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(Cambridge: Cambridge, 1991), ch. 1. In the analytic tradition, this criticism goes back at least as far as Ayer; see *Language, Truth, and Logic* (New York: Dover, 1952), where Ayer claims that Kant 'employs a psychological criterion' because he allegedly speaks of 'subjective intensions', though 'it is possible for symbols to be synonymous without having the same intensional meaning for anyone' (78).

Ayer's insinuated sense of 'subjective' here to qualify 'intension' is a contentious one. By contrast, I would argue that Kant intends to give the notion of what is 'thought in a concept' a more rigorous and 'objective' sense – i.e., a status that has a claim on every individual-empirical subject independently of what they may 'happen' to think or imagine might be connected to a concept  $\alpha$ , or any similar empirical-psychological truths – by way of the general-logical concept-containment apparatus, an objectivity on par with that of the taxonomical 'containment'-system of genera and species in the biological sciences. For more on this counterpoint, see R.L. Anderson, 'It adds up after all'. This is not at all to argue, however, that the notion of something's being 'thought in' something else makes *no* reference to subjectivity; it is necessary that it is at least possible for a consciousness (for an 'I think') to accompany the given concept.

A more interesting and sophisticated version of a subjectivity-indexed reading of Kant's doctrine of analytic judgments is given by Van Cleve, in *Problems from Kant*, who suggests we should rephrase the central problem of Kant's Critical project as: 'how are *judgments* which are known apriori by a given person and expressed by *sentences* which are synthetic for that person possible?' (19; my ital.). Armed with the distinction between judgments, whose status are not person-relative, and sentences, whose status is relative, Van Cleve claims to show that 'such relativity will not undermine Kant's project in the slightest' (ibid.).

possible relation to an object. Hence, we can detach the ‘truth’ of analytic judgments from their ‘referential’ connections to objects, by subsuming Kant’s doctrine of analytic judgments under his general doctrine of expressions of the ‘agreement’ of the understanding with itself, here via explicitation of the formal relations which constitute the essence of any and every given concept.<sup>56</sup>

There might be reason, however, to propose an assimilation in the opposite direction – i.e., give an account of the ‘ground’ of the necessity of the logical principles themselves *in terms of* Kant’s doctrine of analytic truth. At the very least, this would allow us to put more substance behind the thought that formal logic consists in the *analysis* of ‘Verstand überhaupt’. For we might then say that judgments which express logical principles are not judgments about an ‘object’ (a ‘thorough-goingly determinate’ individual thing) but rather judgments

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<sup>56</sup> Compare here Körner’s discussion of ‘non-referential’ rules for the use of concepts in his *Kant* (§4.1). This also points to the fact that analytic truths – like formal-logical principles in general – do not tell us anything ‘positive’ about what ‘is’, or give us truths about the ‘world’. On this point (and others; see Chapters II and VI), I think Kant’s account bears close resemblance to the early Wittgenstein’s, and to logical positivism – though without the latter’s ‘conventionalism’. See, for example, Ayer, *Language, Truth, and Logic*: an analytic proposition ‘provides no information whatsoever...about any matter of fact’; ‘in other words, they are entirely devoid of factual content’ (79). Cf., as well, Hans Reichenbach’s *The Rise of Scientific Philosophy* (Berkeley: California, 1951): ‘[I]f logic is analytic, it is empty; that is, it does not express properties of physical objects. Rationalist philosophers have repeatedly tried to regard logic as a science descriptive of some general properties of the world, as a science of being, or *ontology*. They believe that such principles as ‘everything in the world is identical with itself’ inform us about properties of things. They overlook the fact that all the information supplied by this sentence consists in a definition laying down the use of the word ‘identical’ and that what we learn from the sentence is not a property of things, but a linguistic rule. Logic formulates rules of language – that is why logic is analytic and empty. [...] [L]ogical relations are necessarily true...because no empirical observation can ever falsify them’ (§13, 222-223). In Chapter VI, I take up the question of what ‘ground’ logical rules could have, for Kant, if not ontological but also if not conventional, as Ayer (or Carnap) would have it. (See, e.g., *Language, Truth, and Logic*, 79).

about a very special *concept* – namely, the concept of ‘understanding in general’. In this way, we might claim that logical principles are *themselves* analytic judgments, in the sense that they simply spell out what is ‘already actually thought’ in the content of the concept of ‘understanding in general’. We could then say that, e.g., it is ‘analytically true’ of our capacity for understanding that it cannot produce judgments which have the form ‘ $\alpha$  is non- $\alpha$ ’ or ‘ $\alpha$  is not  $\alpha$ ’. On this account, this ‘property’ is, so to speak, contained in the very thought of ‘understanding in general’.

Such an account would, however, face the following difficulty. By taking logical principles themselves to represent a special class of analytic judgments, we would have then reduced the question of the ground of the validity of these principles to the question about how to explain the fact that analytic judgments themselves are said to be ‘truths’. Analytic judgments, we have seen, are ‘truths’ about concepts ‘as such’, in the sense that they are concretizations of the formal axioms that spell out the nature of conceptuality and judgment as such. Yet this is just to point out that, rather than explaining the ‘ground’ of logical principles in terms of their status as analytic judgments, Kant’s direction of explanation is precisely the opposite – he identifies the ‘ground’ of analytic judgments with their connection to the logical principles themselves. Hence we must look for the ground of the logical principles themselves elsewhere. We will return to this point as well in the next Chapter (VI).

In any case, what I want to show now is that, in this idea of modeling the ‘truth’ that is involved in analytic judgments on the ‘truth’ of the logical principles themselves – and so, in turn, on the idea of the understanding being in agreement with itself (being self-consistent) – we have a ‘clue’ for the interpretation of the ground of the ‘validity’ of logical *inference* in general. For as I will demonstrate in the sections to follow, both analytic judgments and logical inferences find their justification through mere reflection on the nature of conceptuality as such – in the basic doctrines of ‘containing and contained’, to use Leibniz’s phrase.

### C. Quantity and Existential Commitment in a Syllogistic Context

§42 Let us begin by examining some of Kant’s more general remarks about ‘inference [Schluß]’. Just as the act of judging has its particular set of elementary functions which provide the basic forms of unity which can be achieved in such acts, so too does the act of inferring have its basic logical ‘functions’ (B356), which correspond to the general-logical function of ‘relation’. In the act of inferring, however, what provides the ‘matter’ of the relevant ‘forms’ are now whole *judgments*, rather than mere concepts (JL §44, §59).

Jäsche’s *Logik* defines ‘inferring [Schließen]’ as ‘that function of thought whereby one judgment is derived from [hergeleitet aus] another’; ‘inference in general [Schluß überhaupt]’ is identified with ‘the deduction [Ableitung] of one judgment from the other’ (JL §41, 9:114). Kant gives a more detailed explication

of this relation of ‘derivation’ or ‘deduction’ between judgments in the following passage from the Transcendental Dialectic:

In every inference there is a proposition [Satz] that serves as a ground [zum Grunde liegt], and another, namely the conclusion [Folgerung], that is drawn from [gezogen aus] the former, and finally the inferential sequence [Schlußfolge] (consequence [Consequenz]) according to which the truth of the conclusion is connected [verknüpft] unfailingly with the truth of the first proposition. (B359-60)

A Kantian inference appears to consist, then, in three main parts: two distinct propositions –one ‘Grundsatz’ or ‘premise’ or ‘something being stated’, and one ‘Folgerung’ or ‘conclusion’ or ‘something other than what is stated’ – and a consequence-relation, or ‘Schlußfolge’, which consists in the relation of ‘following of necessity’. This basic three-part picture (Grundsatz, Folgerung, Schlußfolge/Consequenz) can also be found in the *Jäsche Logik*.. ‘The matter of inferences of reason consists in the antecedent propositions [Vordersätze] or premises, the form in the conclusion [Conclusion] insofar as it contains [enthält] the consequence [Consequenz]’ (§59, 9:121). Note that here the ‘form’ of the inference is identified with the conclusion ‘insofar as it contains the consequence-relation’. I will return to this point below (§44), as it will prove essential in distinguishing specifically *inferential* relations from *hypothetical* relations in general between judgments.

Let me first, however, say a few words about the consequence-relation itself. Such a relation seems to consist at least in a ‘necessary’ (‘unfailing’) preservation of truth-value, even though it would seem, however, that Kant does not follow Meier, for example, in defining inference in terms of a connection between actual truths.<sup>57</sup> In fact, even though Kant uses the word ‘truth’ here in the definition of inference, I shall argue below that the particular sense of ‘truth’ which is being preserved in formally valid inferences is better characterized as the *assertability* of a relation between concepts ‘as such’, or an assertion concerning their place in the structure of containment-relations.

In this regard, the conditions for formal validity in inference are quite close to conditions of the ‘truth’ of analytic judgments. Formally valid inferential relations express what can always (‘unfailingly’) be ‘said’ assertorically (‘actually’)

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<sup>57</sup> Cf., *Auszug* §353 et seq. In §354 Meier defines an inference of reason [Vernunftschluß; ratiocinium] as ‘a distinct representation of the connection between *truths* [eine deutliche Vorstellung des Zusammenhangs der Wahrheiten]’ (my ital.). In the previous section, he defines a ‘connection between truths [nexus veritatum]’ as the ‘relation [Verhältniß]’ which obtains between true judgments, such that ‘some true judgments contain the sufficient ground of the truth of another judgment [den hinreichenden Grund der Wahrheit eines andern enthalten]’ and so ‘are combined [verbunden] with one another’ as ground/consequence, which (as the backwards reference to §15 might suggest) could be taken to imply that an inference too consists in a combination of these judgments into a hypothetical judgment. The idea that the consequence-relation is, strictly speaking, something that occurs only between truths is something Frege puts forward (though not always straightforwardly); see, e.g., his 1906 unpublished remarks ‘Über Schonflies’: ‘only true thoughts [Gedanken] are admissible premises of inferences’ (*Nachgelassene Schriften*, 195); his 1906 ‘Über die Grundlagen der Geometrie II’, where Frege gives the following as a law: ‘if the thought G follows by way of logical inference from the thoughts A, B, C, then each of the thoughts A, B, C is true’ (*Kleine Schriften*, 320); and his 1918 ‘Die Verneinung’: ‘one can infer nothing [nichts] from a false thought’ (*Kleine Schriften*, 364). For some discussion, see Thomas Ricketts, ‘Logic and Truth in Frege’, *Proceedings of the Aristotelian Society* Supplementary volume 70 (1996), 121- 140; and Michael Dummett, *Frege: Philosophy of Language*, 309-314.

of a given concept, on the condition that something else has already been said assertorically; analytic judgments, by contrast, express what can always be ‘said’ of a given concept without any further conditions.<sup>58</sup>

Most importantly, Kant’s account of inferential validity, like his account of analytic judgments, is free of any ‘objectual’ *existential* commitments, as the principles which ‘validate’ both sorts of activity would be equally ‘valid’ if the understanding were occupied with a structure of concepts that bore no relations whatsoever to actually existing individual objects.<sup>59</sup> Moreover, just as we can make analytic judgments concerning concepts which belong to domains (or ‘hierarchies’) that are not at all concerned with purporting to represent individual objects, so too can we make ‘valid’ inferences involving judgments, each of which are themselves not ‘truth’-apt, in the sense of purporting to establish a relation of ‘agreement’ between the representations involved in the judgment and some real object (in space-time).<sup>60</sup> Finally, just as in analytic judgments, we are merely

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<sup>58</sup> Recall our treatment of the logical function of assertoric judgment above (§24), and the account of Kant’s parenthetical use of ‘wahr’ in this connection in KrV §9.

<sup>59</sup> Kant is quite explicit in the Dialectic about the distance between our capacity for inferring or reasoning (‘Vernunft’) and the representation of objects: ‘the inference of reason does not deal with *intuitions*, in order to bring them under rules (as does the understanding with its categories), but rather deals with *concepts* and *judgments*’ (B363; my ital.).

<sup>60</sup> Though this is less clear, Kant’s definition of inference might also be taken to incorporate an element of what would now be called considerations of ‘relevance’, insofar as it should be evident how the conclusion is ‘unfailingly connected’ to the former and is derived (‘drawn from’) *it* (as ‘Grund’) specifically. This, in turn, raises the question as to whether or not Kant would accept as ‘inferences’ things which took the form of the so-called *consequentia mirabilis* ( $(p \supset \sim p) \therefore \sim p$ ) or were ‘grounded’ on ‘Scotus’s principle’ of *ex falso quodlibet sequitur* ( $(\sim p \therefore (p \supset q))$  or  $p \& \sim p \therefore q$ ), though to my knowledge Kant does not discuss either of these traditional rules. On

‘saying’ of the subject-concept something which is already ‘thought’ in it, regardless of what sort of concept it might be, so too, in a valid inference, we are merely ‘saying’ something in the conclusion which is already ‘thought in’ the premises. As Kant puts it in the Dialectic, the conclusions of inferences ‘lie [liegen] already’ in the initial premises (B360).

Let us first, however, say a bit more about the forms that such valid inferences can take. The initial definition might make it sound as though inference were essentially a relation between *two* judgments or propositions. However, Kant recognizes that sometimes ‘in addition to the cognition that serves as a ground, yet *another* judgment is necessary to effect [bewirken] the conclusion [Folge]’ (B360; my ital.), implying that the inference will consist in *three* judgments – the one containing the ‘ground’, the additional one needed to make the consequence-relation ‘effective’, and then finally the ‘conclusion’ itself. As Jäsche tells us, an inference from one judgment directly to another – ‘the derivation [Ableitung] (*deductio*) of one judgment from another without a mediating [vermittelndes] judgment (*judicium intermedium*)’ – is what Kant calls an *immediate inference* [unmittelbarer Schluß; consequentia immediata] (JL §42, 9:114).

A ‘mediate’ inference, by contrast, is one in which, ‘in addition to the concepts

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Scotus’s principle, cf., G.H. von Wright, ‘Truth, Negation, and Contradiction’, §3 (*Synthese* 66 (1986), 3-14): ‘Scotus’s principle, however, has also worried logicians. The idea that a contradiction ‘entails’ just any proposition may appear counterintuitive. Entailment or logical consequence seems to presuppose some kind of ‘community of content’ between the entailing and the entailed propositions. A motive force behind so-called *relevance logic* is a desire to circumvent the counterintuitive consequences of Scotus’s law’ (5).



that a judgment contains in itself [in sich enthält], still others are needed in order to derive [herzuleiten] a cognition therefrom' (ibid.). Inferences which involve 'grounds' which are distributed among more than one categorical judgment (and so which involve more than one 'premise') will thus be counted as 'mediate' ones. Kant calls a mediate inference an 'inference of reason [Vernunftschluß]' and also (elsewhere) by its traditional name of 'syllogism', whereas an immediate inference is called an 'inference of the understanding [Verstandeschluß]' (B360).

I want to begin our treatment of inference by taking up immediate inferences first, since they are simpler, and yet will nevertheless allow us to introduce several of the central notions of Kant's doctrine of inference in general. In Jäsche's words, the 'peculiar [eigenthümliche] nature' or 'essential [wesentliche] character' of immediate inferences 'consists simply in an alteration [Veränderung] of the *mere form* of judgments, while the *matter* [Materie] of the judgments, the subject and predicate, remains *unaltered, the same*' (JL §44, 9:115). The basic 'forms' of judgment which will be of relevance to Kant's treatment of immediate inference are the four forms of categorical judgments traditionally associated with the syllogistic, and identified by the following 'vowels': (A) Universal affirmative; (I) Particulate affirmative; (E) Universal negative; and (O) particular negative.<sup>61</sup>

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<sup>61</sup> The vowel-correlations are based upon the first two vowels in the Latin for 'I affirm [Affirmo]' and 'I deny [nEgO]', respectively.

As examples of ‘propositions’ that are ‘immediate conclusions [Folgerungen]’ from the universal affirmative categorical judgment (cf., B360),

(0) All [alle] humans are mortal

Kant lists:

(1) Some [einige] humans are mortal,

(2) Some [einige] mortal beings are human beings, and

(3) Nothing that is immortal [Nichts, was unsterblich ist] is a human being.

At least the first two examples clearly meet Jäsche’s condition of being immediate inferences, as all of these ‘conclusions’ involve the same two concepts (‘human being’ and ‘mortal’) that are involved in the initial proposition. Note, however, that in addition to shifts in the mere ‘form’ of the judgment (e.g., from universal to particular), immediate inferences also can involve shifts (reversals) in the *order* or role of the concepts involved (from subject to predicate).

It might be less obvious how (3) can be counted as involving the same ‘matter’, since we no longer have ‘mortal [sterblich]’, but instead ‘non-mortal [unsterblich]’. To see why this too counts as an immediate inference, we must appreciate the extent to which Kant follows tradition in classifying these inferences (i.e., those which consist solely in the alteration of the form and/or order in which the ‘matter’ of a judgment is organized) as types of logical *conversion* [conversio; Umkehrung] (cf., JL §§51-2). For Kant’s examples illustrate the four

types of immediate inference most familiar to the tradition since Aristotle: inference *per judicia subalternata*, conversion *per accidens*, conversion *simplex*, and conversion *per contrapositionem*. In §3 of his early 1762 essay on the syllogistic figures, Kant writes that the latter three are ‘without doubt the most important immediate inferences’ (2:50).<sup>62</sup>

Respectively, (1) is an example of an inference *per judicia subalternata*, because the form is altered with respect to ‘quantity’, moving from a ‘universal’ to a ‘particular’ of either quality-form: (affirmative, from A to I) ‘all  $\alpha$  are  $\beta$ , therefore some  $\alpha$  are  $\beta$ ’, and (negative from E to O) ‘no  $\alpha$  are  $\beta$ , therefore some  $\alpha$  are not  $\beta$ ’. (2) can be taken as an example of either a conversion *per accidens* of (0) or a conversion *simplex* from (1). Conversion *simplex* (also called ‘pure [reine]’ conversion; again, cf., JL §52) is ‘simple’ because the logical form is left unchanged and only the order of the matter is switched. Here it would involve particular affirmatives: ‘Some  $\alpha$  is  $\beta$ , therefore some  $\beta$  is  $\alpha$ ’, though conversion *simplex* also is valid in cases of universal negatives: ‘No  $\alpha$  is  $\beta$ , therefore no  $\beta$  is  $\alpha$ ’. As for *per accidens* (also called ‘altered [veränderte]’ conversion; cf., JL §52), in

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<sup>62</sup> Prior tells us (*Formal Logic* 2<sup>nd</sup> ed., 109) that, in his 13<sup>th</sup> century *Summulae Logicales*, Petrus Hispanus gives the following ‘jingle’ to summarize these basic rules of conversion: ‘Simpliciter feci convertitur, eva per acci, asto per contra, sic fit conversio tota’. As with other mnemonics, it is the vowels of each word which are important: conversion *simplex* is valid from ‘E’ and ‘I’ (IEI, ‘I did’), conversion *per accidens* is valid from ‘E’ and ‘A’ (EvA, ‘Eve’), and conversion *per contrapositionem* is valid from ‘A’ and ‘O’ (AstO, ‘I stand up’). Other types of ‘immediate inference’ which came to be recognized, though to my knowledge were not known by a special name to Kant, include ‘obversion’ and ‘inversion’; cf., Keynes, *Studies and Exercises in Formal Logic* 4<sup>th</sup> ed., §§101-105.

addition to the order being switched, so too is the quantity restricted, moving from universal to particular. Here it would involve a shift from A to I: ‘All  $\alpha$  is  $\beta$ , *therefore* some  $\beta$  is  $\alpha$ ’, but it also licenses inferences from E to O: ‘No  $\alpha$  is  $\beta$ , *therefore* some  $\beta$  is not  $\alpha$ ’.

Finally, (3) can be taken as an example of conversion *per contrapositionem*, or ‘transposition [Versetzung]’ (JL §54) of (0), though this is less straightforward than the previous cases. In the *Dohna-Wundlacken Logik*, Kant gives a partial definition of contraposition as an inference ‘where...the quantity is not altered, only the quality’, and where ‘what was predicate in the first proposition becomes now subject’ (24:769). I say ‘partial’, because as it stands, this allows in too many transformations. It would, for instance, license a change, say, from the universal affirmative ‘All  $\alpha$  is  $\beta$ ’ to the universal negative ‘No  $\beta$  is  $\alpha$ ’, which is (of course) an invalid inference. Further restriction is required.

For the relevant supplement, we can note that, as J.N. Keynes reports in §102 of his *Studies and Exercises in Formal Logic* (4<sup>th</sup> ed., 1906), from Boethius through to medieval logicians such as Petrus Hispanus, contraposition typically denoted an operation in which the order *and quality* of both *concepts*, but neither the quantity nor the quality of the judgment, are switched.<sup>63</sup> This would at least give us valid inferences such as ‘All  $\alpha$  is  $\beta$ , *therefore* all non- $\beta$  is non- $\alpha$ ’, and ‘Some  $\alpha$

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<sup>63</sup> This would make it signify something closer to its contemporary meaning, since ‘contraposition’ is perhaps most common nowadays as a name for the rule in propositional logic which allows for the inference from ‘ $p \supset q$ ’ to ‘ $\sim q \supset \sim p$ ’.

is not  $\beta$ , *therefore* some non- $\beta$  is not non- $\alpha$ ', though this still does not give us (3). Later on, as Keynes also notes, John Wallis and Richard Whately introduced a broader sense of the term, according to which '[c]ontraposition may be defined as a process of immediate inference in which from a given proposition another proposition is inferred having for its subject the contradictory of the original predicate' (§102, 134). This broader rule allows for *two* propositions to count as valid 'contrapositives' of the same initial proposition – e.g., 'All  $\alpha$  is  $\beta$ ' can be contraposed to both 'All non- $\beta$  is non- $\alpha$ ' and 'No non- $\beta$  is  $\alpha$ '. The latter is, finally, Kant's third 'immediate conclusion'.<sup>64</sup>

Now, Kant's acceptance of conversion *per accidens* and inference *per subalternata* raises a specific issue as to the existential 'import' of the quantifiers. Following Frege and Russell,<sup>65</sup> the modern 'translation' of the traditional universal and particular affirmative judgment-forms (A) and (I), and the universal and particular negative judgment-forms (E) and (O), are given on the following Table (where ' $\phi x$ ' and ' $\psi x$ ' are meant to be the Fregean concept-expressions corresponding to the Kantian concept-expressions ' $\alpha$ ' and ' $\beta$ '):

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<sup>64</sup> An alternative account of the derivation of (3) from (0) might be mentioned briefly, though the specific form of immediate inference it involves is not (to my knowledge) directly named by Kant. This form is what is called (following Alexander Bain) *obversion*, and is defined by Keynes (op.cit., §101) as 'a process of immediate inference in which the inferred proposition (or obverse), whilst retaining the original subject, has for its predicate the contradictory of the predicate of the original proposition (or obvertend)' (133). Universal affirmative categoricals obvert to universal negatives: 'All  $\alpha$  is  $\beta$ , *therefore* no  $\alpha$  is non- $\beta$ '. From this we can convert *simpliciter* to (3): 'No  $\alpha$  is a non- $\beta$ , *therefore* no non- $\beta$  is  $\alpha$ '.

<sup>65</sup> See Frege, *Begriffsschrift*, §12. Russell, *Introduction to Mathematical Philosophy*, Ch. XV, 162ff.

**Table 5.1: Aristotelian and Fregean Categorical Judgments**

(A)	All $\alpha$ is $\beta$	$[A\alpha\beta]$	$\rightarrow$	(A*)	$(\forall x)(\varphi x \supset \psi x)$	$[A^*(\varphi, \psi)]$
(I)	Some $\alpha$ is $\beta$	$[I\alpha\beta]$	$\rightarrow$	(I*)	$(\exists x)(\varphi x \ \& \ \psi x)$	$[I^*(\varphi, \psi)]$
(E)	All $\alpha$ is not $\beta$ (No...)	$[E\alpha\beta]$	$\rightarrow$	(E*)	$(\forall x)(\varphi x \supset \sim \psi x)$	$[E^*(\varphi, \psi)]$
(O)	Some $\alpha$ is not $\beta$	$[O\alpha\beta]$	$\rightarrow$	(O*)	$(\exists x)(\varphi x \ \& \ \sim \psi x)$	$[O^*(\varphi, \psi)]$

Hence the contemporary inference rules (PS\*) and (CPA\*) given on the next Table should correspond to Kant's rules for inference *per subalternata* (PS) and conversion *per accidens* (CPA):

**Table 5.2: Aristotelian and Fregean Immediate Inferences**

(PS)	$A\alpha\beta \therefore I\alpha\beta$	$E\alpha\beta \therefore O\alpha\beta$
(PS*)	$A^*(\varphi, \psi) \therefore I^*(\varphi, \psi)$	$E^*(\varphi, \psi) \therefore O^*(\varphi, \psi)$
(CPA)	$A\alpha\beta \therefore I\beta\alpha$	$E\alpha\beta \therefore O\beta\alpha$
(CPA*)	$A^*(\varphi, \psi) \therefore I^*(\psi, \varphi)$	$E^*(\varphi, \psi) \therefore O^*(\psi, \varphi)$

It follows from the standard interpretations of ' $\forall$ ', ' $\exists$ ', and ' $\supset$ ' that, if there do not exist any individual objects in the domain of quantification which make

' $\phi x$ ' true, then (I\*) and (O\*) will be judged to be false. In such cases, however, (A\*) and (E\*) will be judged as true, since, on the standard interpretation of ' $\supset$ ', this sort of conditional sentence is only false when the antecedent is true and the consequent false, and here the antecedent is false for all values of  $x$ . But this means that (PS\*) fails as a rule of inference in contemporary logic, since in cases such as this one, it would take us from a truth to a falsity. Thus the truth of the premises wouldn't necessarily guarantee the truth of the conclusion. Moreover, a similar problem arises for (CPA) and (CPA\*), if we take the case in which both ' $\phi x$ ' and ' $\psi x$ ' are false for all values. Here again, both relevant (A\*) and (E\*) forms will be true, but the (I\*) and (O\*) forms which result from the application of (CPA\*) will be false.

Kant, however, takes both movements of thought in accordance with the forms (CPA) and (PS) to be universally and necessarily 'valid', since these rules give us schemata for drawing out a judgment that is necessarily 'contained' ('thought') in' the premise. Hence, Kant must hold different commitments concerning the corresponding cases of 'emptiness', in which ' $\alpha$ ' applies to no objects (in which there 'are' no objects which are  $\alpha$ 's). Either he might take the (A) and (E) judgments to be false in these cases, or he might take the (I) and (O) to be true in these cases – either move would preserve the validity of the inference-rules (PS) and (CPA). According to traditional terminology, the first move would amount to conferring existential import upon the universal

quantifier, whereas the second would amount to deleting such import from the particular quantifier.

Of course, in the Kantian context, the domain of quantification is no longer *individual objects*, but rather general *concepts*, which will change, of course, the criterion for ‘existence’ within the domain. As a consequence, the question of what the non-emptiness requirement might amount to will be quite different as well. But in any case, what I want to highlight in the next section is the extent to which Kant’s logical principles are formulated in such a way so as to be entirely non-committal on the ‘existence’ of objects which are truly characterized by concepts at issue. Rather – as we would expect from someone for whom logic is distinguished precisely by its ‘abstraction from all relations to objects’ – the only sense of ‘existence’ encoded in the ‘particular’ function of judgment (‘Some...’) is the ‘existence’ of *lower concepts*. I will also show how here, as in other aspects of his logical doctrines, Kant is once again recognizably ‘Leibnizian’.

§43 It is worth dwelling for a moment on how the resulting picture will differ from contemporary first-order logic. Kant here subscribes to a particular version of the traditional logic’s restriction of substitution into the term-places in judgments to substitution of ‘non-empty’ terms. On Kant’s picture, however, there simply aren’t any *absolutely* ‘empty’ terms, in the relevant sense, since all possible concepts – insofar as they are concepts – are constitutively defined by



having a location within some containment hierarchy. It is on this basis, then – on the principle of indefinite extensibility of conceptual *Umfänge* (§35) – that Kant can allow for the form of inference such as subalternation, i.e., the inference from (A) ‘All  $\alpha$  is  $\beta$ ’ to (I) ‘Some  $\alpha$  is  $\beta$ ’.

As we have seen, in first-order predicate logic, however, the ‘surrogate’ inference – i.e., from ‘ $\forall x (Ax \supset Bx)$ ’ to ‘ $\exists x (Ax \& Bx)$ ’ – is counted as invalid, since the former will be true if nothing is A, while the latter will be false; on this interpretation, the purported form can take us from truth to falsity. Hence, in reconstructions of the syllogistic, it is common to suggest, instead, that the appropriate rendering of subalternation must make this so-called existential commitment explicit in the syllogistic premise by introducing such an explicating expression (‘ $\exists x (Ax)$ ’) as a conjunct in the premise itself (allowing us to both express the requirement of non-emptiness and to preserve the validity of the inferential pattern).

This translation helps us bring out more vividly the sense of ‘non-emptiness’ or ‘content’ that our predicate logic works with, which is, on the typical interpretation, what may be called an *extensionalist* sense of content. That is, the non-emptiness of concepts is represented by their being bound by the existential quantifier ‘ $\exists$ ’, which signals that there exists at least one individual *object* in the domain of quantification which is correctly characterized by the given concept. Now, this leads fairly directly to the question of which sense of

‘existence’ of objects is at issue, and what criterion will allow us to determine whether or not there ‘is’ anything in the domain which falls under a given concept. In one sense of ‘existence’ – namely, as a possible or even an actually fictional existent – ‘there is’ some object, for example, which is correctly characterized by the concept ‘ $x$  flies a reindeer-led sleigh’: Santa Claus. Or to make use of a somewhat more ‘canonical’ example, there are intuitions – exploited by Meinong among others – which might move us to admit that ‘ $x$  is a king’ truly characterizes the present king of the United States, and so take the sentence ‘The present king of the United States is a king’ to be true, despite the fact that it is also true – though perhaps now in a different sense of ‘is’ – that there *is* no present king of the United States. But in any case, it is enough for the moment to note that the inference from ‘Santa Claus flies a reindeer-led sleigh’ to ‘ $\exists x$  ( $x$  flies a reindeer-led sleigh)’ will only be seen as valid depending on whether the sense of ‘existence’ encoded in the existential quantifier ‘ $\exists$ ’ is broad enough to include whatever ‘grade of being’, so to speak, that Santa Claus enjoys.

Kant, by contrast, puts forward an *intensionalist* account of ‘non-emptiness’, and in this he is following Leibniz, and according to Leibniz, Aristotle himself. For example, in the 1690’s fragment ‘Some logical difficulties’, Leibniz raises questions as well about the nature of the existence-assumptions built into the traditional quantifiers of the A, E, I, and O categoricals, and argues for an explicitly ‘intensionalist’ approach to the non-emptiness requirement. The

particular form of inference that he focuses upon is conversion *per accidens* (i.e., the passage from ‘All  $\alpha$  is  $\beta$ ’ to ‘Some  $\beta$  is  $\alpha$ ’; our CPA above).<sup>66</sup> The example of this form that Leibniz discusses in this fragment is the possibility of an inference from ‘Every [omnis] laugher is a man’ to ‘Some [quidam] man is a laugher’. Leibniz raises an objection to the validity of this form of inference, since it seems as though ‘the former is true even if no [nullus] man laughs, whereas the latter is not true unless some [aliquis] man actually [actu] laughs’ (G vii.211). He takes this objection to rest on the assumption that ‘the former speaks of possibles [possibilibus loquitur], the latter of actuals [actualibus]’, and so then proposes in turn that ‘the difficulty of this kind does not occur if you remain within the limits of the possibles [in terminis possibilium]’, or ‘in the region of ideas [in regione idearum]’, or (putting it a third way) by taking, e.g., ‘laugher’ ‘for a species of man [pro homo specie], not for an actual laugher [pro ridente actuali]’ (ibid.; cf., G vii.214).

To reiterate, Leibniz aligns this way of treating the ‘matter’ of a judgment – according to ‘ideas’ or ‘species’ rather than the objects which bear them – with the way that Aristotle treats them, as we saw in our previous discussion of Leibniz’s ‘intensionalism’ (again, §35). The focus upon existent ‘individuals’, by contrast,

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<sup>66</sup> We might note again that the simple rendering of this form of conversion in our predicate logic would produce an invalid inference-form, with the problematic interpretation being now the case in which there is neither anything which is A nor anything which is B, since ‘ $\forall x (Ax \supset Bx)$ ’ would then be true, but ‘ $\exists x (Bx \ \& \ Ax)$ ’ will be false.

he aligns with the ‘Scholastics’ (cf., Leibniz’s ‘Elements of a Calculus’ (April 1679)).<sup>67</sup> As we saw above as well, it is the ‘Aristotelian’ approach which is championed again in Leibniz’s later (1705) *Nouveaux Essais*. There Leibniz’s Theophilus claims that Aristotle’s way of rendering all judgments is to ‘refer [them] rather to ideas or universals’, and contends furthermore that this way is to be preferred, even if ‘the common manner of statement concerns individuals’ (IV.17.8).

Kant too shares Leibniz’s ‘Aristotelian’ form of intensionalism (or conceptualism or ‘generalism’, as it might also be called)<sup>68</sup> – that is, both thinkers are committed to the universe of quantification being restricted to concepts alone. As a consequence, we should take Kant to follow up Leibniz’s suggestion that we read ‘Some  $\alpha$  is  $\beta$ ’ not as saying something of some existent *object* or individual, but rather of an idea or set of ideas – in Kant’s terminology, as a claim about a *concept* or set of concepts. The ‘particular’ quantifier allows us to say of some concept which bears the property of being  $\alpha$ , that it is also  $\beta$ . When read this way, ‘Some  $\alpha$  is  $\beta$ ’ says of some *concept* (or set of concepts) which belongs to  $\alpha$ ’s ‘Umfang’ that it also belongs to  $\beta$ ’s ‘Umfang’. (So, to take Leibniz’s example, ‘Some man is a laugher’ should be read as: some concept in the ‘Umfang’ of ‘man’

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<sup>67</sup> In Couturat’s *Opuscles et Fragments Inédits de Leibniz* (Paris, 1903), 53f.

<sup>68</sup> As Cover and O’Leary-Hawthorne have called this position (in their *Substance and Individuation in Leibniz* (Cambridge: Cambridge, 1999)), though they think Leibniz has other ‘haecceitist’ strands which count against this thesis as an unqualified interpretation of Leibniz. (One such point emerges in a quotation from the *Nouveaux Essais* III.3.6 (cited above), about how we humans can grasp individuals, despite their ‘infinity’, by ‘keeping hold’ of them.)

– i.e., some concept further ‘determinate’ than merely: ‘man’, some particular type of man (e.g., a clown-man) – also belongs to the ‘Umfang’ of ‘laugher’, or is equally a type of laugher.<sup>69</sup>)

Of course, as we have noted in previous sections, Kant will then demur from conjoining to this ‘conceptualism’ (or preference for the ‘way of ideas’) within formal logic the further Rationalist thesis that it is possible to construct representations of *individuals* from such purely conceptual resources. This stems from the kernel of truth Kant sees in Empiricism – that no instance of purely conceptual thinking can provide us with true knowledge of any individual existent thing. Even so, not only does Kant take over Leibniz’s understanding of the ‘particular’ quantification of the subject-concept, so too does Kant take over Leibniz’s treatment of the *singular* quantifier as well. In Kant’s hands, though not necessarily for Leibniz, this treatment will have the effect of eliminating all essentially singular expressions, and points once again to the decidedly ‘non-Fregean’ understanding of predication – and with it, the basic structure of an atomic judgment – which is at work in Kant’s system (and so again counsels against reading too much Frege back into Kant).<sup>70</sup>

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<sup>69</sup> Note that the particular form of judgment must be read in an ‘umfangliche’ manner, since if something is contained ‘in’ a concept, then it is contained in *all* of the concepts ‘lower’ than a given concept. We can, of course, say something fairly artificial like: ‘Some man is animal’, and mean: ‘A part of the ‘Inhalt’ of ‘man’ is ‘animal’’, or (to use the notation introduced above: ‘some (of the concepts in) ⟨man⟩ is ⟨animal⟩’.

<sup>70</sup> Indeed, it is perhaps *the* central complaint that Frege has against the ‘traditional’ logic that, as he puts it in his 1880-1 (unpublished) ‘Booles rechnende Logik und die Begriffsschrift’, it fails

Leibniz's treatment is given in the same section of the *Nouveaux Essais* (IV.17.8) discussed above,<sup>71</sup> in which we find Theophilus claiming that it is in fact perfectly legitimate to proceed in such a way that 'singular propositions are counted, so far as their form goes, among *universal* ones'.<sup>72</sup> In §9 of the

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to 'do justice to the distinction between concept and individual [Einzelne]'; in Boole's writings, for example, this distinction 'is completely confounded [verwischt]', since 'taken strictly, his letters never mean [bedeuten] individual things [Einzeldinge] but always extensions [Umfänge] of concepts' (*Nachgelassene Schriften*, 19). In this respect, Kant would be just as guilty as Boole, or even worse off, since his extensions refer, not even to classes of objects, but merely to collections of lower concepts.

<sup>71</sup> In fact, in the earlier 1690's fragment ('Some Logical Difficulties'), Leibniz develops an interpretation of singular judgments as of *either* particular *or* universal form. This has led some of his more recent followers (e.g., Fred Sommers and George Englebretsen) to call this Leibniz's thesis of the 'wild' quantity of singulars. See Sommers, *The Logic of Natural Language* (Oxford: Clarendon, 1982), 15ff; Englebretsen, 'Czeżowski on Wild Quantity', *Notre Dame Journal of Formal Logic*, 21.1 (Jan. 1986), 62-65. As noted above, in the *Nouveaux Essais*, however, Leibniz's Theophilus opts simply for the more traditional universal treatment: 'It is as well to notice that singular propositions are counted, so far as their form goes, among universal ones. For although there is indeed only a single Apostle Peter, it can still be said that anyone who was the Apostle Peter denied his Master. Thus the syllogism: 'St Peter denied his Master, St Peter was a disciple, so some disciple denied his Master', although it has only singular premisses, is deemed to have universal affirmative ones, which puts it into the third-figure mood *Darapti*? (VI.17.8).

It is also worth noting that earlier in the *Essais*, Leibniz argues that all proper names actually begin their life in language as appellative or general terms (III.1.3; also III.3.5). One wonders whether Kant would have agreed to this genetic account; it is not far, however, from more recent suggestions made by Quine (cf., *Word and Object*, §19, etc.); see also §§II-III of Quine's 'Speaking of Objects', in *Ontological Relativity* (New York: Columbia, 1969), esp. 12. In *Methods of Logic* (4<sup>th</sup> ed.; Cambridge: Harvard, 1982), Quine himself acknowledges, both that 'singular statements' were 'traditionally fitted into the syllogistic mold by treating [them] as of the form A', but also that this 'procedure' is 'artificial but *not incorrect*' (107; my ital.). In his 'Singular Terms and Intuitions in Kant's Epistemology', Manley Thompson suggests we should see Kant as quite close to Quine in this regard, insofar as he takes both to advocate the elimination of singular terms from one's canonical language (334-5).

<sup>72</sup> In his 'On Certain Peculiarities of Singular Propositions' (*Mind*, 64.255 (Jul., 1955), 392-395), Tadeusz Czeżowski tells us that 'classical logic textbooks all concur in the view that singular propositions ought to be regarded as universal' (392), but only cites one book – namely J.N. Keynes's *Studies and Exercises in Formal Logic*, §67. (Though, admittedly, this is quite an authority.)

In §38 of *Word and Object*, the section subtitled 'Elimination of Singular Terms', in which he himself assimilates names to general terms, Quine gives a paraphrase of this traditional assimilation of the singular to the universal form: Aristotelian logic 'commonly treat[s] a name

‘Leitfaden’, Kant shows his approval for this manner of accommodating singular terms within formal logic – i.e., treating them as on par with universally quantified concepts:

The logicians rightly say that in the use of judgments in syllogisms singular judgments can be treated like universal ones. For just because *they have no domain [Umfang] at all*, their predicate is not merely related to [gezogen auf] some [einiges] of what is contained under the concept of the subject while being excluded [ausgenommen] from another part [einigem] of it. The predicate therefore holds of that concept without exception [Ausnahme], just as if the latter were a generally valid [gemeingültige] concept with a domain [Umfang] with the predicate applying to the whole of what is signified [gelte von dessen ganzer Bedeutung]. (B96; my ital.)

Kant’s claim is that, in a judgment whose subject is quantified ‘singularly’, if the predication ‘holds’ or ‘is valid’ of its subject, it is valid of ‘everything’ which is contained under the subject-concept – which is just what happens in correct judgments involving universally quantified subject-concepts. The reason that Kant gives for this, however, is somewhat obscure: while, in both the singular and universal cases, there is *no part* of the ‘Umfang’ of the subject-concept which is being excluded from being characterized by the predicate-concept, this is because in a judgment with the singular quantification of a subject-concept, the subject-

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such as ‘Socrates’ rather on par logically with ‘mortal’ and ‘man’ and as differing from these latter just in being true of fewer objects, viz. one’ (181). I think this is not quite accurate, at least as a way of describing Leibniz’s version of the assimilation-thesis. For Leibniz, rather, the assimilation is grounded on his thesis that an individual can be represented as a ‘lowest concept’, such that no *actual* object at all needs to fall ‘under’ a complete individual concept, but rather the concept itself adequately presents the individual. (Of course, if God chooses to ‘realize’ an individual concept, then he can only do so via *one* actual object.)

concept is said to have *no 'Umfang' at all*.<sup>73</sup> Hence it is trivially true that there is no 'part' of the 'Umfang' which might be 'excluded' from relation to the predicate-concept.

But what can it mean for something to be a concept and yet not to have any concepts that fall under it? Here I think Kant must be referring implicitly to a point made in Jäsche's text (§11n) and discussed above (§30), about the *use* of a concept – namely, that we commonly deploy certain concepts 'as if' they were *infimae species*. That is, we make 'conventional' use of concepts, 'as if' there were no further way to divide the given concept, and so choose not to specify branches extending below the concept on the hierarchy, even though we have seen for Kant that it is axiomatic that such division is *always* possible. This is just to say that, in a singular form of judgment, we make a 'singular use' of a concept (JL §1n2),<sup>74</sup> 'as if' it represented something fully determinate, and so on par with a 'thing', as it is defined by the 'principle of thorough-going determination' (B599f).

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<sup>73</sup> In the *Dobna-Wundlacken Logik*, Kant describes 'the concept of an individual [Individuum]' as one which 'has no *sphaera* whatsoever', or is 'equal to a point', and gives 'Julius Caesar' as an example (24:755).

<sup>74</sup> It is not altogether clear what the strictures are on such singular uses – whether all so-called proper names will count as such, or all demonstrative reference, or others besides. In *Jäsche Logik*, we get the following example of a 'singular proposition': 'Caius is mortal' (JL §21n1, 9:102); cf., R3080 [1755-6], next to Meier's treatment in *Auszug* §301 of *iudicium singulare*: 'Adam was fallible; Christ is the redeemer of sins' (16:647). In the *Wiener Logik*, Kant gives the following example of the difference in 'uses' of the concept 'house': 'having a roof holds for all [alle] houses. This use of the concept is concerned universally with all, then. But a particular use is concerned only with many. E.g., some [einige] houses must have a gate. Or I use the concept only for an individual thing. E.g., this [dieses] house is plastered in this way or that. We do not divide concepts into *universales*, *particulares*, *singulares*, then, but instead judgments.... In my judgment I can compare the thing with all, some, or an individual thing. (24:909). In the *Dobna-*



Yet for this reason, the qualification ‘as if’ is essential, since it is axiomatic for Kant that it is *only in intuition* that we truly have a thorough-goingly determinate representation – and so a primitive and immediate relation to an individual.<sup>75</sup> Hence, it is only for a science which is concerned with this sort of judgment, not as to its ‘internal’ formal-logical features, or as an assertion of a containment-relation between concepts, but rather as the sort of thing which can be used to represent an individual object beyond itself, i.e., as a ‘cognition’ (an ‘objective perception’), that a true difference in ‘quantity’ can even show up. In such a science it will be immediately evident that a categorially determinate judgmental synthesis which presents an assertion about *one* object is ‘essentially different’ from an assertion about *all* objects (B96). Yet in any case, it would not seem to be part of the task of formal logic to keep track of possible stipulations for the extra-logical uses for its basic elements.

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*Wundt's Logik*, Kant says that ‘we indicate [zeigen an] the *differentia numerica* among men through *nomina propria*’, where ‘differentia numerica’ is defined as ‘the distinction of *conceptus singulares*’ (24:756).

<sup>75</sup> This would seem to vindicate the distinction drawn in the opening remark of Robert Adams’s ‘Primitive Thisness and Primitive Identity’ (in *Journal of Philosophy* 76.1 (Jan. 1979), 5-26): ‘Is the world – and are all possible worlds – constituted by purely qualitative facts, or does thisness hold a place beside suchness as a fundamental feature of reality? Some famous philosophers – Leibniz, Russell, and Ayer, for example – have believed in a purely qualitative constitution of things; others, such as Scotus, Kant, and Peirce, have held to primitive thisness’ (5). As Cover and Hawthorne have suggested (see footnote above), the gesture in the *Nouveaux Essais* passage – of ‘keeping hold of the thing’ in a way that doesn’t consist in comprehensive grasp of the thing’s ‘suchnesses’ – makes it impossible to accept this straightaway as a characterization of Leibniz, though the ‘purely qualitative’ trend is surely the dominant one.

§44 Let us finally turn to ‘mediate’ inferences, or inferences of ‘reason’, which constitute the heart of the traditional syllogistic. In our initial introduction to ‘inference in general’, we saw that Kant takes the relational ‘functions’ of unity which guide acts of inferring *between* judgments to bear an intimate connection to the forms of relation that can obtain within a single judgment. This fact was blurred over somewhat in our discussion of immediate inferences, though these might have all been expressed in rules which would have brought out, in particular, their connection to the hypothetical form of judgment (*‘if  $\beta$  can be affirmed of all  $\alpha$ , then  $\beta$  can be affirmed of some  $\alpha$ ’*). In fact, there are certain passages in which Kant’s language can seem to *identify* inferences with kinds of judgments, and so we should ask whether there is, in the end, any *strict* distinction that Kant wishes to uphold between judging and inferring.

I have waited to take up this question until the present section, since this apparently assimilation occurs most frequently in Kant’s discussions of ‘inferences of reason [Vernunftschlüsse]’. For instance, in the first section of his early 1762 essay on the ‘false subtlety’ of the traditional figures of the syllogism, Kant defines an inference (‘of reason [Vernunftschluss]’) as follows: ‘it is the comparison [Vergleichung] of a mark [Merkmal] with a thing [Sache] by means of an intermediate mark’, such that ‘every such *judgment* [Urteil] made through a mediate mark *is an inference* of reason’ (§1, 2:48; my ital.). Moreover, in the final section of this essay, Kant claims that it is obvious that ‘Verstand’ and ‘Vernunft’ – here

identified with the capacity to ‘cognize something distinctly’ and the capacity to ‘make inferences of reason’, respectively – are ‘not different *fundamental faculties* [Grundfähigkeiten]’ (§6, 2:59). Rather both ‘consist [bestehen] in the capacity to judge [Vermögen zu urteilen]’, the only difference being that ‘if one judges mediately [mittelbar urteilt], then one infers [schließt]’ (ibid.).

And lest one think that this identification was simply a remnant of his pre-Critical period,<sup>76</sup> we can note that Kant makes a similar sort of classification (i.e., of inferring as a species of judging) in the Introduction to the Transcendental Dialectic: ‘the inference of reason [Vernunftschluß] is itself *nothing but a judgment* [Urteil] mediated by the subsumption of its condition under a universal rule’ (B364; my ital.); ‘an inference of reason *is itself a judgment* which is determined [bestimmt] apriori in the whole extension [Umfang] of its condition’ (B378; my ital.); ‘reason...is the capacity [Vermögen] of inferring [schließen], i.e., of *judging* [urteilen] mediately’ (B386; my ital.).<sup>77</sup>

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<sup>76</sup> This suspicion might arise especially if one were to note that in this essay Kant also identifies the capacity for judgment with the ‘capacity [Vermögen] of inner sense, that is, the capacity to make one’s own representations into objects of one’s thought [Objecte seiner Gedanken]’ (§6, 2:60). By contrast, in his Critical writings, Kant aligns the capacity to judge (and with it, the understanding in general) with the capacity for apperception (KrV §16, B134n), and insists on differentiating this capacity (for apperception) from that of inner sense (KrV §24, B153) – even if Kant’s language sometimes suggests that apperception consists in ‘taking’ one’s own representations as *of* objects, and so still akin in certain ways to this earlier operation of inner sense. (For discussion, see Dickerson, *Kant on Representation and Objectivity*, Ch.1.)

<sup>77</sup> In his ‘Kant’s intellectual development: 1746-1781’, in *Cambridge Companion to Kant*, Beiser suggests that ‘this analysis clearly prepared the ground for the later ‘metaphysical deduction’ of the categories in the first Critique’, which is surely correct (38). It is harder to agree with Beiser’s further claim that Kant’s ‘identification of reasoning with a form of judgment’ is of a piece with a more general programme of reform in logic which involves ‘*rejecting* the traditional classification

Perhaps the temptation to take syllogistic inference to be a form of mediate judging is fostered by the fact that we can ‘see’ the syllogistic act as taking place in one swoop, thanks to the traditional way of representing these inferences according to a syllogistic ‘figure’. Yet it is at least obvious that, if inference does turn out to be a species of judgment, then at the very least inferences of reason cannot be identified with *simple* judgments of *categorical* form. This is clear from Kant’s statements that they are acts of thinking which involve the *mediation* of some third thing, something in addition to a predicate-concept (‘mark [Merkmal]’) and a subject-concept (‘thing [Sache]’). For it is only because it displays the relationship that this third thing – the (inter)mediate mark (or concept) – has to both the subject-concept and the predicate-concept that the syllogistic ‘figure’ can establish the inferential connection between them.

We can display the basic structure of a typical inference of reason somewhat more formally as follows: *Because*  $\beta$  belongs to  $\gamma$ , and  $\gamma$  belongs to  $\alpha$ ,  $\beta$  belongs to  $\alpha$ . Here ‘ $\gamma$ ’ stands for the mediating ‘third’ concept whose connection to both  $\alpha$  and  $\beta$  provides the necessary link for (that ‘by means of [vermitteltst]’ which) the simple categorical judgment ‘ $\alpha$  is  $\beta$ ’ to be grounded. Now, insofar as the ‘*Because...*’ is meant to mark the fact that it is the mediating connection established by ‘ $\gamma$ ’ which provides the *ground* for the judgment ‘ $\alpha$  is  $\beta$ ’, such that ‘ $\alpha$

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of the faculty of knowledge into concepts, judgments, and syllogisms’, such that ‘concepts are *only* a form of immediate judgment as syllogisms are a form of mediate’ (ibid.; my ital.), since it is quite difficult to know what it might mean to claim that a concept *itself* is simply an immediate judgment.

is  $\beta'$  represents a *consequence*, we might conclude that inferences of reason have the logical form of *hypothetical* judgments. To be sure, Kant does tend to use the language of 'Grund/Folge' in his discussions of inference; compare above the initial definition of inference we took from the Dialectic (B360).

But then does Kant fail to possess a clear sense of the distinction between asserting a conditional and drawing an inference? Kant does in fact take both inferences and hypotheticals to be distinguished by possessing as their 'form' a 'consequence [Consequenz]'. We have seen the definition of 'inference' above; consider here Jäsche's definition of hypothetical judgment: 'the representation of this kind of connection [Verknüpfung] of two judgments to one another for the unity of consciousness is called the consequence [Consequenz], which constitutes the *form* of hypothetical judgments' (JL §25, 9:105).<sup>78</sup> So, perhaps it would not be incorrect, in the end, to say that Kant takes acts of inferring to form a sub-class of acts of hypothetical judging.

Even if this were the case, however, Kant does intend, at the very least, to mark the difference between hypothetical judgments *in general* and those which express formally valid inferences, since only the latter enjoy the presence of the sort of 'consequence'-relation that constitutes an 'inferential sequence

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<sup>78</sup> Compare KrV §9, which tells us that, while the two judgments which constitute the 'material' of the hypothetical are left unexamined as to their truth-value, it is the 'consequence' which is (assertorically) 'thought': 'Whether both of the propositions in themselves are true, remains here unsettled [unausgemacht]. It is only the consequence [Consequenz] which is thought through this judgment' (B98).

[Schlußfolge]’ – namely, one in which the ‘truth’ (assertibility) of the consequent is ‘unfailingly connected [unausbleiblich verknüpft]’ with that of the antecedent (ground) (B360). That is, while we can make all sorts of hypothetical judgments which link together various judgments in all sorts of ground-consequent relations, we will *only* have performed an act of inference (we will only have ‘derived’ or ‘deduced’ something) from the point of view of formal logic, if we have unified the given judgments according to one of the logical functions of inferential unity. That is, we must synthesize the judgments through a function which links them together in a way that makes explicit the ‘unfailing connection’ which obtains between them. This is simply a special case of Kant’s more general claim that we will only have judged something at all, if we have exercised our mental capacities in a way that is guided by the formal-logical functions of unification – that is, if we have exercised our capacity for understanding.

Does this mean that we cannot ‘infer’ *incorrectly* or *invalidly*? Does this mean that Kant has no room for the possibility of a fallacious inference? Or what about inferences whose ‘validity’ is not of the formal-logical, but rather of the ‘material’, sort – can Kant recognize these too as, nevertheless, acts of inference?

I will return to these questions in the following chapter (VI). To conclude the present one, however, I want to show why this account of inferential validity as explicit realization of one of the logical functions helps us draw out an additional aspect in which Kant takes there to be an analogy between inferential

validity and the ‘truth’ of analytic judgments. This further point of analogy comes to the fore in Kant’s pre-Critical essay from 1762, ‘The False Subtlety of the Four Syllogistic Figures’ – the only text he himself ever published on logic itself. In this essay, Kant argues that, in addition to inferences of reason properly so-called, there are ‘mixed’ or ‘hybrid’ inferences (§3), which, on the surface, share some of the basic features of a proper or ‘pure’ syllogism – i.e., they contain only three concepts, and have only two premises and a conclusion – but which become distinguishable once we inquire into what is necessary for this arrangement of concepts in judgments to enjoy a ‘power to establish a conclusion [Schlusskraft]’ (2:51).

Kant goes on to give an account in which what are traditionally called the second, third, and fourth figures of the syllogism all turn out to be cases of such ‘hybrid’ inferences. Kant thinks that in these cases, as in all cases of ‘hybrid’ inference, the deductive power ‘depends on the tacit addition [Dazufügung] of an immediate inference, which one must have at least in thought [in Gedanken]’ (ibid.), even if it is not written out or stated explicitly or ‘really expressed [wirklich ausgedrückt]’ (2:50). In Kant’s mind, ‘what is important here is not what one says [sagt] but what is indispensably necessary for one to think [denken] if a valid inference [richtige Schlussfolge] is to be present [vorhanden sein]’ (2:50).

In some sense, then, what is ‘said’ or ‘expressed’ in a hybrid syllogism does not yet make ‘a valid inference present’. Of course, this not to deny that a certain

sequence of judgments might be such that it ‘contains [enthält]...the materials for a conclusion’, even if it itself ‘does not have the form, in accordance with which an inference is to be drawn [wornach geschlossen werden soll]’ (2:54-55). Even so, later Kant is more explicit about the failing of the ‘hybrid’ syllogism: the relevant immediate inference (e.g., conversion) ‘must, therefore, be tacitly thought [in making the mediate inference], for otherwise my propositions *do not follow inferentially* from one another [schließen meine Sätze nicht]’; i.e., an ‘inferential sequence [Schlussfolge] is *not possible*’ (2:52; my ital.). It would seem, then, that hybrid inferences are not really ‘inferences’ after all.<sup>79</sup>

The idea of something’s having ‘material’ which, when given a different ‘form’, a certain ‘power’ is conferred upon it, is roughly the same idea which was at work in our discussion of Kant’s account of the transition from implicitly to explicitly analytic judgments via the principle of concept-substitution. It is only if we could resolve the judgment into a form which made explicit the applicability of the principle of identity or contradiction that Kant thinks we could say that it would involve an always necessarily ‘correct’ affirmation or denial, since at that point we would have shown it simply to be a concretization of the basic formal principles of conceptuality themselves (cf., §41).

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<sup>79</sup> Kant says as much in §5: ‘now, it might at this point occur to someone to suppose that...the three [hybrid] figures would, at worst, be useless, but not actually *false*. But if one considers the intention which inspired their invention and continues to inspire their presentation, one will come to a different view of the matter’ (2:55-56; my ital.).



What I want to suggest here is that we can think of the relation between hybrid and pure inferences on the same model, that it is only if we can ‘resolve’ the material of the hybrid inference, through the substitution-principles articulated by the rules for immediate inference (such as those of (PS) and (CPA) sketched above) that we can say of a given sequence of judgments that it has the ‘power’ of ‘unfailingly connecting’ its grounds with its consequence. Just as it is the case that not all judgments are analytic judgments, and so not every judgment can be transformed by substitutions into an explicit concretization of one of the formal principles of thought, so too is it the case that not all sequences of judgments are inferences in Kant’s sense, nor can every sequence be transformed by substitutions into an explicit realization of one of the formal principles of inference.

Kant himself draws out this connection between the principles of inference and the principles of analytic judgments in the ‘Concluding Remarks’ of this early essay on the syllogism (§6). Here Kant claims, first, that ‘all affirmative inferences of reason are subsumed under the rule: *nota notae est nota rei ipsius*; all negative inferences of reason are subsumed under the rule: *oppositum notae opponitur rei ipsi*’ (2:60). These are then coupled with the principles for affirmative and negative judgments, which are the principles of identity and contradiction, respectively. Kant claims, furthermore, that the ‘thought’ expressed by this coupling ‘will be bound to be a source of pleasure to those who are able to delight

in the unity which is to be found in human cognition' (ibid.). This 'unity' is shown by the following remark:

All judgments, which stand directly under the laws of identity or contradiction – that is to say, all judgments in which identity or contradiction is apprehended [eingesehen] immediately, not through an intermediate attribute (and consequently not by means of the analysis [vermittelst der Zergliederung] of concepts) – are indemonstrable propositions; those in which identity or contradiction can be cognized [erkannt] mediately are demonstrable. (2:60-61)

In effect, Kant identifies the capacity to come to 'cognize' judgments as containing expressions of identity or contradiction (better: non-contradiction) *through analysis* with our capacity to cognize these implicit relations through *mediate* judgment or *demonstration*. This, of course, fits quite nicely with his identification of 'Verstand' and 'Vernunft' as 'not different *fundamental faculties* [Grundfähigkeiten]'; rather *both* essentially 'consist [bestehen] in the capacity to judge [Vermögen zu urteilen]' (§6, 2:59).

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## CHAPTER VI

### Our Relation to Logical Laws

#### A. Apprehending Logical ‘Content’

§45 At this point we have explored in some detail Kant’s conception of the most basic elements in his science of logic – namely, *Begriffe* (concepts), *Urteile* (judgments), and *Schlüsse* (inferences). We have also achieved a preliminary grasp of how these elements are able to function together in exercises of our capacity (‘in general’) for making sense or achieving understanding, exercises all of which are governed by a system of laws and principles – laws such as the substitution-principles, the *Reciprocitätsgesetz*, the *principium contradictionis*, and so on. Having attained this overview of Kant’s system as a whole, we are now, in effect, in possession of an outline of the formal possibilities which express the essence of our capacity for thinking, what Kant calls ‘understanding as such’ or ‘in general’ [Verstand überhaupt].

Yet even though at this point we have been given an overview of the subject-matter of logic, we have been told very little about what sort of relationship obtains between the ‘object’ of logic (‘Verstand überhaupt’) and these laws which delimit its possibilities. Let us call this question the question of the ‘nomological’ status of logical laws, since it intends to ask after the correct way to classify the particular sort of *bindingness* that logical law has upon the capacity for understanding, the specific manner in which the logical laws are meant to govern or constrain the faculty of understanding – indeed, thought as such.

Now, it is reasonable to think that the sort of ‘bindingness’ that logical law has upon our capacity for thinking will depend upon the *source* of this bindingness – whether it is somehow simply ‘built into’ the very nature of thinking that it ‘must’ follow these laws, or if instead these laws are perhaps something to which thinking subjects must bind themselves, or ‘give’ to themselves, in some robust sense of the term, as Kant’s oft-cited language of ‘Selbstgesetzgebung’ might seem to imply. Let us call this the question of the ‘ontological’ ground of the universal and necessary validity of logical law within thought.

Posing these two previous questions helps motivate a third, insofar as they bring into even starker relief the extent to which we have neglected to elaborate (in any detail) the method in which Kant thinks that we can come to cognitive apprehension of, come to *know*, these forms and principles in the first place. How *does* Kant himself think we come to have the knowledge of logic that he

clearly thinks we do have, and thinks moreover that we have had at least implicitly since the time of Aristotle? Let us call this the problem of the *epistemic access* to the subject-matter of logic.

Now, it might well be that a response to this problem might depend on an answer to the two previous questions, since it is not unreasonable to think that we would first need to be able to identify where something comes from and what kind of thing we are trying to ‘access’, in accessing logical laws, in order to know *how* to access that sort of thing. Yet absent such an account, Kant’s theory would be judged to be a failure by many contemporary philosophers, since it has been argued quite forcefully that, to count as an adequate explanation by a human subject (such as Kant) of any content or subject-matter, the explanation should, among other things, give an account of how that content can in the first place *become available* to the human subject explaining it.<sup>1</sup> But perhaps this is just to overextend the demands for reasons, since perhaps there is *no* satisfactory explanation of how it is possible for us to come to know the things we do in fact know in knowing the principles of logic. And so long as there is no

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<sup>1</sup> Cf., Paul Benacerraf’s now-classic characterization of this demand – that ‘something must be said to bridge the chasm...between the entities which form the subject matter...and the human knower’ (675) – in the case of mathematical truth in his essay of the same name (‘Mathematical Truth’, *Journal of Philosophy*, LXX, 19, 1973; 661-679). Benacerraf’s point about mathematics has been generalized more recently by Christopher Peacocke (in his *Being Known* (Oxford: Oxford, 1999)), with the resulting ‘reconciliatory’ task of providing, for any given domain or subject-matter of inquiry, ‘a simultaneously acceptable metaphysics and epistemology’, a task he calls the ‘Integration Challenge’: ‘we have to reconcile a plausible account of what is involved in the truth of statements of a given kind with a credible account of how we can know those statements, when we do know them’ (1).

demonstration that it is *impossible* for us to know the things we appear to know, is there really an unavoidable difficulty here?

Here I will first take up Kant's account of our epistemic access, and will return to the question of the nature and the source of the bindingness of logical laws in the second (B) and third (C) parts of the present chapter. I choose to begin with the 'how possible?' question regarding knowledge, because it has often been taken to be one of the virtues of, even one of the basic motivations for, idealism – at least since Descartes – that it has a ready response to this 'how possible' question in particular. In fact, its subscribers are by and large confident that they can give reasons for thinking that idealism will be the *only* intelligible account for how we can know the things we appear to know, when we 'know' that things like the principle of contradiction are universally and necessarily valid principles of thought. This confidence is expressed in Kant's well-known challenge to empiricism, that 'experience teaches us, to be sure, that something *is* constituted thus and so, but not that it *could not be* otherwise' – not that it *must be* so constituted (B3). For the principles we know in logic are principles which possess precisely this extra 'modal' inflection. Hence, no single experience, nor an indefinite collection of them, can 'teach' us these principles. We must look elsewhere for 'logical' instruction.

According to the idealist tradition, for a priori knowledge, we must look, not to 'experience', but to *ourselves*. That is, we can come to know logical

principles because they are the ‘nearest’ things to our minds – in fact, they are always already ‘contained in’ our minds, even *innately* so.<sup>2</sup> As a consequence, logical principles always available as possible objects of knowledge, in as transparent and direct a fashion as anyone could hope for – essentially: as ‘available’ as I am *to myself*.

Of course, there will arise an immediate difficulty here – namely, that of distinguishing a ‘way’ in which I am available to myself which is *not* ‘through’ experience of some form or another, or a kind of knowledge of myself which experience doesn’t ‘teach’ to me. For this reason, it is not hard to sympathize with Locke who, when facing the question, in his *Essay*, of the mind’s ‘reflective’ apprehension of itself, simply classes it with ‘sensation’ as a *kind* of experience or ‘inner’ sensation.<sup>3</sup> Yet far from simply affirming what Kant and the idealists insist we must deny – that ‘experience’ can teach us what must be so – Locke’s account of reflective ‘experience’ is actually much more nuanced, and clearly foreshadows much in Kant’s own position. But the fact that we can recognize proto-Kantian

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<sup>2</sup> For Descartes’ doctrine of innate ideas, see, e.g., the 3<sup>rd</sup> and 5<sup>th</sup> *Meditation* (AT VII.37-8 And 64-8), in his letters, to Mersenne, in June 1641 (AT III.382) and to Voetius, May 1643 (AT VIII B.166-7), but especially his 1648 ‘Comments on a certain broadsheet’: ‘I have never written or taken the view that the mind requires innate ideas which are something *distinct from its own faculty of thinking*’ (AT VIII B.357; my ital.). For Leibniz’s version, see, e.g., the ‘Preface’ and Book I of the 1705 *Nouveaux Essais*.

<sup>3</sup> Later Idealists, such as Husserl, will posit instead a new kind of ‘Erfahrung’ – namely, a ‘transzendente Selbsterfahrung’; cf., *Cartesianische Meditationen* §§11 et seq. Kant himself raises this question in a well-known *Reflexion* from the late 1780’s that bears the heading: ‘Beantwortung der Frage, ist es eine Erfahrung, daß wir denken?’ (R5661; 18:318f). Kant’s answer is: ‘das Bewußtseyn, einen solchen Gedanken zu haben, ist keine Erfahrung. [...] [Es] ist ein *transcendentales Bewußtseyn, nicht Erfahrung*’ (18:319).



threads in Locke's thought will in turn raise questions about the extent to which Kant actually achieves a break with Locke, or with other more thorough-going 'empiricisms'.<sup>4</sup>

Locke is classified as an 'empiricist' because, in his *Essay*, he famously claims that all of our ideas come from perception or observation, even though he acknowledges that this operation can be directed toward two kinds of 'objects', so to speak:

Our observation employed either about external, sensible objects, or about the internal operations of our minds, perceived and reflected on by our selves, is that, which supplies our understandings with all the materials of thinking. These are the two fountains of knowledge, from whence all the ideas we have, or can naturally have, do spring. (II.1.1)

In 'reflective' perception of our 'selves', the true 'object' is actually a sort of activity or 'operation', as his definition of 'reflection' itself makes clear: reflection is 'the perception of the *operations* of our minds within us, as it is employed about the ideas it has got' (II.1.4).

What is further worth noting is that in this same section Locke states explicitly that the 'set of ideas' with which reflection 'furnishes the understanding' are ideas '*which could not be had from things without*' (II.1.4; my ital.). Moreover, as we might have guessed from the presence of the traditional denomination of the

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<sup>4</sup> There are surely questions which should be raised about whether Locke himself is as thorough-going an empiricist as he is often made out to be, though we cannot go into them here. For some effort to bring these questions to the fore, see Lorenz Krüger, 'War John Locke ein Empirist?', *Studia Leibnitiana* 2 (1970), 261-83.

subject-matter of logic (as *operationes mentis*), Locke even goes on to link the ‘ideas’ of our own mind’s ‘operations’ that are ‘furnished’ in reflection with expressions of logical form, claiming later in the *Essay* that certain ‘contents’ of reflective perception – namely, the ‘operations’ of affirming and denying – are ‘shown’ or ‘intimated’ by the logical particles:

The mind, in communicating its thoughts to others, does not only need signs of the ideas it has then before it, but others also, to *shew or intimate some particular action of its own*, at that time, relating to those ideas. This it does several ways; as ‘is’, and ‘is not’, are the general marks of the mind, affirming or denying. (III.7.1; my ital.)<sup>5</sup>

Finally, even though Locke devotes most of the first part of his *Essay* arguing that our *ideas* of these mental operations are not ‘innate’ to the mind itself, we can note that Locke admits (implicitly, at least) that the capacity to engage in these operations is something that is ‘contained’ in the mind: ‘[N]o body, I think, ever denied, that the mind was *capable* of knowing several truths. The *capacity*, they say, is innate, the knowledge acquired. But then to what end such contest for certain innate maxims?’ (I.2.5; my ital.).<sup>6</sup>

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<sup>5</sup> Cf., *Essay* III.7.2: ‘The words, whereby it signifies what connection it gives to the several affirmations and negations, that it unites in one continued reasoning or narration, are generally called *particles*.’

<sup>6</sup> Many commentators have argued that Locke is happy to admit that these operational capacities are, in fact, innate. John Harris, for one, in his ‘Leibniz and Locke on Innate Ideas’ (in *Locke on Human Understanding*, ed., I.C. Tipton (Oxford: Oxford, 1977), 25-40), adheres to this sort of interpretation, suggesting that the thesis of capacity-innatism is a thesis ‘Locke thought too obvious to mention explicitly in the *Essay*; [Locke] nowhere denies the existence of natural faculties such as perception, understanding and memory, and innate mental powers like those of abstraction, comparison and discernment. The ‘white paper’ metaphor is meant to indicate that the understanding (and hence the mind) is originally empty of objects of thought like ideas; but it

What I want to show now is that Locke's story thus far incorporates several elements which parallel those of Kant's own account of our acquisition of logical knowledge. First of all, as we have seen, like Locke, Kant's most common way of describing thought or reason is not, in the first instance, as an 'object' at all, but rather as an *activity* [Handlung],<sup>7</sup> or more generally as the exercise of a *faculty* or a *capacity* for understanding, which is itself defined with reference to the certain kind of activity. More specifically, understanding [Verstand] is defined as a faculty [Vermögen], *all* of whose actions [Handlungen] can be traced back to *judging* [urteilen] (B94). As we have seen, it is the task of 'common [gemeine] logic' to tell us 'how the simple acts [Handlungen] of reason may be fully and systematically enumerated' (Axiv).

The main 'act' or 'action' involved in thinking and judging is, according to Kant, the activity of *synthesis*, or what Kant calls 'the act [Handlung] of putting

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has whatever apparatus is necessary to acquire them through experience, and then to derive knowledge by comparing and contrasting them with each other' (27). Similarly, in his *Problems from Locke* (Oxford: London, 1976), J.L. Mackie claims that the thesis that 'we have, by nature, the powers of perceiving, doubting, believing, and so on together with the ability to be self-conscious about their exercise' a thesis that '[o]f course, Locke, and everyone else, concedes' (214).

Leibniz, too, upholds a version of capacity-innatism as well. When confronted, in *Nouveaux Essais* I.1.26, with the question, 'if there are innate truths, must there not be innate thoughts?', Leibniz's (Theophilus's) response is to deny that the latter follows from the former, insofar as 'thoughts are *actions*, whereas items of knowledge (or truths), in so far as they are within us even when we do not think of them are *tendencies* or *dispositions*; and we know many things which we scarcely think about' (G v.79; my ital.). As Leibniz famously expresses this thought in his 'Preface', '[t]his is how ideas and truths are innate in us – as inclinations, dispositions, tendencies, or *natural potentialities* [virtualités] and not as actions' (G v.45; my ital.).

<sup>7</sup> cf., B304: 'Das Denken ist die Handlung, gegebene Anschauung auf einen Gegenstand zu beziehen.'

together different representations with one another and comprehending [begreifen] their manifoldness in one cognition' (§10, B103). In §15 of the B-deduction, Kant claims that this activity of synthesis or 'combination [Verbindung]' which is involved in understanding is an 'act of [the] self-activity [Selbsttätigkeit]' of the subject (B130). Moreover, we learn from §19 of the B-deduction that this 'synthesis' in judgment is precisely what is represented by the 'copula [Verhältnißwörtchen] *is*, which in turn represents the 'logical form of *all* judgments' (B142). Kant tells us in §9 that a set of logical 'functions' can be found in 'the form of understanding' in judging; these he lists on the famous table (B95). And Kant defines a 'function' in general, too, as a way of bringing unity to synthetic activity; a function is 'the unity of an act [Handlung] of ordering several representations under a common one' (B93).

Perhaps more surprisingly, Kant is also quite close to Locke on the topic of innate ideas. For, as is evident from his 1790 exchange with Eberhard, Kant himself also doesn't take these logical 'functions' (pure concepts) *qua* 'represented' to be 'innate', but rather insists that representations of these functions must themselves be 'acquired [erworben]': '[t]he Kritik admits absolutely no divinely implanted [anerschaffene] or innate [angeborene] representations'; rather 'our cognitive faculty [Erkenntnißvermögen]...brings them about, apriori, out of itself [aus sich selbst]' (8:221). Even so, as this last clause suggests, Kant acknowledges that

[t]here must indeed be a *ground* [Grund] for [these representations] *in the subject*, however, which makes it possible that these representations can arise [entstehen] in this and no other manner, and be related to objects which are not yet given, and this ground at least is *innate* [angeboren]. (8:221-2; my ital.)

Hence the ‘cognitive faculty’ itself is ‘in’ the subject ‘innately’, and itself serves as the self-sufficient ‘ground’ for the production of apriori concepts: the ‘*acquisitio*’ of the ‘universal transcendental concepts of the understanding’ is something which ‘presupposes [voraussetzt] nothing innate save the subjective conditions of the spontaneity of thought (conformity with [Gemäßheit] the unity of apperception)’ (8:223).

It is, of course, precisely these ‘conditions’ of thinking and apperceiving which are under investigation in Kant’s logic itself, and more generally, throughout his transcendental philosophy. This provides us with one reason why Kant feels entitled to make use of the language of ‘self-knowledge’ to describe the general project of the first *Kritik*, such as in a passage from the A-edition preface, where he claims that ‘nothing can escape us’ in the course of the *Kritik*’s investigation, ‘because what reason brings forth *entirely out of itself* [aus sich selbst hervorbringt] cannot be hidden’ (Axx; my ital.). As he writes earlier in the same Preface, in cases such as this, ‘I have to do merely with reason itself and its pure thinking; to gain exhaustive acquaintance [Kenntniß] with them I need not seek far beyond myself [weit um mich], because it is *in me myself* [in mir selbst] that I

encounter them' (Axi; my ital.). And it is still earlier in this Preface that we find Kant construing the methodology of the *Kritik* as essentially *reflexive*, insofar as it undertakes the 'self-knowledge [Selbsterkenntnis]' of reason (Axi). A particularly emphatic self-description of Kant's project along these lines occurs in his August 7, 1783 letter to Christian Garve:

[I]t is not at all metaphysics that the *Kritik* is doing, but a whole new science, never before attempted – namely, the critique of *an apriori judging* reason. Other men have touched on this capacity, such as Locke as well as Leibniz, but always in admixture with other powers of cognition. It has come to the mind of no one, however, that this [reason] is an object of a formal [förmliche], necessary, and yes, extremely broad science, requiring such a manifold of divisions...and at the same time – which is wonderful – *deriving* [ableiten] out of its own nature *all objects to which it is extended*, enumerating them, and able to prove its completeness through their connection [Zusammenhang] with the entire capacity for cognition. Absolutely no other science attempts this – namely, to try to develop [entwickeln] apriori, out of the mere concept of a capacity for cognition (if it is precisely determined [genau bestimmt]) all objects, all that one can know [wissen] of them, yes, even what one is involuntarily but deceptively compelled to judge of them. (10:340)

Finally, as we noted in the Introduction (§II), in this same Preface, but in the B-edition Preface as well, formal logic is cited as *the* prime example of a science which proceeds reflexively: 'in logic', Kant writes, 'the understanding has to do with nothing further than *itself* and its own form' (Bix; my ital.).

Yet all of this points to the fact that it is at least an open question whether Kant is truly entitled to use the language of *cognition* [Erkenntniß] to describe the

results of the self-apprehension of our cognitive faculties – that is, the results of the ‘understanding’ having to do with *nothing* further than itself. For it is one of Kant’s essential theses – and one of the better-advertised marks of his break with ‘Empiricism’ – that ‘cognition can arise [entspringen]’ *only* when understanding *and another faculty* ‘unite with one another [sich vereinigen]’ (B76).<sup>8</sup> In particular, cognition *qua* ‘objective perception’ can only arise when our capacity for understanding is united with our capacity for receptivity (sensibility). Without our understanding itself somehow being ‘sensibly given’ in an intuition, it is hard to see how we can claim *cognition* of the understanding, its activity, or the forms and principles which delineate its possibility for exercise.

The problem of the possibility of cognitive access to thought by thought itself should, of course, also be confronted in light of Kant’s concerns in the Dialectic. For isn’t it precisely the burden of the Paralogism in particular to argue that we have, and can have, absolutely *no* ‘intuition’ of ourselves as we self-actively are, of the ‘I think’ which is responsible for the formal determination of all of our consciousness? That we can have no ‘cognition’ of this ‘thinking subject’ as an ‘object’?

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<sup>8</sup> In the Amphiboly, Locke is alleged to have ‘totally sensitivized [sensificirt] the concepts of understanding’ (B327). Even though reflection ‘be not sense, as having nothing to do with external objects’, for Locke it is nevertheless ‘very like it, and might properly be called internal sense’ (II.1.4).

Indeed, Kant states quite clearly in the B-edition of the Paralogisms that, in the apprehension of the logical forms of thought or apperceptive unity, we are *not* ‘given’ to ourselves as an object of cognition:

All *modi* of self-consciousness in thinking are in themselves therefore not yet concepts of the understanding of objects (categories), but merely logical functions, which provide thought with no object at all, and hence *also do not give myself as an object to be cognized*. (B406-7; my ital.)

But then, if not ‘as an object’, how else am ‘I’, or my capacities, to be cognized within logic? What can the ‘cognition’ in ‘self-cognition’ mean?

Kant returns to these issues explicitly in §25 of the B-deduction. There Kant says that, in the performance of intellectual acts of synthesis, ‘I am conscious [bewußt] of myself’, but adds immediately that I am conscious, ‘not as I appear to myself, nor *as* I am in myself, but only *that* I am’, and that moreover, ‘[t]his *representation* is a *thinking* [Denken], not an *intuiting* [Anschauen]’ (B157). He again emphasizes that the mode of apprehension of synthetic operations of thought is *distinct* from intuition in a footnote to this same section, stating that ‘I do not have yet another self-intuition [Selbstanschauung], which would give the *determining* of me, of the spontaneity of which I am only conscious [bewußt]’ (B158n).

Hence though (a) it is clear that Kant recognizes some form of awareness of our intellectual activity, and (b) even admits that it is appropriately described as



enjoying a ‘representation with consciousness’, and even though (c) this representation seems to put us in an immediate relation to this activity, in the end, Kant still insists that it is nevertheless not an intuitive relation. Instead, he claims that we ‘apprehend’ the activity of thinking in something that is itself a kind of *thinking*. But then, again, how can it also be a *cognizing*?

§46 We can approach this question of access from a slightly different angle. It is well-known that Kant takes intuition to play a necessary role in the provision of a certain kind of ‘content’ for our concepts:

For every concept there is requisite, first, the logical form of a concept (of thinking) in general, and then, second, the possibility of giving it an object to which it is to be related. Without this latter it has no sense [Sinn], and is entirely empty of content [völlig leer an Inhalt], even though it may still contain [enthalten] the logical function for making a concept out of whatever sort of data there are. Now the object cannot be given to a concept otherwise than in intuition.... (B298)

Yet even without an intuition, we are told that a concept is not in fact completely empty, but nevertheless ‘contains’ something in itself: a ‘logical function’. This in turn gives us some reason not to take ‘relation to an object’ as a universal specification of the source of all forms of ‘content’, since otherwise we would be faced with substantial difficulties when we try to account for how our thinking about *logical concepts themselves* could have any significance at all, or how, e.g., one logical function could be distinguished from another, independently of

considering the ‘possibility of giving it an object’.<sup>9</sup> For it is precisely the latter ‘possibility’ which is bracketed from within formal logic, since, we have seen time and again, Kant holds that in formal logic we consider thought *in abstraction from* intuitions, and in general in abstraction from relations that it might have to objects (B79, etc.).

Indeed, it would be hard for Kant to deny that logic textbooks convey at least *some* ‘information’ about concepts, or more generally about thought itself, insofar as logic is the science of the basic forms and principles of thinking in general. Kant himself presents precisely this sort of information in his logic lectures, but also in the first *Kritik* (cf., the ‘Table’ of logical functions in §9) and elsewhere. But then we can legitimately ask once again: how does Kant think we come into possession of this distinct sort of ‘logical’ content? How does this ‘thinking *about thinking itself*’ come to acquire the special sort of ‘content’ that it does? Is there – or if there isn’t should we posit, on Kant’s behalf – some sort of ‘logical’ intuition, an intuition by which we are ‘given’ logical information such as the properties of logical functions? Is there some special intuitive mode of apprehension of *thought itself*, as an object for (logical) cognition?

It would seem, in fact, that Kant *must* recognize that some sort of perceptual language would be not entirely out of place in this domain, since, at

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<sup>9</sup> Recall in **IV**, we identified a distinct form of *containment*-‘Inhalt’ that is treated within formal logic.

least on the face of it, the ‘things’ we come to know in logical investigations are things about which we can be *mistaken*. For Kant himself recognizes the possibility of such mistakes – to take just two examples of misperceptions by logicians, there are those who wrongly ‘mix in’ a reference to time when they mean to identify the principle of contradiction (B191f), and there are also those (like Leibniz, and later Brentano) who wrongly believe that all judgments (e.g., hypothetical and disjunctive) can be reduced to categorical form (cf., *Jäsche Logik*, §24n). But this would again appear to require that we introduce something like a ‘seems’/‘is’ distinction at the level of what we might tentatively call ‘logical apprehension’. And isn’t this just to introduce a language for recording our perceptions of logical information, allowing us to mark a distinction between what we *take* to be true in logic, and what *is* true?

In any case, we have noted above that, due to its reflexivity, Kant takes the faculty which prosecutes logical investigation to have *unmediated* access to its subject-matter – ‘nothing can remain hidden’. Of course, according to Kant’s official definition of an immediate perception, on the so-called ‘Stufenleiter’, it is specifically an *intuition* that is a representation ‘with consciousness [mit Bewußtsein]’ which is ‘immediately related to the object and is singular [bezieht sich unmittelbar auf den Gegenstand und ist einzeln]’ (B376-7). Could whatever perception we might enjoy of the subject-matter of logic be made to fit this definition?

Logic would seem to be ‘objective’ if anything is, at least in the sense that its principles are valid despite whatever wishes or desires we might have (despite our best efforts). It would seem as well that our apprehension of logical forms are definitely accompanied by consciousness. Finally, it would seem that thinking about thinking itself should be ‘immediately related to its object’ – again, if anything is. Why, then, does Kant demur, and insist that we apprehend our spontaneous activity only through a ‘consciousness’ alone, through mere ‘thinking’? Does it have to do with the requirement that intuitive representation be a *singular* representation?<sup>10</sup> Well, the primary ‘object’ of Kantian logical perception would seem to be the activity of synthesis, the various modes of unifying these ‘acts’, and the basic principles which govern these acts.<sup>11</sup> But what would it mean for a logical form or principle to be represented ‘singularly’? Or what would it mean for these forms and principles – or for thought itself – to actually *be* individual objects?

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<sup>10</sup> There is, of course, a long-standing debate – between Charles Parsons and Jaakko Hintikka, over the precise meaning and priority of the ‘singularity’ and the ‘immediacy’ aspects of intuition. To this, Carl Posy has recently suggested (in his ‘Immediacy and the Birth of Reference in Kant: The Case for Space’, in *Between Logic and Intuition*, eds., Sher and Tieszen (Cambridge: Cambridge, 2000)) that we must add the aspect of ‘reference’, insofar as to have an intuition is to be in a *successful* representative relation. Given the ambiguities which accrue to ‘reference’, a better phrase would be Husserl’s – that of *fulfillment*. For some discussion of the role (or rather, consequences of the non-role) that intuitions play in Kant’s logic, see **IV** (§36).

<sup>11</sup> To repeat, this is not all that far from Locke’s position in the *Essay*. The main difference, if any, would lie in Kant’s denial that the ‘awareness’ or ‘apprehension’ is of the same form as our *intuition* of our inner states; rather, it is *mere* consciousness.

I think we should bracket for the moment the question of whether or not it makes sense to speak of intellectual activity – let alone their forms or principles – as itself an individual object or as consisting of ‘singular objects’, for I think that the root difficulty here has to do with the fact that the true (so-called) ‘object’ of such apprehension – the activity of the thinking subject – is not something that ‘in itself’ exists or can appear *in time*, and so cannot be ‘thought *under* the form of sensibility’. And the reason for this exclusion of the activity of thinking from appearing in the temporal sequence is precisely the *spontaneity* of thinking, the fact that it represents a *self-activity* [Selbsttätigkeit] of the mind, as the above quotes have it. All ‘appearances’ in time fall instead under the regime of determination by *external* causes, as we learn in the first *Kritik*’s ‘Analogies of Experience’.

But here again we face several well-documented difficulties, circling around what Kant himself calls the ‘paradox’ of inner sense (cf., KrV §24). At the very least, it is hard to see how we can avoid acknowledging that our *being (self-)conscious* of such spontaneous logical activity is something which itself does not transpire ‘in’ time, or at the very least bears some ‘loose’ relation to the time sequence.<sup>12</sup> Yet Kant wants to claim that the intentional ‘object’ of our

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<sup>12</sup> Cf., Geach, *Mental Acts*, §4: ‘Anybody performs an act of judgment at least as often as he makes up his mind how to answer a question; and acts of judgment in this sense are plainly episodic – have a position in a time-series’, though he adds parenthetically that ‘[w]e shall see, indeed, that we cannot – cannot in principle, not for lack of information or technique – assign positions in time to acts of judgment in the same way as we do physical events, nor even in the same way as we do sensations’ (9). In §23, Geach claims that ‘it seems reasonable to say that unless the whole complex content is grasped all together...the thought or judgment just does not exist at all. [...] [T]here can be no question of their occurring in *any* temporal order’ (104-5). He

consciousness is itself not ‘appearing’ to us as something ‘in’ time, and so as something belonging to inner sense, but rather is not ‘appearing’ *at all*.

Yet Kant is no stranger to the possibility of ‘representings’ that occur in time, but whose ‘representeds’ (‘intentional objects’) are thought in a way which does not incorporate a time-determination. As we noted on several occasions, such ‘thinking’ is absolutely essential to his *moral* philosophy. We might, then, try to exploit for the present purposes this room that is created by this ‘pure’ or ‘unschematized’ thinking – i.e., room which exists for the representation of an object without this representation being ‘thought’ under the sensible determinations which would be necessary for it to belong to experience.<sup>13</sup> On this account, within logic, we would then merely be thinking of the understanding itself as, e.g., a mere ‘subject that can never be a predicate’, or a mere ‘ground for certain necessary consequences’, without thinking of these roles as being specifically *temporalized* in any way.

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concludes by admitting that ‘[a]ll that we can say is that the judgment is loosely bound up with physical time’, though hastening to add that this ‘does not imply e.g. that judgments are really performed in a super-physical realm’, since ‘for judgments to be loosely tied to physical time is still for them to be tied’ (106).

<sup>13</sup> We have treated the distinction between ‘pure’ and ‘schematized’ categories, and its significance for Kant’s system as a whole, in previous chapters (e.g., **II §19**). For a take on this problem somewhat along these lines, see Henry Allison, *Kant’s Theory of Freedom* (Cambridge: Cambridge, 1990), who wishes to make what he claims is an at least ‘logically possible’ distinction between ‘an independence of the ‘conditions of time’ as opposed to a full-fledged *timelessness*’ (52; my ital.). The former signals the treatment of an object from a certain ‘point of view’, whereas the latter ascribes to an object substantial ‘ontological’ properties. (Allison favors the former as an account of the ‘relation’ of time to free agency in general.)

Now, the possibility for both formal-logically and categorially determinate thoughts about the ‘self’ which is ‘self-cognized’ in logical investigation is surely something which tempers somewhat a persistent point of criticism among Kant’s readers, that the very idea at work here is simply incoherent.<sup>14</sup> Yet the main difficulty with this route is that such unschematized thinking of the understanding as a kind of ‘object’ is thinking which can only provide us with a *problematic* concept of an object, and so is still not a promising candidate for the foundation of any *cognition*.<sup>15</sup> What would seem to be required is a form of purely *intellectual intuition*, something which Kant explicitly denies to our form of mindedness (much to the chagrin of the post-Kantian idealists).<sup>16</sup>

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<sup>14</sup> This is the general tone of Strawson’s *The Bounds of Sense*: Kant attempts to ‘draw the bounds of sense’ (11), but then ‘Kant’s arguments for these limiting conclusions are developed within the framework of a set of doctrines which themselves appear to violate his own critical principles. He seeks to draw the bounds of sense from a point outside them, a point which, if they are rightly drawn, cannot exist’ (12; cf., 44).

<sup>15</sup> For a special emphasis on the problem of calling this sort of ‘apprehension’ a kind of *cognition*, compare W.H. Walsh, *Kant’s Criticisms of Metaphysics*: ‘We need to show how pure reason can pronounce not just on mathematics and physics and metaphysics, but also *on itself*. We need to examine the logical status of its pronouncements, to say whether they are supposed to amount to knowledge, and if so to specify the type of knowledge involved’ (§42, 250; my ital.). Compare as well Graham Priest, *Beyond the Limits of Thought* (2<sup>nd</sup> ed.): ‘Kant’s claim that we can have knowledge of phenomena but not of noumena [such as the thinking subject], puts very precise limits on the extent of knowledge. It is not, therefore, surprising that Kant is caught in the self-referential trap involved in skepticism. For here is Kant writing a large book at least purporting to inform us about, *inter alia*, noumena. His own theory would therefore seem to be both within and without the known’ (5.§5, 80).

<sup>16</sup> On this, cf. again Walsh (op.cit.): ‘[K]nowledge, in its human form at least, is basically bound to sense. But what of the claim that it is? Is this supposed to represent a bit of sense-knowledge? Is it the result of insight on reason’s part into its own nature and limitations, and if so how is that insight achieved? And if we say that it does constitute a part of the self-knowledge of reason (cf., Bix), what self is here concerned? Does reason here know itself *as it appears* to itself or *as it really is*? [...] How shall we avoid admitting that the main results of the Analytic are arrived at by a species of *intellectual insight* which they themselves claim to be unavailable to human beings?’ (§42, 251; my ital.). Cf., as well, T.D. Weldon’s *Kant’s Critique of*

Perhaps here, however, is where the force of my mere ‘consciousness’ of my *existence* as a self-active, self-determining, spontaneous being (described in KrV §25, cited above) is enough to move this concept from ‘problematic’ to ‘assertoric’ status. For perhaps the mere consciousness of my thinking’s beholdenness to logical laws can be given the more ‘substantializing’ role of conferring a kind of ‘objective reality’ upon this problematic concept of ‘Verstand’, on the model provided by the role that consciousness of our will’s beholdenness to the moral law, which confers ‘objective reality’ of the problematic concept (Idea) of freedom (cf., KpV §§6 et seq.).

Yet even if something like this story could be told on Kant’s behalf, in any case, what we still would not have is an *intuition* of the ‘object’ of logic. Now, I suggested above that we put to one side the difficulty in thinking of ‘Verstand überhaupt’ as itself an ‘individual’, but we need to return to this point once again, for it is behind Kant’s *anti-psychologistic* approach to formal logic. This connection comes out perhaps most clearly in the following passages from first *Kritik*, which described the *purity* of formal logic: ‘[a]s *pure* logic it has no empirical principles: thus it draws nothing from psychology (as one has occasionally been persuaded)’

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*Pure Reason*: ‘[Kant] has to claim *intuitive acquaintance* with his own activity of synthesizing, or else the whole elaborate story of scientific knowledge as a kind of making or producing and not a passive contemplation of self-evident truths must collapse; and this is why the doctrine of inner sense is so terribly embarrassing when Kant tries seriously to disentangle it in [the B-edition]. [...] Yet Kant will not openly claim *intuitive insight* into the thinking activity of the self, since this would undermine the critical distinction between sense and thought by introducing an *intellectual intuition*. Implicitly, however, I think he did make this claim, and he was right’ (158-9; my ital.).



(B78);<sup>17</sup> ‘in [pure logic] we abstract from all empirical conditions under which our understanding is exercised [ausgeübt]...because these merely concern the understanding under certain circumstances of its application, and experience is required in order to know these’ (B77).

As was brought out in our analysis of the contrast between concepts and intuitions (II, §31), intuitions give us ‘thorough-goingly determinate’ representations, which are essentially indexed to ‘certain circumstances’ – namely, a particular perspective on space, glimpsed at a given time. Any ‘intuition’ (were it possible) of my capacity for thinking would merely disclose what is the case with *my* understanding ‘then and there’, rather than with an ‘understanding in general’.<sup>18</sup> Because of this ‘generality’, Kantian logic can still be considered an ‘objective’ science, even if it has no ‘object’ in any unproblematic sense, since its findings demand universal assent, ‘für jedermann und jederzeit’ (cf., Prol. §§18f, B-Ded. §19).

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<sup>17</sup> We noted above (I §7) that Christian Wolff, for one (in §§88-9 of his *Discursus Praeliminaris* to his *Logica*), claims that logic does, in fact, draw its principles from psychology, though it is not at all clear that Wolff meant *empirical* psychology.

<sup>18</sup> Perhaps we could arrive at such a ‘pure’ point of view on ‘understanding überhaupt’ through some form of ‘abstraction’? In this regard, consider the following passage the opening paragraph to Kant’s 1786 essay, ‘Was heißt: Sich im Denken orientiren?’: ‘If, from [a] concrete act [Handlung] of understanding we leave out the association of the image – in the first place, of an accidental perception through the senses, and then the pure sensible intuition in general – then what is left over is the pure concept of understanding, whose range [Umfang] is now enlarged [erweitert] and contains a rule for thinking in general. It is in just such a way that general logic comes about’ (8:133). Yet Kant still does not tell us here how we are related to the ‘concrete act of understanding’ itself, whether or not we somehow ‘intuit’ this act, or are still merely ‘conscious’ of it.

Yet this is just to say that the appropriate ‘generality’ is one of *impersonality*. This, in turn, helps to bring out the extent to which ‘the understanding’ stands for a sphere which is determined wholly ‘from within’, so to speak. For this further complicates the bearer of ‘spontaneity’ at issue, since it would seem now that it belongs to ‘*the* understanding’, and not necessarily to *my* understanding. As I will argue in the next part (**B**), the ‘spontaneity’ of the understanding consists essentially in the fact that its acts are always only ‘determined’ by its *own* principles, rather than ‘determined by alien causes’. Yet I as an *individual* thinker, however, do *not* appear to be wholly self-determining, since from my individual historical point of view, precisely in thinking, I seem to be determined by an ‘alien cause’, in that I find myself beholden to laws which I have not chosen (or voted for) or instituted. When I think, *I personally* seem to be passive with respect to the spontaneity of my understanding.

Likewise, while another way that Kant describes this spontaneity of ‘the understanding überhaupt’ is to say that it ‘gives its law to itself’, or ‘is’ a law ‘to itself’, it is hard to see how *I*, on the other hand, am *active at all* in relation to these laws. Rather, I seem to be entirely passive (receptive) – and not only in the first-order acts of thinking, but also in the second-order acts of reflection upon my thinking. Here, when I become ‘conscious’ of the spontaneity of thinking as such, and of its rules, in effect I am brought to recognize what has been ‘determined’ for ‘thinking as such’ by forces entirely beyond *my* control.

But then, on the view which would then be emerging, should we take Kant to be a kind of ‘Platonist’, with respect to ‘the understanding’ and ‘its laws’? For the understanding’s forms are beginning to seem as if they enjoy a kind of existence – and its laws are beginning to seem as though they enjoy a kind of validity – which seems to ‘obtain’ entirely independently of the existence of any given individual thinker. Yet then, not only would Kant’s position be plagued by all of the typical worries about Platonism, most importantly, he would have lost his claim on what I called above the ‘virtue’ of idealism – namely, its capacity to provide a compelling answer to the problem of epistemic access, via the immediacy and transparency that characterizes *self-reflection*.

Until Kant can show us how it is that I as an individual can come into possession of those ‘idealities’ which ‘the understanding überhaupt’ gives to itself when it undergoes ‘self-analysis’ or achieves ‘self-cognition’, it would seem as though Kant is no better off than his ‘realist’ counterparts.<sup>19</sup> In response to the danger of what we might call ‘faculty-Platonism’, the two most common courses

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<sup>19</sup> A version of the dilemma lurking in this neck of the woods is given particularly clear expression by Michael Loux, in his *Metaphysics* (London: Routledge, 1998). As Loux understands it, ‘traditional metaphysicians...will argue that if the [Kantian] is correct in denying that the world as it really is can be an object of serious philosophical inquiry, then the [Kantian] is wrong to suppose that a *conceptual scheme* can be. The central premise in the [Kantian]’s argument against the traditional metaphysics is the claim that the application of the conceptual structures in the representation of things bars us from genuine access to those things; but the defender of traditional metaphysics will point out that we need to employ concepts in our characterization of what the [Kantian] calls a conceptual framework, and they will conclude that, by the [Kantian]’s own principles, that entails that there can be no such thing as characterizing the nature and structure of a conceptual scheme’ (10; my ital.). (Loux has ‘conceptual schemer’ where I have ‘Kantian’, but identifies the two in a paragraph prior.)

of action in the secondary literature are to ascribe to Kant, either a position in which logic's principles are *normative* for our thinking – perhaps because we ourselves freely recognize that we 'ought' bind ourselves to these laws, on the model of the relation between the moral law and our wills – or a position which descends into some form of *psychologism*. Since the *normativist* strategy, as we might call it, has been by far the more common strategy as of late, I will focus at length upon the prospects of such an interpretation in the next several sections. I will conclude, however, that there are compelling reasons to think that, in the end, the *normativist* interpretation must be mistaken. I will then return to the implicit 'ontological' commitments of Kant's account of logic in the final part (C).

## B. Normative vs. Constitutive

§47 Here will again we will revisit several themes initially encountered in the first Chapter (I). For it is quite common for such a 'normativist' interpretation to describe the 'end' or 'goal' of logic in terms quite close to those used by those early moderns who wished to treat logic as a kind of *ars*. Béatrice Longuenesse provides an especially clear expression of how this relation is most commonly understood in her recent 2006 essay 'Kant on *a priori* concepts'.<sup>20</sup> There Longuenesse draws an explicit analogy between Kant's views and those of the 17<sup>th</sup>

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<sup>20</sup> *The Cambridge Companion to Kant and Modern Philosophy*, ed. Paul Guyer (Cambridge: Cambridge, 2006), 129-168.

century Port-Royal Logicians Arnauld and Nicole, whose *Logique* bears the subtitle: ‘l’art de penser’. In Longuenesse’s reading, Kant’s logic ‘is not just preoccupied with the way we happen to think, but establishes the norms for thinking *well*’ (137). Longuenesse takes this to be true, even if Kant ‘is more explicit than they are about the *normative* character of logic: logic, he [i.e., Kant] says, does not concern the way we think but the way we *ought* to think’ (ibid.; my ital.).

In alluding to what ‘Kant says’, Longuenesse is making reference to an oft-quoted passage from Jäsche’s text (from the ‘Introduction’, §I) reads as follows:

In logic...the question is not about...how we do think [denken], but how we *ought* to think [denken sollen]. [...] In logic we do not want to know how the understanding is and does think and how it has previously proceeded [verfahren ist] in thought, but rather how it *ought* to proceed [verfahren sollte] in thought. (9:14; my ital)

And indeed, the presence of the language of ‘ought’ in this passage clearly does seem to indicate that Kant views the relationship which obtains between logical laws and our capacity for understanding along the lines suggested by Longuenesse’s reading. That is, the passage strongly suggests that this relation is, as Longuenesse puts it, a *normative* relation. In fact, the passage seems to provide such a straightforward answer to the question of the relation between the laws of logic and their subject-matter (thinking), that it is perhaps unsurprising that most

contemporary interpreters of Kant are happy to simply repeat or paraphrase the passage with little further comment and move on to other issues.<sup>21</sup>

Let us use the label ‘normative interpretation’ to pick out those interpretations which ascribe to Kant a position in which he takes the logical laws to be *imperatives* for thinking – i.e., laws that tell us how we *ought* to think, or tell us how to think *well*. It is safe to say that the normative interpretation is by far the most common interpretation currently on offer. The reason for this prevalence no doubt extends beyond the presence of the above statement in Jäsche’s text, as the type of position being ascribed to Kant in the standard interpretation is one which has itself enjoyed long-standing appeal. Longuenesse herself refers to the *Logique* of Port-Royal, but throughout the 19<sup>th</sup> century up till the present, it has been extremely common for logic textbooks to propound precisely the sort of position these readers wish to ascribe to Kant – namely, one in which logic is taken to provide norms for reasoning, in the sense that its principles are adequately expressed in the language of ‘oughts’.<sup>22</sup> This fact in turn might give a

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<sup>21</sup> In addition to Longuenesse, some other recent adherents of what I call the ‘normative interpretation’ (though they each elaborate it with varying degrees of sophistication) include: Robert Hanna, *Rationality and Logic* (Cambridge: MIT, 2006, ch. 7, as well as Hanna’s *Kant, Science, and Human Nature* (Cambridge: Cambridge, 2006); R. Lanier Anderson ‘Neo-Kantianism and the Roots of Anti-Psychologism’, *British Journal for the History of Philosophy*, 13.2 (2005), 287-323; Mary Tiles, ‘Kant: from General to Transcendental’, *Handbook of the History of Logic*, vol. 3 (Amsterdam: Elsevier, 2004), 85-130; and John MacFarlane, ‘Frege, Kant, and the Logic of Logicism’, *The Philosophical Review*, 111.1 (January 2002), 25-65.

<sup>22</sup> Later 19<sup>th</sup> century representatives of a ‘normativist’ position about logical laws include Friedrich Ueberweg (cf., his 1857 *System der Logik*, §6), Wilhelm Windelband (cf., his ‘Normen und Naturgesetze’, and ‘Kritische oder genetische Methode?’ in his *Präludien* (Freiburg: Mohr, 1884)) and Christoph Sigwart (cf., his 1888 *Logic* (2<sup>nd</sup> ed.) §§1-3, §39). For helpful discussion of

further motivation for the normative interpretation, insofar as Kant's readers might be predisposed to attribute what they take to be philosophically 'sensible' views to a thinker whom they admire.

Yet as I will show in what follows, there are equally strong reasons for thinking that most versions of this standard normative interpretation will end up being forced to ascribe beliefs to Kant which would be in direct conflict with other key Kantian commitments. In fact, I will contend that thorough and systematic reflection – upon both the presuppositions that the normative interpretation would require, and the consequences that such an interpretation would have for our understanding of other aspects of Kant's philosophy – will show that it is actually far from clear that there is any room within Kant's conception of logic for the sort of 'ought' that the normative interpretation wants to find in Kant's characterization of logical laws.

In order to draw out the need for a *non-normative* interpretation, I want, first, to explore the extent to which Kant's *practical* philosophy can give us a model of a discipline whose laws Kant takes to be clearly normative for that

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these post-Kantian normative positions, as well as relation between these views and the late 19<sup>th</sup> century debates over logical 'psychologism' and the nature of logical laws in general, see Lanier Anderson, 'Neo-Kantianism'; Eva Picardi, 'Sigwart, Husserl and Frege on Truth and Logic, or Is Psychologism Still a Threat?', *European Journal of Philosophy* 5:2 (1997) 162–182; Martin Kusch, *Psychologism* (London: Routledge, 1995); and Wolfgang Carl, *Frege's Theory of Sense and Reference* (Cambridge: Cambridge, 1994).

For two representatives of the 'normative' approach in more recent logic textbooks, see Daniel Bonevac, *Deduction* (2<sup>nd</sup> ed.; Oxford: Blackwell, 2003) and R.M. Sainsbury, *Logical Forms* (2<sup>nd</sup> ed.; Oxford: Blackwell, 2001). Several philosophers have tried to provide a systematic, philosophical grounding for this sort of position, the most well-known of which may be Robert Brandom; see his *Making It Explicit* (Cambridge: Harvard, 1994), especially 12f and 113f.

which they govern, in that the laws of Kant's morality clearly provide the fundamental norms that are to guide all human volitional activity. What I will show below (in §48), however, is that *even in the practical sphere*, it is not at all evident that Kant takes practical laws to be normative *in themselves*. I will propose instead that Kant holds such laws to be norms only in light of their relation to beings who are not purely rational. That is, moral laws become norms when they are applied to beings whose capacities for reasoning are conjoined with other, possibly obstructive forces – such as, in humans, the capacity for 'inclination [Neigung], or sensible impulse [sinnliche Antreib]', as Kant names them in his 1797 *Metaphysik der Sitten* (6:213; hereafter 'MS'). It is only due to the interaction between reason and sensible impulses in humans that we experience ourselves as having the power of 'free choice [Willkür]', i.e., the capacity to act both in and out of accord with the moral law (MS 6:226).<sup>23</sup>

Hence, there are substantial grounds for thinking that, in the case of beings that possess *only* the capacity for practical reasoning, Kant would *not* take the moral law to be normative, but rather would view it as *constitutive* of its 'kind of being', 'species', or 'essence [Wesen]'. As he puts it in the 1785 *Grundlegung zur Metaphysik der Sitten* (GMS), these laws are to be 'derived from the concept of a

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<sup>23</sup> It is a difficult question whether or not Kant is willing to call 'Willkür' a capacity or power in any sense. For instance, in *Metaphysik der Sitten*, Kant writes that 'only freedom in relation to the internal law giving of reason is really an ability [Vermögen]; the possibility of deviating [abzuweichen] from it is an inability [Unvermögen]' (6:226). I return to this point below.



rational being in general [aus dem allgemeinen Begriffe eines vernünftigen Wesens überhaupt abzuleiten]' (4:412).

After saying a bit more about what is meant by 'constitutive' in this context, and emphasizing that the relevant meanings of 'constitutive' and 'normative' show them to be mutually incompatible terms,<sup>24</sup> I will then argue (in §§49-50) that, if there is any analogy to be drawn between logical laws and practical laws, it would have to be drawn at this constitutive level. For logical laws, too, are 'derived' from a concept of a similarly purely rational sort of being – namely, from the concept of an 'understanding in general', considered in isolation from every other faculty or 'force'. In this, Kant will be shown to be quite *Leibnizian* in his conception of the 'spontaneity' of the understanding. This is of a piece with Kant's partial acceptance of a Leibnizian account of the independence of 'understanding' and its laws from considerations of volition, something which underwrites Kant's consistent claims that logic thus must consider our capacity for understanding in isolation from the *will*.

I argue that Kant also follows Leibniz insofar as Kant's use of the language of 'spontaneity' to describe the activity of understanding does not introduce any element of 'free choice [Willkür]' on the part of the understanding to follow the laws which govern thought as such. I do not, however, fully close off the

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<sup>24</sup> To continue the cautions from above: I do not mean to claim that every sense which might be given to the term 'constitutive' is necessarily incompatible with every sense that might be given to the term 'normative' – only that the senses presently at issue are incompatible.

possibility that there could be some such correlate present in a sphere in which thinking operates in conjunction with an additional (sensible) faculty, which is concerned, not with the formation of judgments, but with acts of holding-true.<sup>25</sup> This point entails that, unlike in the moral dimensions of human activity (in which we ought to submit our ‘free choice’ to the norms of practical reason), there is no relevant composite of capacities in view within formal logic for which formal-logical laws as such could then be normative.<sup>26</sup>

The constitutive interpretation thus makes good sense of one of the fairly strong claims that we saw Kant making earlier (**III**, §27; **V**, §41), that *no* thinking would take place if logical laws are not followed, that something which ‘violates’ logical laws is not even a thought. Even if (as I show in §§51-2) Kant surely thinks that we are free to make what might be called ‘second-order’ mistakes (such as incorrectly thinking (or misjudging) that, in a given case, thinking or inferring has occurred, or mistaking certain putative laws for truly ‘logical’ ones), the conclusion we will be compelled to draw is that, for Kant, we are simply incapable of engaging in ‘first-order’ thinking that fails to be logically structured.

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<sup>25</sup> We have already touched upon this possibility above, in Chapter **III**, §22.

<sup>26</sup> This can be true of logic’s relation to the understanding *as such*, while still leaving room for the possibility that there is some *other* set of laws – such as ‘transcendental-logical’, ‘special-logical’, or ‘applied-logical laws’ – which might function as norms for some composite of capacities. In the meantime, I will simply leave open the precise nature of the parallel between the moral and the logical.

This is in direct contrast with the ‘freedom’ we have to act immorally.<sup>27</sup> Hence, if, according to Kant, we are somehow able to perform an action or ‘be’ in a mental state whose apparent structural articulation is not in accord with logical law, it will be necessary for Kant to say in such instances that we have simply *failed* to think (judge, infer).

At this point, if the constitutive interpretation is to be fully legitimated, the main task that will remain will be to find a way to re-incorporate the normative language contained in the well-known passage from Jäsche’s *Logik*, i.e., the passage cited earlier as strongly suggestive of the standard interpretation. For, we might wonder, how can a constitutive interpretation of the sort that I have proposed above be made to accommodate this clear insertion of an ‘ought’ into Kant’s description of the results of logical inquiry?

I conclude this part of the chapter (§52) by arguing for a reading which, to my mind, best allows for a partial reincorporation of a normative element in the logical domain of the sort suggested by Jäsche’s passage. In brief, I will suggest that the reading which provides the maximal amount of interpretive consistency is

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<sup>27</sup> This may bring to mind a certain notorious interpretation of Kant’s understanding of relation between law and free action in the moral sphere, in which (like the suggestion here that ‘logical’ is equivalent to ‘thinkable’) morally ‘free’ activity is simply *equated* with ‘rational’ activity. This reading is put forward perhaps most famously by Sidgwick, in the 6<sup>th</sup> 1901 edition of his 1874 *The Methods of Ethics*, I.5 (‘Free Will’), as well as in the Appendix to this work (‘The Kantian Conception of Free Will’; originally published in *Mind* 13.51(1888)). To address this sort of interpretation of the moral sphere would unfortunately take us too far afield; for some discussion, see Christine Korsgaard’s *Creating the Kingdom of Ends* (Cambridge: Cambridge 1996), 171f; and Allen Wood, *Kant’s Ethical Thought* (Cambridge: Cambridge, 1999), 173f.

one that ascribes to Kant a position in which logic is normative for our mental life *only* when viewed in reference to the fact that thinking and reasoning are necessary means for the fulfillment of the ‘ends’ of humanity – i.e., for the realization of human ‘interests’, such as the acquisition of scientific truth and the actualization of a moral community. This has the effect of making normativity an externally conferred, rather than essentially inherent, property of logical law.

Of course, at this point, many questions will still remain about the ‘ground’ for the essence of a capacity. For if it is not grounded in ‘imperatives’, nor in some ‘object’ which can be ‘given’ in ‘objective perception’ or empirical cognition, then what is responsible for the universal necessity and validity of our logical principles? In the next main part of the chapter (C), I extend the comparison with Leibniz that we began in this part, in order to bring out just how ‘problematic’ (in Kant’s technical sense) a status is conferred upon the answer Kant gives to the question of the ground underlying the necessity of logical laws.

**§48** But, first, let me provide an argument against the normative interpretation of Kant’s understanding of this ground. What, then, do most contemporary interpreters seem to have in mind when they say that a law is ‘normative’? The relevant sense can be captured by the following three conditions:

- (1) The ‘subjects’ of the law – those beings which are governed by, or subjected to, the law – must both be able to succeed *and be able to fail* to act (or be) in accordance with the law.<sup>28</sup>
- (2) The *subjects* of a norm *must retain their identity* as beings that are subjected to this specific sort of law regardless of their (actual) accord with it. This latter condition is important, as it implies that evaluative ascriptions in light of norms (e.g., *x* as ‘in’ or ‘out of accord’) institute a division *within* some otherwise well-defined class.
- (3) The *laws must retain their validity* or bindingness over their subjects regardless of the (lack of) *actual* adherence to the norms by their subjects – though, to be sure, there must be the *possibility* of such adherence (to uphold the traditional formula that ‘ought’ implies ‘can’).

So unlike descriptions, laws which are norms have a ‘direction of fit’ (to once again use J.L. Austin’s turn of phrase)<sup>29</sup> which provides them with fixed content that prescribes certain behavior of their subjects as ‘correct’, regardless (in typical cases)<sup>30</sup> of any actual behavior of their subjects; nothing subjects do can change the appropriateness of the norms’ claim to governance.

To illustrate the intended sense of ‘normativity’, let’s take a concrete (if banal) example: the relation which obtains between traffic laws and drivers. According to the above analysis, these laws can be counted as normative for drivers for the following three reasons: (1) Drivers can succeed or fail to be in

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<sup>28</sup> Douglas Lavin provides a substantial catalogue of relevant citations from prominent ‘normativity’-theorists (e.g., Robert Brandom, John McDowell, Christine Korsgaard) on this point – though with an emphasis on the nature of normativity in *practical* reasoning – in his ‘Practical Reason and the Possibility for Error’, *Ethics* 114 (April 2004), 424-57.

<sup>29</sup> Cf., Austin, ‘How to Talk’ (1952), reprinted in *Philosophical Papers*, 3<sup>rd</sup> ed., Urmson and Warnock, eds. (Oxford: Oxford, 1979).

<sup>30</sup> I say ‘in typical cases’, since those which involve governance by laws which are freely self-imposed or due to convention (such as, e.g., political statutes) *can* be affected by the activities of those bound by these laws – namely, the activity of unbinding oneself from the specific law, rendering it null, or imposing a different law.

accord with them. Of course these laws are *not* normative for, say, stones, since there doesn't seem to be a clear sense in which stones (on their own) can (or cannot) succeed and fail to be in accord with regulations. And as a corollary of this condition, it seems that we should also say of petrological laws themselves that they are likewise *not* norms for stones, since stones cannot both succeed *and fail* to be in accord with these laws. Instead, part of the task of these laws is to separate stones from *non*-stones (not 'failed' stones). As cases like these indicate, not all relations of law to subject have this normative valence. For instance, some laws (perhaps such as those of geology) provides a specification of what we might call the *essential constitution* of their subjects and their properties.<sup>31</sup> (2) Though traffic laws are normative for drivers, when someone fails to be in accordance with their prescriptions, they do not thereby fail to be a driver. In other words, the essential task of traffic law is to separate good from bad drivers, taking 'driver' as an independently definable concept. It separates drivers from non-drivers only secondarily, if at all. Finally, (3) even if *no* driver at the moment were actually

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<sup>31</sup> To take a more broadly accepted example: geometrical law is not something which shapes can either succeed or fail to live up to, but rather provides the explication of what it is to be a shape 'as such', and so separates shapes from *non*-shapes. A thought, say, is not a 'failed' shape, no more than a triangle is a 'failed' square. (Things might be different if we consider the relation of geometrical law to the material (technical) production of shapes; cf., KU 5:172f.)

In his *Speech Acts* (Cambridge: Cambridge, 1969), John Searle draws a closely related distinction between 'regulative' and 'constitutive' rules, such that the former 'regulate antecedently or independently existing forms of behavior', an 'activity whose existence is logically independent of the rules', while the latter 'create or define new forms of behavior' (33-4). (A similar contrast is drawn in Rawls, 'Two Concepts of Rules' (1955); and for some discussion of both, see John Haugeland, 'Truth and Rule-Following', in *Having Thought* (Cambridge: Harvard, 1998).) In our discussion above, I prefer 'normative', both because of the special senses given to 'regulative' by Kant, and because of the current prevalence of talk of 'normativity'.

driving in accord with traffic law, these laws would still clearly represent (appropriately enforceable) prescriptions for driving.

Now that we have a better sense of what it means to say in general of a law, that it is a norm, we can see immediately why it has been commonplace for some time to use the language of normativity to interpret Kant's conception of *ethics* and, in particular, to interpret the way in which the moral law binds human beings.<sup>32</sup> We might now unpack the content of such claims by showing that the relation of moral law to human action fulfills the three conditions identified above.

Take the first condition: as Kant writes in the *Metaphysik der Sitten*, 'experience' itself shows us that the freedom inherent in the process of selecting our act-determining law-representations ('maxims') appears to us as if it results from the exercise of an 'ability to make a choice for or against the [moral] law' (6:226). That is, 'experience shows that the human being...is able to choose [wählen] *in opposition to* [zuwider] as well as *in conformity with* [gemäß] the law', even if the true 'freedom of free choice [die Freiheit der Willkür]' cannot be 'defined [definiert]' *solely* by our 'being able to make a choice in opposition to [our] reason' (ibid.).

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<sup>32</sup> Among many others who use the language of 'normativity' in this context, see Allan Wood, *Kant's Ethical Thought*, 51, 79-80, 172f; Korsgaard, *The Sources of Normativity* (Cambridge: Cambridge, 1996), 92f; Korsgaard, *Creating the Kingdom of Ends*, 43f.

As a consequence, the second condition for normativity is then also met, since even morally incorrect acts retain their identity as human acts. Human action as such is not constitutively (essentially) defined as only that action which is morally worthy (or unworthy). Rather, as Kant writes in a footnote, the ‘highest concept’ at issue in practical philosophy – a concept which is then divided further along the spectrum of moral evaluation (‘right’ and ‘wrong’) – is actually that of the ‘act of free choice in general [Act der freien Willkür überhaupt]’ (MS 6:218n).<sup>33</sup> This would seem to imply that the concept of ‘free act’ is definable independently, in a way that allows human choices to be identified as such regardless of their particular moral-evaluative status.

Finally, we can note that our third condition is met, in that even if no human being in fact (in history) has ever actually selected maxims that merited the ascription of moral worth to their actions, the moral law would still enjoy its validity. In the words of Kant’s first *Kritik*, these laws ‘say what *ought to happen* [was geschehen soll], even though perhaps it never does happen [nie geschieht]’ (B830).<sup>34</sup>

This, then, gives a clear sense to the claim that the moral law is, for Kant, *normative* for humans. Yet before we apply this analysis to logical laws, I want to

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<sup>33</sup> We have discussed the concept of a ‘highest concept’ in Chapter IV.

<sup>34</sup> We have already been introduced in Chapter I to Kant’s distinction between ‘sein’ and ‘sein-sollen’ in our discussion of the grounds for Kant’s ‘division’ of ‘material philosophy’, in comparison with Aristotle’s.



introduce one further element of Kant's moral theory, in order to raise a worry about the aptness of such a comparison. For it must be pointed out that Kant appears to be willing to entertain the possibility that the moral law is *not* normative for *every* sort of rational being. This can be seen from Kant's discussion in the *Grundlegung* of the possibility of a being which might be composed *solely* of the capacity for practical reason – a being that, as Kant puts it, has a 'holy will' (GMS 4:439).

In the case of a being with a holy will, though it would succeed in fulfilling the demands of morality, Kant thinks that it *cannot fail* to do so. Its 'volition [Wollen]', Kant writes, is of itself necessarily in accord [notwendig einstimmig] with the law' (GMS 4:414). Of course, Kant is quick to point out that, even in this case, the 'selection' of the representation of law which would determine the actions of a holy will is itself determined without any influence of alien causes (GMS 4:446). Because of this, the activity of such a will would remain 'negatively free' – i.e., it would occur in the absence of external influence. Moreover, Kant also holds that a being with a holy will would also be an autonomous, self-determining agent, and so also be 'positively' free (4:446-7). This is because its own activity would be guided by principles that derive from the essence [Wesen] of a rational being as such (4:412). Kant expresses this point through his cryptic claim that a rational being can be said to 'give' (or 'be') a 'law to itself [sich selbst ein Gesetz zu sein]' (4:447) (and so engages in 'Selbst-gesetzgebung'). By this I

take Kant to mean that the entire structural articulation of the space of possible activity for a being with a holy will can be understood exhaustively and solely on the basis of its own ‘internal’ principles.<sup>35</sup>

The basic distinction between such a will and wills like our own (as humans) is summarized nicely by Allen Wood, in his *Kant’s Ethical Thought*: ‘[i]f the will is perfect or holy, the normative law tells us what its self-determined volitions necessarily *are*; if it is finite and imperfect rather than holy, then this law is a categorical imperative, determining what its volitions *ought* to be’ (174). Yet in a long and difficult endnote, Wood, however, goes on to claim that, because ‘the laws of *every* will must be *normative*’, it must follow that ‘the laws of a holy will, just because it is a *will*, have to be normative, but they are not obligatory’ (379n25). However, since there is absolutely no possibility for the holy will to err in any sense – that is, a holy will is not contingently or accidentally ‘perfect’, but *essentially* so – it becomes difficult to see in what sense these laws can still serve as *norms* for such a will.

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<sup>35</sup> The language of ‘self-legislation’ points to the fact that the objectivity of the moral law is wholly derived from its foundation in the ‘timeless’ (apriori) concept of pure practical reason itself. Despite what many commentators appear to think, neither its content nor its bindingness depends upon, or takes its cue from, any *actual* human acts (of free choice, etc.), either individually or collectively. With ‘actual’, I mean to signal my agreement with Karl Ameriks against certain ‘constructivist’ (conventionalist, or voluntarist) interpretations of Kantian moral autonomy; cf., his *Interpreting Kant’s Critiques* (Oxford: Oxford, 2004), 263f. Ameriks argues that, for Kant, no ‘act’ *in history* (in time) can institute the moral law, or confer bindingness upon it, because the ‘Selbst’ in ‘Selbst-gesetzgebung’ picks out not an individual human self, but rather ‘Vernunft’ *itself*. As I suggest above, the idea that reason gives itself its own law can be understood as referring to something like the explanatory self-sufficiency of ‘rational’ principles for rational behavior, principles that the concept of practical reason contains within itself.

Indeed, Kant himself concludes that the language of ‘the ought [das Sollen]’ is ‘out of place’ in the case of such a divine or holy rational being (GMS 4:414). The purity of such a thoroughly and solely rational being with a holy will would thus differ from humans in that it could not be characterized by the same possibility for deviance or error as a result of ‘free choice’ (in the sense of ‘Willkür’). Rather, its activity just *is* universally and necessarily determined solely by what *we ought* to take as correct representations of moral law. Its ‘maxims’ would thus be necessarily identical with the moral law, and so its activity would fully exemplify pure or perfect practical reasoning. But this means that the relationship between the moral law and the holy will of such a being would fail to meet the first condition set out above, since such a being would fail to *be able to fail* to accord with law. And on this basis, then, I would argue (against Wood) that the relation between the moral law and such a purely (practically) rational being should not be said to be normative.<sup>36</sup>

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<sup>36</sup> In the lectures cited below (*Metaphysik Vigilantius*) Kant calls this condition the ‘subjective contingency [Zufälligkeit]’ of a law that is a norm: ‘it is connected in its determination with the *possibility for the subject to deviate* [abzuweichen] *from the rule and to do the opposite* [Gegenteil]’ (29:1016); the categorical imperative is thus an *imperative* for humans precisely because human beings have ‘a subjective possibility for the observation [Befolgung] of the law as well as the transgression [Übertretung] of it’ (29:1018).

In her ‘Kant on the Objectivity of the Moral Law’ (in *Reclaiming the History of Ethics: Essays for John Rawls*, Reath, Herman, Korsgaard, eds. (Cambridge: Cambridge, 1997), 240-69), Adrian Piper offers an interpretation of the moral law which is in some ways closer to the one put forward here, insofar as it takes seriously the thought that (as Piper puts it) ‘Kant’s moral theory explicates substantive ethical principles in terms of ‘the universal concept of a rational being in general...i.e., entirely as metaphysics’ (*Groundwork* 4:412), and so as categorical principles in the indicative mood’ (263). Yet I cannot agree with Piper’s general claim that Kant’s main reason for these contentions is because ‘his moral theory is fashioned *primarily* with an eye to its application to rational beings in general’, and especially disagree with her claim that such universal

These points are recapitulated nicely in §69 of Kant's 1794-5 lectures on metaphysics (*Metaphysik Vigilantius* ('K<sub>3</sub>')): 'God is not capable of a deviation [Abweichung] from the law, he determines himself only by the law, i.e., by himself [durch sich selbst], with him there takes place no necessitation [Nötigung], no ought [Sollen]' (29:1017). What is striking is that Kant uses the same language to describe the faculty for pure practical reasoning 'as such' (or 'in general') – that is, the capacity which he later distinguishes as 'Wille'.<sup>37</sup> The *Metaphysics of Morals* tells us that 'Wille' can be 'directed to [geht auf] nothing beyond the law', and so actually 'cannot be called either free or unfree', because it 'directs with absolute necessity and is itself *subject to* no necessitation [Nötigung]' (MS 6:226).<sup>38</sup> As a

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applicability is 'true for Kant's metaphysics *more generally*' (264; my ital.). It would seem rather that Kant's main aim, in both the theoretical and practical domains, is to provide an account that adequately captures specifically *human* experience. It is extremely difficult to see how the (less-proud) 'ontology' that is generated out of the Transcendental Analytic of the understanding is derived – first and foremost – from anything like divine reason. Nor do we find any claims that the forms of objects provided by the categories would be valid of an intuitive (or infinite) intellect.

In this regard the moral domain may be more complex, since we are supposed to occupy the very same sphere or realm ('Reich') as God, and stand under the very same laws of identical form (GMM 4:389, 414, 434). (Thanks to Karl Ameriks for raising this worry.) For an excellent discussion of how this point provides a key to the 'anti-voluntarism' of Kant and some of his predecessors (like Leibniz and Clarke), see Chapter 23 of J.B. Schneewind's *The Invention of Autonomy* (Cambridge: Cambridge, 1998). I cannot see, however, what moves Schneewind to claim that Kant thinks that the moral law 'constitutes a *synthetic* necessity in *all* rational wills, God's as well as our own' (521; my ital), since (as noted above) Kant states to the contrary that the moral law follows 'analytically' from the concept of a purely rational will.

<sup>37</sup> Compare H.J. Paton, *The Categorical Imperative* (Philadelphia: Pennsylvania, 1971): 'In his later works...Kant makes a distinction between will (Wille) and *arbitrium* (Willkür). Will in this technical sense is concerned only with the law and so seems to be equivalent to pure practical reason: it is said to be neither free nor unfree' (213).

<sup>38</sup> This denial that Wille is 'free' might seem to raise questions about the aforementioned (quasi-Leibnizian) sense of 'freedom' that Kant does seem to ascribe to a being who consists

result of the complete and absolutely necessary accord of ‘Wille’ with the moral law, it seems clear that the relation between this faculty, on the one hand – considered as a capacity on its own, in abstraction and in isolation from its possible cooperation with other faculties – and the moral law, on the other, should also be viewed as *non-normative*. For the moral law does not tell pure practical reason (as Wille) how it should, but might not, act. Rather, the moral law simply *expresses* what pure practical reason (Wille) *is*, in its very nature or essential *constitution*.

All of this points up an important contrast with the nature of *human* beings. For the moral law does not on its own express the essence of the human form of being – or indeed the essence of any other being which is only partially, though not wholly or simply, rational.<sup>39</sup> But then this implies that we will need to look elsewhere for the *constitutive* laws of our complete type of ‘being’ (i.e., the principles which constitute the kind of being that humans enjoy ‘as a whole’).<sup>40</sup>

Yet whatever these ‘cooperative’ laws may look like, because of the relationship that Kant identifies between our capacity for ‘free choice’ and pure

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solely of rational capacities (i.e. a holy will), though the context suggests that what Kant has in mind in this denial is the ‘freedom’ that characterizes our capacity for ‘free choice’.

<sup>39</sup> As the third *Critique* puts it (§76), the moral law is only in an indicative form (says what ‘is’) when ‘reason is considered without sensibility’, such that ‘its causality’ would be in ‘thoroughgoing correspondence with the moral law, where there would be no distinction between what should be done and what is done [zwischen Sollen und Tun]’ (5:404).

<sup>40</sup> This would be part of the task of a *philosophical anthropology*; cf., my Introduction, §III. For this idea in Kant, cf., Kant’s May 4<sup>th</sup> 1793 letter to Carl Friedrich Stäudlin (11:429); Jäsche’s *Logik*, ‘Introduction’ §III (9:25); the so-called ‘Pölitz’ 1790-1 *Vorlesungen über die Metaphysik* (28:533-4).

practical reason, the moral law will stand above them insofar as it serves as a fundamental *norm* for all human activity, since (as we have seen) its relation to human action fulfills the three conditions outlined at the beginning of the present section.<sup>41</sup> As we have seen, this normative relationship marks us out as a special type of (partially) ‘rational being’, in that we can both succeed and fail to accord with moral law.<sup>42</sup> Moral law thus tells us humans, not how we *do* act, nor which maxims we *do* choose, but how we – considered as the collective result of our various capacities – *ought* to act, and so which maxims we *ought* to choose. And, as we have seen, the reference here to the rest of our humanity is essential.

§49 We have found that the relation between moral law and its subjects takes on two different forms, due to the fact that one and the same law actually governs two different *types* of subjects: on the one hand, it governs purely rational beings, and on the other, it governs beings whose capacities for acting rationally are

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<sup>41</sup> The point at issue is stated nicely in *Metaphysics of Morals*: ‘a metaphysics of morals cannot be based [gründet] upon anthropology but can still be applied [angewandt] to it’, such that the application yields a ‘moral anthropology’ as the ‘counterpart [Gegenstück]’ to metaphysics (6:217).

It might be argued that the case involving the ‘free choice’ of humans actually represents, for Kant, the *original* form in which normativity manifests itself, with the other cases (e.g., the teleological laws of animal behavior and development) being counted as normative only *derivatively* (i.e., only due to the regulative demands of *our* subjective capacities for systematic explanation, as discussed in the Transcendental Dialectic and the third *Critique*), on analogy with the distinction between original and derivative intentionality in Robert Brandom, *Making It Explicit* (Cambridge: Harvard, 1994), 58f; and John Haugeland, ‘The Intentionality All-Stars’ (1990), reprinted in *Having Thought* (Cambridge: Harvard, 1998), 129f.

<sup>42</sup> Or put more carefully: we can both make, and fail to make, accord with moral law the reason or ground for our acts.

conjoined to other competing ‘forces’ (e.g., inclination, ‘Willkür’, and so on). With respect to a purely rational being, the moral law simply expresses the essential (‘timeless’) structure of its moral volition as such, and gives a complete description of its ‘subjective constitution’ (GMS 4:414). Yet even in relation to the more general sphere that includes both purely and impurely rational beings, this law represents the necessary condition which any act of will must meet if it is to count as the exercise (whether in us or in any other ‘being’) of pure practical reason (rather than of some other capacity). It is just that such laws take on an added imperatival or normative force when they are viewed in relation to a kind of being (like humans) which can freely choose to heed its demands.

All of these considerations will be relevant as we return to the main topic of the present sections – that is, what relation Kant thinks obtains between *logical* laws and the capacity for understanding. For what we must now ask is whether things in the logical sphere look more like one or the other type of relation between moral law and moral subject, whether, that is, the logical subject is more like one or the other type of moral subject: whether the logical subject (the ‘thinker’) should be viewed on par with a composite (e.g., human) being or instead on analogy with a ‘pure’ being with a holy will, whether it is more like a collective of possibly competing capacities, or rather a being constituted out of a single one.

The normative interpretation would thus seem to presuppose that the relation between logical laws and thinking is straightforwardly analogous to the

relation between moral laws and human volitional capacities. But it is equally clear, I will now argue, that such an answer is unacceptable.

For one thing, Kant consistently argues that logic considers the capacity for understanding *in isolation*, i.e., in abstraction from any and every other faculty. For example, in the first *Critique*, Kant makes this point quite clearly (and most famously) in relation to *sensibility*, or our capacity to be receptive to representations caused by objects, writing that, in each of the sciences (logic and aesthetic) which investigate only one or the other capacity, ‘one has great cause to separate [abzuseondern] them carefully from each other and distinguish them’ (B76). Yet, though this is perhaps less well-known, Kant also makes an analogous point (time and again) with respect to our *volitional* capacities in the student transcripts of his logic lectures and the marginalia of the logic textbook from which he lectured.

We have already broached the application of this ‘separation’-thesis to our practical capacities in Chapter I, in order to provide initial grounds for distinguishing logic from any practical discipline. It will be worthwhile, however, to introduce here a bit more of the historical context of the debate into which Kant is entering by making such a strict distinction. For this context, I want to turn to Meier’s 1752 *Auszug aus der Vernunftlehre*, the textbook that Kant used for his own logic lectures.



Now, as Meier's text is written from the Wolffian point of view, and as Kant's criticisms of Wolffian rationalism as a whole are well-known,<sup>43</sup> it is not surprising to find that these notes, as well as the student transcripts from Kant's lectures, are peppered with critical remarks directed at 'the author'. The criticism most relevant to the present topic, however, may come as a surprise to some, and especially to those who embrace the normative interpretation of logical laws. What I have in mind is Kant's consistent rejection of Meier's decision to include a discussion of the 'practical' sphere within his logic textbook.

Elements of the criticism can be found in the *Blomberg Logik*, a transcript of Kant's lectures from the 1770's:

Our author [i.e., Meier] speaks in general in this whole section (§§216-248) of cognition, how it relates to free will [zum freyen willen]. In logic, however, the relation of cognition to will [zum Willen] is simply not considered; instead, this belongs to morals. The relation of free will is not an *objectum domesticum* of logic. (24:250)

Now, the title of the 'whole section' from Meier's text is 'On practical learned cognition [von der praktischen gelehrten Erkenntniss]'.<sup>44</sup> In §216 of this section, Meier defines a 'practical cognition [cognitio practica]' as one that 'can move us to a noticeable extent to do [tun] or allow [lassen] an action [Handlung]' (16:516). In

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<sup>43</sup> This, despite Kant's apparent esteem for Christian Wolff's – and by extension, Meier's – teachings on logic in particular. See *Jäsche Logik* (§II 9:21), and *Wiener Logik* (24:797).

<sup>44</sup> It is worth pointing out that Meier's use of 'Erkenntnis' is somewhat broader than Kant's own, as it is extended to include *all* representations (§11 16:76), whereas Kant's term is (officially) only meant to cover *objective* perceptions (B376). This difference is, however, largely irrelevant for the present discussion.

§217 Meier adds to this the remark that a practical cognition is one in which we ‘represent to ourselves that something *ought* [solle] be done or allowed’ (16:517; my ital.). In other words, a practical cognition is something which today might go under the name of a *normative* assessment, the judgment that ‘such-and-such *ought* to come about’. And though Meier does not use Kant’s own phrasing here (‘free will [der freie Wille]’), he does speak in §221 about the capacity for practical cognitions to ‘produce [würken]’ something in our ‘power of desire [Begehrungskraft]’ (16:520), a term quite close to one of Kant’s own titles for our volitional capacities, the ‘capacity for desire [Begehrungsvermögen]’.<sup>45</sup>

The quote above from the early *Blomberg Logik* (24:250) gives us Kant’s response to Meier’s inclusion of these topics within a ‘general’ logic – topics which Kant summarizes under the heading: ‘the relation of cognition to free will’. Kant’s response states emphatically that all of these topics are to be banished from the science of logic. Logic is simply not concerned with any specific

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<sup>45</sup> In the ‘Introduction’ (§I) of the *Metaphysics of Morals*, Kant aligns the ‘will [Wille]’ and our capacity for ‘free choice [Willkür]’ with our ‘capacity for desire [Begehrungsvermögen]’ (6:213). Cf., §I of the published ‘Introduction’ to Kant’s 1790 *Critique of Judgment* (5:172). Kant’s own discussion of practical propositions in his lectures from Meier’s text typically introduce the idea of free activity; cf., *Wiener Logik*: ‘When a proposition is a proposition that commands, an *imperativus*, and says that something *ought* to happen, then it is a practical proposition[;] it says which free actions [freie Handlungen] would be good for a certain purpose’ (24:900). Compare also the sections entitled ‘Psychology’ in the *Lectures on Metaphysics*.

On the difference between capacity and force or power (‘Vermögen’ and ‘Kraft’), compare the following comment by Kant’s student, Johann Christian Kiesewetter, in a ‘Remark’ to §12 of his *Grundriß einer allgemeiner Logik nach kantischen Grundsätzen* (Leipzig, 1791; 4<sup>th</sup> ed., 1824): ‘A capacity [Vermögen] is the inner ground of the possibility of a thing [Sache]; a power [Kraft] is the inner ground of its actuality [Wirklichkeit]’ (12).

representations of what ‘ought’ to ‘move’ our free will, because it is not concerned with the relationship between free will or volition and cognition *at all*.

Kant’s rejection of practical cognition, and with it issues connected to the will, as a topic for logic is not restricted to these remarks. Kant returns to this point repeatedly in later logic lectures, consistently underlining the connection between practical cognition (normative representation) and our capacity for volition, and claiming all the while that logic has no room for these topics, no ‘practical’ component.<sup>46</sup> A particularly striking example of such a claim can be seen from a passage from the 1790’s *Wiener Logik* lecture transcripts that contains the epigraph to the present essay. Again making reference to Meier, Kant argues once more that ‘[t]he whole doctrine of practical use, with which the author deals, simply does not belong to logic’, claiming instead that, ‘in logic one must think *as if one had no will* [Wille]’ (my ital.), since logic is ‘the science of thinking, and not of willing [Wollen]’ (24:903).

Kant’s criticisms of Meier thus appear to target precisely the idea that lies behind the normative interpretation – namely, the idea that logic deals with laws of the sort that are at issue in a practical discipline, i.e., laws which function as norms or prescriptions for our capacities for volition. Yet, as we have found, Kantian logic simply has no room for such a practical element. It is hard, then, to

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<sup>46</sup> Compare, e.g., 1780’s *Wiener Logik*: ‘there is no practical part in logic’ (24:794); 1790’s *Dobna-Wundlacken Logik* (24:700, 751); 1800 *Jäsche Logik* (9:17).

see how logic could give us any sort of ‘practical’ guidance, or show us how to do anything (e.g., thinking) ‘well’, as Béatrice Longuenesse and others have suggested.

Indeed, as we saw in the first Chapter (**I**, §7), Kant feels so strongly enough about the need to distinguish logic from practical philosophy in general that he makes such a distinction basic to his general philosophical architectonic. To reiterate some of the points from our earlier discussion, in the ‘Preface’ to his *Grundlegung* and in both the published and unpublished versions of the ‘Introduction’ to the third *Kritik*,<sup>47</sup> Kant explicitly distinguishes logic from practical philosophy, classifying logic under the heading of *formal* philosophy, and classifying practical philosophy (‘ethics’) under the heading of *material* philosophy (along with ‘physics’). What is more, only practical philosophy is consistently aligned with the examination of the ‘concept of freedom’ (KU 5:171) and ‘the laws of freedom’ (GMS 4:387), while logic is said to be ‘occupied only with the form of the understanding and of reason itself and with the universal rules of thinking in general’ (GMS *ibid.*).

It is difficult indeed to see how the normative interpretation will be able to account for such a clear separation of topics in Kant’s official disciplinary classification-scheme. For now, however, it is enough to note that Kant

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<sup>47</sup> For the ‘Preface’ to the *Grundlegung*, cf. 4:387f; for the unpublished and published ‘Introductions’ to the third *Kritik* see 20:195f and 5:171f respectively. For a discussion of the circumstances which caused the existence of the two versions of the ‘Introduction’, see Paul Guyer’s ‘Editor’s Introduction’ to the Cambridge edition of the third *Critique* (Cambridge: Cambridge, 1998), xlii-xliii. For another place where Kant makes the threefold distinction within philosophy, see also the *Metaphysik von Schön* (28:468).

consistently claims that logic has nothing to do with the will, or the relation of free will to thinking, or anything else that pertains specifically to practical-normative representations. Is there, nevertheless, an analogy which might be drawn from the moral to the logical sphere?

I think we can find grounds from our above analysis for concluding that, if anything can be carried over to the question of the bindingness of logical law upon its 'subject' (i.e., *Verstand überhaupt*), it can *only* be Kant's conception of the relationship which obtains between moral laws and the faculty of practical reason as such, since practical reason alone is considered with the same sort of 'purity' that Kant prescribes for the treatment of the capacity for understanding within logic. It is striking, in this regard, to note Kant's willingness to speak of a corresponding universal science of the Will (*qua Wille*), namely, a 'general [allgemeine]' practical science that would parallel pure general (formal) logic (compare GMS 4:390; also, B79).

Yet before we evaluate this conclusion, let us first consider what would be required of the normative interpretation, again taking our cues from our analysis in previous sections. For if – as the majority of contemporary interpreters suggest – the nature of the 'bindingness' of logical laws upon the capacity for understanding (for 'thinking in general') were to be explicable by way of a model similar to the normative relation that we found in Kant's practical philosophy, then we ought to be able to interpret logical law on analogy with the general form

of lawfulness that governs human actions or productions through *free choice*. That is, if we are still determined to make the normative interpretation work, then we should ask what (if any) role Kant thinks that free choice, or something like it, play in the ‘activity’ or ‘production’ of thinking.

Now, at this point, two well-known Kantian doctrines might spring immediately to mind. First, Kant consistently characterizes the activity of the understanding as *spontaneous*,<sup>48</sup> which surely implies that thought is accorded at least *some* form of freedom. This has led some readers, such as Pierre Keller and John McDowell, to simply identify the spontaneity of the understanding with the sort of ‘freedom of choice’ that we have analyzed in the moral sphere. For instance, in his *Kant and the Demands of Self-Consciousness*,<sup>49</sup> Keller writes

Bona fide norms must be principles that the individual can come to understand as the basis for his or her behavior, and they must be principles that the individual can come to see him- or herself as having chosen to be bound by in his or her behavior. Such a capacity for choice is what Kant refers to as ‘spontaneity’. (7-8)<sup>50</sup>

Second, the role that the ‘freedom of thought’ plays in Kant’s conception of ‘Enlightenment’ is well-known, especially in connection with his assertion that, in

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<sup>48</sup> Claims about spontaneity are scattered throughout the first *Critique*’s ‘Transcendental Analytic’: cf., among other places, B74, B93, B129-30, B162n.

<sup>49</sup> Cambridge: Cambridge, 1998.

<sup>50</sup> In both *Mind and World* (Cambridge: Harvard, 1996), and in his 1997 Woodbridge lectures (*Journal of Philosophy* 95.9 (1998)), John McDowell construes Kant’s doctrine of the spontaneity of understanding as involving the robust sense of freedom requisite for the normative interpretation. To take a representative passage from *Mind and World*: ‘When Kant describes the understanding as a faculty of spontaneity, that reflects his view of the relation between reason and freedom: rational necessitation is not just compatible with freedom but constitutive of it’ (5).

order to escape intellectual immaturity, one must have the courage to exercise one's freedom to 'think for oneself'.<sup>51</sup> And in connection with these two doctrines, we might also recall the fact that, as several commentators have noted, early in the Critical period Kant appears to have been drawn to a 'short' argument for the existence of the (transcendental) 'freedom' that morality requires, one which could be grounded upon a direct consideration of the spontaneous freedom that we possess in thought and judgment.<sup>52</sup>

Even more support might seem to be lent to this interpretive line if we note that, in many of the transcripts from his logic lectures, Kant is reported to have acknowledged the appearance of a connection between the activity of thinking and judging, on the one hand, and the capacity for 'free choice' on the other, such that both capacities come together in the concept of 'holding-true' [fürwahrhalten]. For instance, the *Wiener Logik* tells us that 'there must be something in our approval which is arbitrary [willkürlich], where we ourselves have to determine whether we will [wollen] hold the cognition to be true [vor wahr halten] or not' (24:859). Jäsche's *Logik* too states that there seems to be 'something arbitrary [etwas Willkürliches] in our judging, in that we hold

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<sup>51</sup> That a certain sort of 'freedom of thought' is possible is crucial to Kant's famous 1784 call to 'Aufklärung' (8:41-2).

<sup>52</sup> Relevant passages include: (1) the 1770's Pölitz lectures (28:266-9); (2) the 1783 review of Schulz (8:13f); (3) the 1785 GMM (4:448). This 'short' argument has been discussed in, e.g., Karl Ameriks, *Kant's Theory of Mind*, 2<sup>nd</sup> ed. (Oxford: Oxford, 2000), 190-210; Henry Allison, *Kant's Transcendental Idealism* (New Haven: Yale, 1984), 316-25; Robert Pippin, 'Kant on the Spontaneity of Mind', reprinted in *Idealism as Modernism* (Cambridge: Cambridge, 1997), 52-3. All three agree that Kant gave up hope in such a 'proof' sometime after 1785.

something to be true because we want [wollen] to hold it to be true' (9:73). Perhaps, then, just as the moral laws are normative for our capacity for 'free choice [Willkür]', so too is logic normative, if not for our understanding *per se*, at least for the understanding conjoined with free choice or some 'Willkür'-correlate – i.e., normative for whatever it is that is responsible for 'holding-true'?

In fact, Jäsche's text goes on to say that the apparent involvement of something like 'free choice' in judgment *qua* holding-true is highly misleading, even 'absurd', stating explicitly that 'the will does not have any influence immediately on holding-true' (ibid.).<sup>53</sup> This recalls Kant's criticisms of Meier discussed above, which made it quite clear that logic treats the understanding in abstraction from any connection it may have to the 'will'. Yet even if we grant the assumption that *some* sort of freedom of choice *does* pertain to activity in which thinking is involved – that is, *even if* we enjoyed some form of 'freedom of choice' in relation to 'holding-true', or believing – it still remains altogether unclear whether this freedom would amount to the sort that would be required in order

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<sup>53</sup> The *Dobna-Wundlacken Logik* transcript weighs in somewhere between the *Wiener* and *Jäsche* positions, as it ties 'freedom' [Freiheit] to suspension of judgment [*suspension judicii*], which occurs 'by choice [willkürlich]' and is 'the mean between holding-true [Fürwahrhalten] and rejecting [Verwerfen]' (24:736).

Note that Jäsche's construal of Kant's position puts fairly direct pressure on readings which want to extend this sense of 'freedom', here ascribed to the capacity for 'holding-true', to Kant's talk of the 'spontaneity' of judgment in general. In addition to Keller and McDowell (*opera cit.*), Korsgaard also seems to subscribe to this sort of reading in those works cited above. For criticism of this sort of interpretation, see Adam Dickerson, *Kant on Representation and Objectivity* (Oxford: Oxford, 2004), 36f; and for sharp criticism of this sort of position in general (with direct reference to McDowell and Korsgaard, and their versions of Kant), see David Owens, *Reason without Freedom* (London: Routledge, 2000).



for logic to be *normative* for thought, for it would have to be a freedom (to choose) to think in a manner that *fails to be logical*.<sup>54</sup> For only this, it would seem, could complete the analogy with the ethical sphere, since we would then have a logical correlate for cases in which our capacity of free choice is exercised *immorally* (in opposition to the moral law).

In fact, we could marshal even more support for a non-normative interpretation if it could be shown that Kant thinks that *illogical thought is impossible* (in the strongest sense of the term), for then it would be extremely difficult to see how (despite those sentences which surface in Jäsche's text) the normative interpretation could even get off the ground. For what sense could it make to ascribe to Kant a view in which the understanding (or anything else) possesses the freedom required for logical laws to be norms – i.e., the freedom to think illogically – if this would amount to the freedom to *do the impossible*?

**§50** With this in mind, we might recall some of the claims we have seen Kant make about the absolute necessity of logical law. General logic, we have seen, 'contains the absolutely necessary rules of thinking, without which *no use of the*

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<sup>54</sup> Similarly, claims like the *Prolegomena*'s statement that, 'when an appearance is given to us, we are still quite free as to how we choose to assess the matter' (4:290), need not automatically imply that we have any 'freedom' or choice with respect to whether or not, say, the 'form' of the thought about the appearance will be 'in accord with' the logical functions of unity in judgment (whether or not, say, we can take the appearance to be determined by both a predicate and its contradictory).

*understanding takes place* (B76; my ital.).<sup>55</sup> Here the clear implication would seem to be that, with respect to the laws of general logic, the understanding simply *cannot act* – that is, it is *not free* to act – without abiding by these ‘absolutely necessary rules’; otherwise nothing at all would ‘take place’ in thought. Even so, not everyone agrees. For example, John MacFarlane (op.cit.) has suggested that this description of the absolute necessity of logical laws need not imply that ‘we cannot think contrary to them’, adding parenthetically: ‘Compare the sense in which Kant calls the categorical imperative ‘necessary’’ (44). Yet though it is clear that MacFarlane means for this last comparison to provide support for the normative interpretation, we have already been given grounds above for thinking that there are other sorts of necessity besides that of an imperative (however universal and necessary) that are present in the moral domain itself. Hence, MacFarlane’s comparison simply begs the relevant question.

Moreover, there are further textual reasons for seeing in this quotation (from B76) precisely the entailment which MacFarlane denies, namely, if some ‘thing’ violates the rules set forth in general logic – such as the Principle of Contradiction [Satz des Widerspruchs], though the point surely generalizes to other formal-logical laws – then it is simply ruled out *as a thought*. For Kant draws exactly this conclusion quite clearly in his 1790 polemic against Eberhard:

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<sup>55</sup> A similar point is repeated in the *Jäsche Logik*. (Introduction, §I): ‘All rules according to which the understanding operates [verfährt] are either necessary or contingent. The former are those without which *no use of the understanding would be possible at all*’ (9:12; my ital.).

‘whatever conflicts with [nicht bestehen mit] this principle [i.e., the Principle of Contradiction] is obviously *nothing* [nichts] (*not even a thought* [gar nicht einmal ein Gedanke])’ (8:195, my ital.; cf., B189-90).<sup>56</sup> Kant’s thesis here is that, because no thought or judgment ‘can be opposed to it without annihilating itself [sich selbst zu vernichten]’, ‘this principle’ – i.e., the Principle of Contradiction – stands as a ‘*conditio sine qua non*’ for thought as such (B191). In this regard, Manley Thompson captures the essence of Kant’s position quite nicely in his essay ‘On *a priori* Truth’:<sup>57</sup> ‘when we accuse someone of illogical...thought, what we mean is that the person’s efforts at thought have completely failed’ (471); ‘conformity to [the

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<sup>56</sup> The controversy with Eberhard takes places in an essay is entitled: ‘On a discovery whereby any new critique of pure reason is to be made superfluous by an older one’. From thought’s point of view, this some ‘thing’ which fails to meet the demands of logic is a *nihil negativum*, an absolute *non*-thing ‘opposed to possibility’ (B348; cf., B624n). Following up on the consequences of these points would require us to sort through Kant’s doctrines concerning indirect (apagogic) proofs, and to see whether Kant would recognize anything like a purely ‘logical’ *reductio*. In the Doctrine of Method, Kant actually cautions against the use of this proof indiscriminately; e.g., the proofs of ‘pure reason’ must ‘never be apagogic’ (B817); ‘Apagogic proof, however, can be allowed only in those sciences where it is impossible to substitute that which is subjective in our representations for that which is objective, namely the cognition of what is in the object’ (B819) – ‘in *mathematics* this subreption is impossible; hence apagogic proof has its proper place there’ (B820). The fact that this style of reasoning doesn’t hold good for *all* contexts should entail that it cannot be counted as a purely formal-*logical* principle.

It might also be open for Kant to take a line similar to that put forward by Fred Sommers, in his reconstruction of ‘term-logic’ in *The Logic of Natural Language* (Oxford: Clarendon, 1982), that *reductio* (and, more generally, various forms of negation) essentially involves a moment of ‘semantic ascent’ (or in his words, involves a judgment of a higher semantic ‘valence’ than the initial predicative unities, as does all *de dicto* negation in Sommers’s account). Something of significance in this regard is the fact that, for Kant, logic is not in the first instance about language or a formal language or a symbolic system for the expression of thought, but rather about *thought itself*. Within a formal language, ‘reductio’ proofs might be construed via semantic ascent as proofs of the inability of certain sign-strings to count as *expressions* of thought.

<sup>57</sup> In *Journal of Philosophy*, 78.8 (Aug., 1981), 458-482. I am indebted to Michael Hardimon for pointing me to this essay, in which Thompson argues for what he calls a ‘neo-Tractarian or neo-Kantian way of speaking about logic’ (472).

principle of contradiction] is not simply the best thing to do; it is the only thing to do if there is to be thought at all' (464n2).

In general, whatever does not fall 'within the canon' of logical forms (of judgment, of inference, etc.) is something which cannot be counted as an act of the understanding. It would only amount to a 'putative' thought, no more a thought than a 'false friend' is a friend.

This brings out a further manner in which the relationship between logical law and its 'subject' fails to meet the conditions set forth above (in §48): that which fails to accord with logical law simply loses its identity as an exercise of the faculty governed by this law. Similarly, various passages – such as the Introduction to the first *Critique's* 'Transcendental Dialectic' – indicate that the first condition (i.e., the possibility of both success *and failure* of accord with logical law) likewise cannot be met, because the understanding cannot 'by itself depart from its own laws' (B350).<sup>58</sup> In several of these passages, the possibility for error is said to arise only when there are *multiple* forces at work, or when there are influences of 'other causes'. Formal logic, however, considers the understanding in complete isolation.

Now, it might be argued that these passages indicate that our understanding *can* in fact depart from its own laws, once it is 'influenced' by

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<sup>58</sup> Again, Jäsche's text (Introduction, §VII) includes similar statements (9:53-4); Cf., also, *Wiener Logik* (24:824). And among many *Reflexionen*, see R2142 [1776-8] (16:250).

‘another cause’. But it is important to see that an alternate reading is possible, for though it might be true that error ‘in general’ can only arise once we are in a situation in which there is co-operation between two forces, the laws with respect to which these forces are said to cause an ‘error’ might actually amount to a *different sort of law altogether*, a law which governs the *co-operation* of the forces, rather than either individually. This would seem to be especially appropriate in cases – like that of cognition – in which we are required to have co-operation between two *non-homogenous* forces (e.g., receptivity and spontaneity).<sup>59</sup> For example, the co-operative ‘laws’ at issue in the ‘Transcendental Dialectic’ would then be, not pure-general, formal-logical laws, but rather *transcendental*-logical laws, such as the Principles from the ‘Transcendental Analytic’. On this reading, though during the co-operation, the joint product might deviate from the co-operative laws, the co-operation itself cannot cause either force (to the extent that its specific contribution can be isolated) to deviate from its *own* essential laws. And if ostensibly co-operative forces engage in activity which does go ‘contrary’ to the laws of one of the individual forces, we should conclude that a force of that sort is in fact no longer present or wasn’t ‘at work’ in the first place.

In fact, this interpretation brings to light, and then makes good sense of, two important and related *disanalogies* between logic and ethics, which have been

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<sup>59</sup> It is perhaps for action in such a cooperative ‘plane’ that the normative rules for ‘holding-true’ would be relevant.

touched upon above, though not yet made fully explicit. The first stems from Kant's oft-repeated claim, at the heart of his anti-Rationalism, that cooperation of the above sort (between spontaneity and receptivity) is *necessary* for the possibility of cognition ('only from their unification can cognition arise' (B75-6)). Now, the systematic collection and organization of such cognition – more specifically, of *true* cognition – in turn represents what Kant calls the 'interest' of the theoretical ('speculative') sciences. 'Interest' is defined by Kant in the second *Critique* as 'the principle which contains the condition under which alone the exercise [Ausübung] of the relevant mental capacity is promoted [befördert]' (5:119). Hence, even though, when viewed in conjunction with the rest of our mental capacities, the capacity for understanding (thinking) is subordinated to the principle which promotes its use in the systematic acquisition of true cognition, this capacity on its own ('as such') is simply *not* able to meet the demands of knowledge. Yet it is equally evident that *no* such cooperation is necessary in the moral sphere, since (as we have seen above) a being endowed with practical reason ('Wille') alone (such as a holy will) *would* (be able to) achieve the 'end' set by morality (practical philosophy). No further faculty (e.g., sensible inclination) is necessary.

But what is more – and this provides the second disanalogy between ethics and logic – in the second *Critique*, Kant argues that there are certain things which are 'required for the possibility of *any* use of reason', such as acting in accordance with rules like: 'principles and affirmations must not contradict one another'

(5:120). These requirements ‘do *not* constitute a part of the interest’ of our capacity for reasoning, but are ‘instead the condition of *having reason at all*’ (ibid.; my ital.). This implies that there is a space for the investigation of the capacity for reasoning or understanding ‘as such’, considered independently of any such interests or ends towards which it might be ‘used’. And the language here (i.e., the requirement of non-contradiction) indicates that it is *formal logic* which Kant takes to represent the science that will undertake this sort of inquiry, and which will therefore bracket all considerations of interests and ends. (In this regard, recall once again that it is *transcendental* logic – or a logic which takes up the conditions of relation between our thought and objects – which Kant calls a ‘logic of *truth*’ (B87; my ital.)) By contrast, reason in its practical use is essentially interested in ‘the determination of the will with respect to the final and complete end’ (5:120).

Since we (as of yet) have found no ‘logical’ equivalent to our capacity for free choice, for which logical laws could be normative, the ground for a straightforward analogy between ethics and logic has been obscured. Moreover, it would seem that we have actually found reason to think that *no* such grounds can exist, given Kant’s claims that something which was *not* in accord with logical law is not to be counted as a ‘thought’, albeit a logically ‘bad’ one, but rather to be counted as *not* a thought *at all*.

§51 Perhaps by now enough has been said to convey a sense of the difficulties which face the straightforward normative interpretation of Kantian logical laws. Rather than continue to present criticism of this interpretation, let me begin to lay out what I take to be a more promising alternative. As the reader may suspect, this alternative interpretation also takes an analogy which appears to obtain between ethics and logic, though not the one which is *prima facie* implied by the quote from Jäsche’s text. Rather, the relevant analogy is one which might be phrased by way of a transposition of the claim from the *Metaphysik der Sitten* (cited above, §48) into the logical register: like the capacity for practical reasoning [Wille] as such, the capacity for understanding as such [Verstand überhaupt] is simply *not* ‘subject to necessitation’ by its laws; instead, logic directs the understanding’s activity and use with ‘absolute necessity’.

With this transposition, we would be put in a position to view the ‘spontaneity’ of the understanding as of a piece with whatever ‘freedom’ we might be able to attribute to a holy will, or to the ‘capacity’ for purely practical reasoning itself. Both ‘pure’ faculties are completely and necessarily determined *internally* – their ‘activity’ is wholly and solely determined by those laws which express their essence as a capacity. They are each ‘free’ in the following, quasi-‘Leibnizian’ senses:<sup>60</sup> free ‘negatively’, as each enjoys an absence of external influence upon its

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<sup>60</sup> For the Leibnizian uses of ‘spontaneity’ and ‘freedom’ that I have in mind, see (among other places) his 1686 *Discourse on Metaphysics* §32; his 1695 *New System of the Nature and Communication of Substances*; and his 1698 *On Nature Itself*, §10.



activity, but also free ‘positively’, since their own essences provide the principle(s) sufficient for the complete explanation of their activity.

In fact, a more substantial comparison with Leibniz will prove quite fruitful, since it provides us with a proximate historical source from which Kant might have drawn his own conception. Logic is for both Kant and Leibniz a discipline which takes as its subject-matter something that is to be found in the thinking subject itself – namely, the capacity for understanding and reasoning. In *Nonveaux Essais* IV.21.5, Leibniz describes logic as ‘giving a thorough account of the understanding [expliquant cet entendement au fonds]’ of ‘spirits’ (G v.504); earlier, in III.10.12, logic is said to be ‘the art which teaches us the order and connection [liaison] of thoughts’ (G v.323).<sup>61</sup>

Moreover, both take the general principles of logic to in some sense constitute the very essence of this capacity. In I.1.20, Leibniz claims that ‘general principles enter into our thoughts, serving as their soul [ame] and as their links [liaison]’, such that ‘even if we give no thought to them, they are necessary for thought, as muscles and tendons are for walking’ (G v.69). In I.3.3 Leibniz even speaks of the categories of ‘being’, ‘possible’, ‘same’ as ‘so thoroughly innate that they enter into all our thoughts and reasoning, and I regard them as *essential* things to our minds’ (G v.93).

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<sup>61</sup> As we have seen many times, for Kant, logic is ‘the science of the rules for the understanding in general’ (B76).

As I have argued in the present part (B), Kant too takes the laws of logic to be constitutive of thought in the sense that without them ‘absolutely no use of the understanding would take place [stattfindet]’ (B76). In fact, as I will argue below (in (C)), the only substantial difference – though it is, to be sure, an absolutely crucial one – between Leibniz and Kant on the question of the status of logical laws concerns the question of the *grounding* of this constitutive relation itself. For his part, Leibniz takes the ground of these principles to lie ultimately in the eternal ‘existence’ of God’s intellect, while Kant thinks we have no reason to think that a finite and a divine intellect will *share* the constitutive possibilities.

In any case, returning our focus back to Kant’s own views, just as with pure practical reason, the understanding is (in the end) *not* ‘free’ to adhere to any other law (nor to be ‘lawless’). It simply *is* that which accords with the logical law. Its ‘essence’ is wholly expressed by logical law, just as the ‘essence’ of pure practical reason is expressed by the moral law.<sup>62</sup> Logical laws are not things that the understanding ‘ought’ to live up to, or ‘ought’ to act in accordance with, but rather that which articulates its very form of ‘being’, or rather the entire sphere of ‘activity’ of a being composed solely of this capacity.

I think it is here that the explanatory usefulness of this sort of analogy begins to show itself. For in the parallel non-normative, but rather *constitutive*

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<sup>62</sup> Compare the analogy drawn in the ‘Introduction’ to the ‘Transcendental Logic’, between logic and ‘pure morality’, which ‘contains merely the necessary moral laws of a free will [freie Wille] in general’ (B79).

interpretations which can be given of the relation between ‘Verstand’ and ‘Wille’ and their respective laws and principles, we might be able to find the beginnings of an account which would help us avoid the ‘Kantian paradox’ (so labeled by Terry Pinkard) of moral self-legislation [Selbstgesetzgebung] of reason. Pinkard writes that, according to Kant,

if we are to impose a principle (a maxim, the moral law) on ourselves, then presumably we must have a *reason* to do so; but if there was an antecedent reason to adopt that principle, then that reason would not itself be self-imposed; yet for it to be binding on us, it had to be (or at least had to be ‘regarded’ to be, as Kant ambiguously stated) self-imposed.<sup>63</sup>

I agree that, as it is stated, this situation appears paradoxical.<sup>64</sup> In fact, it is extremely difficult to see how such a position could avoid bottoming out in some form of (radically) voluntaristic ethical and logical conventionalism. Yet as I have suggested above, Kant never gives any indication that he would go in for such conventionalism, in either the logical or the ethical sphere.<sup>65</sup>

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<sup>63</sup> Pinkard, *German Idealism 1760-1860*, (Cambridge: Cambridge, 2002), 59.

<sup>64</sup> Charles Larmore’s stronger opinion (in his *Les pratiques de moi* (Paris: PUF, 2004)) is that, where Pinkard sees a paradox, ‘I see a contradiction’ (149n1), since ‘there is not any place outside of normativity from which thought would be able to effect, by some inaugural gesture, its entrance into this domain’ (149). (This comes after a comment about the efforts of Fichte to escape such a paradox, which lead to a conclusion that ‘tips over into nonsense’ (ibid.)) Larmore takes this ‘contradiction’ to afflict Kant’s own position, and, in a recent essay (‘Back to Kant? No Way’) he criticizes Karl Ameriks for trying to defuse this sense of paradox in a way similar to that suggested above. See the exchange between Ameriks and Larmore in *Inquiry* (June 2003) 46.2.

<sup>65</sup> Charles Parsons makes this point with regard to logic in his ‘Kant’s Philosophy of Arithmetic’, reprinted in *Mathematics in Philosophy* (Ithaca: Cornell, 1983), 118. Recall Keller’s construal of spontaneity: the capacity necessary for an individual to be able to ‘come to see him- or herself as *having chosen to be bound* by [certain principles] in his or her behavior’ (op.cit.; my ital.).

On my reading, Kant himself would seek to temper the sense of paradox, in both spheres, as follows. Rather than being something ‘we’ *do* (or could fail to do), the manner in which the will [Wille] as such is said (in the *Grundlegung*) to ‘give itself the law’ (4:431) or to be ‘a law to itself’ (4:447) consists in its being so *constituted* as a capacity so as to never be determined by anything ‘from without’. Its entire space for activity is delineated *a priori* by its essential principles. The same applies to the case of the capacity for understanding as such and its laws (and any other form of pure ‘rational being [vernünftige Wesen]’). The highest principles of each sphere (the law of contradiction and the non-normative correlate of the categorical imperative, respectively) do not represent *prescriptions* concerning what an understanding or practical reason ‘should’ do (and yet might fail to do), but rather an expression of what these capacities *are* (in their ‘essence’, as I have been calling it).

In general, then, on the non-normative interpretation, Kantian logical rules construct a ‘space’ of possible activity which circumscribes a capacity for understanding *per se*, such that nothing which could not be construed as in accordance with these rules could be counted as an act of understanding. Any ‘thing’ which failed to meet up with these rules would, on this picture, fail to be an act of the understanding, but would have to be the product of some other force or capacity. Unlike norms, these laws do not institute a division *within* thinking, between, say, ‘correct’ and ‘incorrect’ thought, but rather one between

thought and *non*-thought.<sup>66</sup> We should thus conclude that Kant simply does not ascribe to humans the ‘freedom’ to ‘think’ what is illogical. In this regard, Kant’s conception of logic’s relation to thought is neatly encapsulated in the propositions from the *Tractatus* that serve as our second epigraph: nothing unlogical *can* be thought.<sup>67</sup>

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<sup>66</sup> This interpretation brings us close to aspects of Wilfrid Sellars’ position in his 1970 APA presidential address (‘This I or He or It (the thing) which Thinks’, reprinted in his *Essays in Philosophy and Its History* (Dordrecht: Reidel, 1974)). There Sellars suggests (§57 et seq.) that the ‘spontaneity’ of the understanding can be construed on the ‘model’ of the functional determination of a computer process, as ‘following a routine’ (§59). In her *The Unity of Reason* (Oxford: Oxford, 1994), Susan Neiman likewise describes the understanding’s operations as ‘routine, automatic, and mechanical’ (49), though I think she makes too much of the alleged ‘priority’ of practical reason, and also fails to note Kant’s explicit insistence (in the second *Critique*, cited above) that there are logical conditions on having a capacity *at all*, which make no reference to ends or interests which the capacity can be used to attain.

In general, however, we have to be on guard not to make the understanding out to be too mechanical, in the sense of being ‘blindly’ so; self-consciousness is essential. Compare *Metaphysik Volckmann* (28:449). Doug Lavin (op.cit.) calls this insistence on the necessity of self-consciousness in distinctly ‘rational’ activity the ‘participation requirement’ (444). Yet I want to insist (with David Owen (op.cit), and against Korsgaard (*Sources of Normativity*)) that the self-consciousness at issue in the formal-logical analysis of thought – the sense in which we participate and are conscious of the formation of judgments – need not imply any *control* over (or any ability to ‘guide’) the relevant activity.

<sup>67</sup> For a partial exploration of the connection between Kant and the *Tractatus* on this point, see Manley Thompson, ‘On *apriori* Truth’. Insofar as the early Wittgenstein, unlike Kant, does not flirt at all with the language of ‘oughts’ in his discussion of logic’s bindingness upon thought, Eva Picardi might well be right in her claim (op.cit.) that ‘[t]he most thorough rejection of the conception of logic as a normative science is to be found in Wittgenstein’s *Tractatus*’ (170).

Note that, strictly speaking, Kant thus should deny us the ability to ‘hold-true’ something illogical as well, insofar as this capacity presumes that the item at issue is already a thought. By contrast, Frege at times – and despite his overt commitment to antipsychologism – seems to countenance a construal of logic as normative for our capacity for ‘holding-true’, and so by implication countenances the possibility of ‘holding-true’ that which is illogical. See his 1897 ‘Logic’ (in his *Posthumous Writings*, 145f), where he implicitly extends the scope of ‘thinking’ to include *illogicalia*, writing that ‘thinking, as it actually takes place, is not always in agreement with the laws of logic any more than men’s actual behavior is in agreement with the moral law’ (145). Of course, if Frege were to subscribe to a strict distinction between formation-rules and inference-rules (see below), perhaps he could then think that, though we can fail to be in agreement with the inference-rules (*invalid* inference is thereby possible), we still could not think something *p* without that *p* being in accord with the formation-rules.

One consequence of this interpretation is that there would seem to be that, in a fairly strict sense, for Kant there is no such ‘thing’ as logically ‘faulty’ judging or reasoning or inferring. Now, this may seem to some modern readers to run together two kinds of failure to accord with logical rules, since there are nowadays (typically) two sorts of rules which belong to logic – namely, formation rules and rules of inference. That is, while we might be convinced that if we ‘fail’ to produce something ‘well-formed’, we are, from the point of view of logic, indulging in nonsense (i.e., ‘failing’ to give expression to anything thinkable), we might nevertheless want to keep room for the idea that we can entertain something which is perfectly well-formed sentence in the relevant formal language (a ‘wff’), but then go on to make a mistake by assuming that a certain move from this sentence to another ‘wff’ is licensed by an inference rule, when in fact we have no such license. Such a case is not typically described as a *failure* to infer, but rather a ‘bad’ or ‘invalid’ inference, because, as was noted in the introductory section, most contemporary logic textbooks teach that logic is a normative discipline.

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In any case, a position which does not rule out illogical thought (allegedly held by Russell in the 1900-1910’s) is criticized (from a quasi-Kantian point of view) by the early Wittgenstein, who claims in the *Tractatus* (§5.5422) that ‘[t]he correct explanation of the form of the proposition ‘A judges *p*’ must show that it is impossible to judge nonsense. (Russell’s theory does not satisfy this condition.)’ This point is made as early as the 1913 ‘Notes on Logic’ (3<sup>rd</sup> MS): ‘Every right theory of judgment must make it impossible for me to judge that this table penholders the book. Russell’s theory does not satisfy this requirement’ (103, in the Appendix to the 2<sup>nd</sup> edition of Wittgenstein’s *Notebooks 1914-1916*, ed. von Wright & Anscombe (Oxford: Basil Blackwell, 1979)).

Now, for his part, Kant would agree that we can link together well-formed judgments in non-inferential sequences. Yet Kant also takes *inferences as such*, and not ‘good’ or correct inferences, to be identifiable through the traditional set of syllogistic forms and a handful of schemata for ‘immediate’ inferences such as ‘conversion’ and subalternation. This comes out perhaps most clearly in Kant’s early 1762 essay, ‘The False Subtlety of the Four Syllogistic Figures’. In this essay, Kant gives an account of inference in which what are traditionally called the second, third, and fourth figures of the syllogism are all demoted to cases of ‘hybrid inference [ratiocinium hybridum]’ (2:50). Kant thinks that, in cases of ‘hybrid’ inference, the capacity for these sequences of thoughts to count as inferences ‘depends on the tacit addition [Dazufügung] of an immediate inference, which one must have at least in thought [in Gedanken]’ (2:51), even if it is not written out or stated explicitly or ‘really expressed [wirklich ausgedrückt]’ (2:50). In Kant’s mind, ‘what is important here is not what one says [sagt] but what is indispensably necessary for one to think [denken] if a valid inferential sequence [richtige Schlussfolge] is to be present [vorhanden sein]’ (2:50).

Hence, Kant holds that what is ‘said’ or ‘expressed’ in a hybrid inference is such that it does not yet make ‘a valid inference present’. Of course, this not to deny that the relevant sequence of judgments might be such that it ‘contains [enthält]...the *materials* for a conclusion’, even if it itself ‘does not have the *form*, in accordance with which an inference is to be drawn [wornach geschlossen werden

soll]’ (2:54-55; my ital.). Yet Kant is quite explicit about the failing of the ‘hybrid’ syllogism: the relevant immediate inference (e.g., conversion) ‘must, therefore, be tacitly thought [in making the mediate inference], for otherwise my propositions *do not follow inferentially* from one another [schließen meine Sätze nicht]’; i.e., an ‘inferential sequence [Schlussfolge] is *not possible*’ (2:52; my ital.). Thus, in the end, hybrid inferences are not really ‘inferences’ after all, because they fail to express one of the ‘forms’ of inference.<sup>68</sup> But then if Kant judges cases such as these, which are at least ‘implicitly’ or ‘mediately’ connected to actual forms of inference, not to be themselves inferences, we can only conclude that Kant will be more dismissive of those sequences which have no hope of being rearranged or transformed so as to accord with a syllogistic figure, even if each of the individual elements in the sequence is itself a perfectly ‘well-formed’ thought.

For Kant, then, ‘Barbara’, ‘Celarent’, rules such as *nota notae ist nota rei ipsius*, *modus ponens*, etc., simply *define* what thought *qua* ‘inference’ is. These rules provide the canon for distinguishing inference from *non*-inference. In general, then, the forms of judgment and inference and the laws which govern them do not sort acts of understanding into good and bad thoughts or good (valid) and bad (invalid) inferences. Rather, things which cannot be seen to fit the logical forms of thinking and reasoning are simply not thoughts or inferences at all (just as no act

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<sup>68</sup> Kant says as much in §5 of this essay: ‘now, it might at this point occur to someone to suppose that...the three [hybrid] figures would, at worst, be useless, but not actually false. But if one considers the intention which inspired their invention and continues to inspire their presentation, one will come to a different view of the matter’ (2:55-56).



of practical reason could consist in undertaking an immoral maxim). If we seem to ‘think’, or appear to ‘infer’, and yet fail to do anything that accords with either judgmental or syllogistic stricture, then no thought or inference has yet been achieved. At best, perhaps we have managed to link together representations or judgments according to empirical-psychological rules for association.

What we *can* do, however, is *take ourselves* to have made a judgment, or inference, when in fact we have done no such thing. We can, that is, succumb to what James Conant has usefully dubbed ‘the illusion of thought’.<sup>69</sup> Moreover, we can also *take ourselves* to have identified the logical ‘canon’ of thought (i.e., to have identified logical law and the canonical forms of thinking), when in fact we have failed to make a correct identification. But in these cases it must be emphasized that we are making *second-order* judgments, such as ‘ $x$  is a judgment (thought)’, or ‘the principles  $p, q, r...$  indicate the canon of the understanding’. It seems clear

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<sup>69</sup> In his ‘The Search for Logically Alien Thought’ (*Philosophical Topics* 20.1 (Fall 1991), 115-180), Conant defines ‘an *illusion of thought*’ as ‘the manufacturing of an appearance of sense where no sense has been made’ (134). Conant’s essay brings out the importance of ‘illusion’ as a technical, diagnostic category in both Wittgenstein’s *Tractatus* and in Kant’s own efforts to uncover transcendental illusion in the *Transcendental Dialectic*. Below I extend this analogy with a similar proposal for Kant’s understanding of *logical* illusion. Conant’s essay also contains a rich treatment of the historical development (from Aquinas, through Descartes, Leibniz, Kant, Frege, Wittgenstein, to Hilary Putnam) of some of the central themes involved in what I have been calling a ‘constitutive’ understanding of logic – especially regarding the ‘problematic’ status of ‘unlogical’ thought within this tradition. Even so, Conant does not appear to find any of the tensions latent in Kant’s own writings – tensions, that is, between Kant’s ‘Leibnizian’ prioritization of understanding to will (see below) and his commitment to the absolute impossibility of illogical thought, on the one hand, and the sentences from Jäsche which motivate the standard, ‘normative’ interpretation, and its implicit commitment to the possibility of such *illogicalia* – that Conant puts on full display in his insightful treatment of this problematic through Wittgenstein’s discussions of logic in the *Tractatus*.

that this (higher-order) judgment itself can still go on to contradict (fail to correspond to) its (second-order) ‘object’, since we can be mistaken in our estimations in this regard. (In the 1762 essay discussed above, Kant himself writes of the ‘*false subtlety*’ of traditional presentations of the syllogism.) It will still be necessary, of course, for each of *these* judgments (considered as first-order judgments in their own right) to be in accord with logical form and not conflict with logical principles in order to count as a thought (judgment) in the first place.

In a similar fashion, we might also be said to ‘fail’ with respect to inference when a *non*-inference is passed off as something with the logical form of an inference, due to a failure in its formalization – say, because we have used the same term in both premises without recognizing an unnoticed ambiguity across its uses (as occurs, for example, in the ‘inferences’ which generate the Antinomies of the first *Critique*’s Transcendental Dialectic, cases of what Kant calls a *sophisma figurae dictionis* (cf., A402; B411)). This occurs when the true form of the movement of thought is masked by the fact that the material involved has been given the ‘appearance’ of an inference (e.g., by the silent transition from a negative to a (superficially similar) infinite judgment, etc.). Here we have the faulty determination of the form of the relationship that obtains among some of the expressions involved in a judgment. Here again, though, we only misjudge what form  $x$  has (i.e., that it is an inference), and should not be said to ‘make’ a faulty inference.

These last, ‘second-order’ mistakes are cases of succumbing to what Kant labels logical *illusion*: ‘Logical illusion [Schein]...consists in the mere imitation [Nachahmung] of the form of reason (the illusion of fallacious inferences)’ (B353). With illusion comes the possibility for error, but we can succumb to such illusion only by *taking* the relevant sequences of representations as of such and such form – that is, by taking up the position of reflective consciousness, and so implicitly raising the question of whether what ‘appears’ to us to be *x*, actually *is* an *x*. For here we are given room to take ourselves to have inferred or judged, whereas what we have actually done is something which only gives off an illusion of inference or judgment.

At this point, we should recall a point made in §50 – namely, that all concern for true cognition, even at this reflective level, represents an *interest* of ours, and not a condition upon the activity of thinking or inferring itself. These sorts of questions about whether we have merely appeared to judge or infer or have actually done so are questions which only will arise if we have placed ourselves in a sphere in which we take an interest in the cognition of our own mental activities.<sup>70</sup> That is to say, these questions will only become relevant when

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<sup>70</sup> This is an important consequence of Kant’s separation of the notion of judgment as such, and its principle of logical unity (apperception), from the notion of *truth* in particular. In this regard, compare Michael Kremer’s discussion (in his ‘Judgment and Truth in Frege’, *Journal of the History of Philosophy* 38.4 (Oct. 2000), 549-581) of the distinction between Frege’s view of judgment and Russell and Moore, who hold ‘a view of judgment antithetical to Frege’s, ‘involving a sharp separation of the notion of truth from that of judgment’ (556). ‘On the sort of view represented by the early Moore and Russell, judgment is a relation between a subject and a complex non-mental entity, possessing one or the other of the paired properties of truth and

we take up an interest in deciding when we are truly, rather than apparently, engaged in thinking, judging, and inferring, as a possible ‘end’ for our mental activity, that we can bring in the possibility of a ‘failure’ to achieve that end.

§52 This last distinction between ‘logical’ failure (which Kant takes to be impossible) and logical ‘illusion [Schein]’ – or second-order judgments which mistake something being, or falling under, a logical concept or rule – as well as the point of view which takes an interest in avoiding logical illusion, will both be of use as we turn now to the hitherto looming challenge of reincorporating the original passage from Jäsche’s text into a constitutivist account, since it was this passage that provided the motivation for a normative interpretation in the first place. For up till now, we have left the following question unanswered: how can the constitutivist interpretation of Kant’s views on logical law deal with the Jäsche passage, which so obviously suggests the normative interpretation? For, as was noted above, we undeniably *do* see a use of ‘sollen’ in Kant’s logic lectures and *Reflexionen*, and it is surely this fact which must have been behind Jäsche’s choice to include the oft-cited remark in his textbook. So, can the constitutivist interpretation of the relation between logical law and thinking account for, or at

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falsity. On such a view, ‘it is not at all platitudinous that individuals do or ought to strive to make true judgments’ (ibid). (To be more precise, here Kremer is rehearsing an analysis of Russell and Moore by Thomas Ricketts, who is the one being quoted, from his ‘Logic and Truth in Frege’, *Proceedings of the Aristotelian Society*, Supp. Vol. 70 (1996), 121-140, here 129-30.)

least accommodate, this obvious intrusion of normative language – and if so, how?

Before I propose such a reconciliation, I want to note that, even though few interpreters these days have opted for a more substantial inquiry into the viability of the position expressed in Jäsche's text, I am not altogether alone in being suspicious of the simple appearances given off this remark. For in fact, in the 'Prolegomena' to Edmund Husserl's *Logical Investigations*,<sup>71</sup> we find the beginnings of such a reading – even introduced by an outright claim that the passage from Jäsche's text gives the wrong impression about Kant's true views:<sup>72</sup>

Kant himself – though he opposes logical laws, as 'necessary rules' which say 'how the understanding ought to proceed in thought', to psychological laws, which say 'how the understanding is and does think', (cf. *Jäsche Logik*, §I) – *did not ultimately have the intention to regard logic as a normative discipline* (in the sense of one that measures adequacy [Angemessenheit] in relation to set ends). This is decisively shown by his coordination of logic and aesthetic to accord with the two 'basic sources of the mind'.... His logic, no more than aesthetics in this Kantian sense, is to be counted [gelten] as a discipline guided by ends [nach Zwecke regelnde Disciplin]. ('Prolegomena', §13, 37n1; my ital.)

Husserl recognizes Kant's commitment to the 'self-sufficiency [Eigenberechtigung] of a pure logic', and recognizes as well that to 'posit

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<sup>71</sup> 'Prolegomena', vol. I, Halle: Max Niemeyer, 1900; *Investigations I-VI*, vol. II, 1901. J.N. Findlay's 1970 translation of the 'Prolegomena' can be found in *Logical Investigations* Volume 1 (London: Routledge, 2001). Citations, however, will be to the original German pagination, and the translation here is my own.

<sup>72</sup> In this estimation, Husserl is partly following Carl Stumpf, and joined by Wilhelm Windelband. See Martin Kusch, *Psychologism* (London: Routledge, 1995).

normative character...as something which belongs essentially to its concept' is something that would lead to an 'obvious inconsequence, indeed even a contradiction', since 'the relation [Beziehung] to a guiding end and to activities subordinated to this end lies in the concept of normativity [Normierung]' (§13, 35-6). By contrast, pure general, or formal, logic, in Kant's sense, treats thinking in abstraction from any interests which it might subserve, as we have seen above. The parallel Husserl points to between logic and aesthetics is particularly striking in this regard, since there is perhaps less temptation to take sensibility to be a faculty which on its own is oriented toward 'ends' with respect to which it could meaningfully be said to fail to achieve. Indeed, as Kant claims explicitly in the passage quoted above from the first *Critique's* Transcendental Dialectic, the senses too, considered on their own, 'do not err' – a fact which he derives from the very same general claim he uses to support the absence of 'error' within understanding itself: 'no force of nature can of itself depart from its own laws' (B350).

What is even more striking about Husserl's remarks about Kant's position is that it is put forward in the course of Husserl's general argument in the 'Prolegomena', that *every* normative discipline *presupposes* a non-normative, theoretical discipline:

[E]very normative and likewise every practical discipline *rests on* [beruht auf] one or more theoretical disciplines, inasmuch as its rules must have a theoretical content [Gehalt] *separable from* the thought of normativity (of the 'ought' [Sollen]), whose scientific

exploration lies with these theoretical disciplines. ('Prolegomena', §14, 40; my ital.)

Husserl himself goes on to argue later in the 'Prolegomena' that, far from being a normative discipline, pure logic is instead the most fundamental sort of theoretical discipline, so much so that it is in some sense presupposed by *all* disciplines, including all normative disciplines, and in particular any discipline which purports to give norms for thinking. I take Kant to hold a quite similar point of view, insofar as the non-normative disciplines of pure logic will be presupposed by any discipline which hopes to provide norms for the achievement of ends or realization of interests by means of the 'free' interaction of understanding and reasoning with other 'external' forces (such as sensibility or inclination).

But, to return to our final task, we need to find a way to make sense of the inclusion in Jäsche's 1800 *Logik* of the passage (cf., §47) which stands as the one well-known piece of textual evidence that seems to lend fairly direct support for the use of normative language ('sollen') in a logical context. Now, were this the only text in which an 'ought' was connected to logic, then we might attempt to belittle the passage by appealing to the peculiar status that Jäsche's text has within Kant's corpus. We might insist that since Jäsche's text lacks the *full* 'imprimatur'

of Kant's authorship, no decisive conclusion can be drawn upon Jäsche's manuscript alone.<sup>73</sup>

This appeal will not help us here, however, since similar sentences show up throughout the other extant lecture transcripts as well as in the so-called 'logic *Reflexionen*' from the Critical period.<sup>74</sup> Still, to my knowledge, no such claim appears in those works which Kant himself prepared for publication. And, as we have seen, there might be a clear reason *why* no similar statement found its way into Kant's published writings – namely, because it is *incompatible* with other published doctrines, and might simply persist in the notes as an unreconstructed trace of Kant's intellectual heritage.

But in any case, what we should hope – and what we should demand of any interpretation – is that it can be shown how, nevertheless, the viewpoint expressed in Jäsche's text (and elsewhere) can be made to be compatible with published doctrine, with a minimal amount of mutilation or gerry-mandering. We have already found it appropriate to ask the normative interpreters to give *general, systematic* ('architectonic') grounds in support of their claim that Kant takes the laws of formal logic to be normative for thinking. Yet as we have seen, there are

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<sup>73</sup> For further discussion of some of the scholarly concerns with Jäsche's editing policies, see Terry Boswell, 'On the Textual Authenticity of Kant's *Logic*', *History and Philosophy of Logic*, 9 (1988), 193-203, as well as my 'Introduction', §V, above.

<sup>74</sup> Cf. R1627 [1790's]: 'Nicht: nach welchen Regeln wir denken – sondern, *denken sollen*. Nicht psychologie' (16:43); R1628 [1780's]: 'Sie untersucht nicht, wie der Verstand denkt und was geschieht, sondern (lehrt), was geschehen *soll*, d.i. wie er denken *soll*' (16:46; my ital.); see also R1692 [1780's] (16:47); R1612 [1773-7] (16:36). In the lectures, see *Vienna Logic* [1780's] (24:791-2); *Dohna-Wundlacken Logic* [1790's] (24:694).



*no* straightforward grounds upon which to base such a reading. Is there, by contrast, any way to make the Jäsche passage compatible with the alternative, constitutive interpretation?

Let us return to something that we touched on in our discussion at the end of the previous section (§51). We might argue that in the Jäsche passage Kant means to be claiming that it is when we consider logic's laws *themselves* as possible 'objects' of thought that they become 'normative', in the same sense that *any other truth* is normative for cognition: cognition *aims at* the true, and so *ought* to have truths rather than falsities as its object.<sup>75</sup> Certain laws, and not others, are laws which we 'ought' to take as expressive of the necessary forms of thought. If (for whatever reason; e.g., prejudice) we fail to identify the (true) laws of thought, or if we count (or discount) certain things as thoughts by reference to the wrong set of laws, then we are making a mistake, albeit a second-order one. We are not, however, thinking a first-order illogical thought.

Yet this last interpretation forces us to see Kant as departing from his typical use of this sort of contrast – between how one *happens* to *x* and how one

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<sup>75</sup> This is, roughly, the suggestion put forward by Anita Kasabova, one of the only recent commentators to attend to some of the obstacles which face any (robustly) normative interpretation. See her 'Is Logic a Theoretical or Practical Discipline? Kant and/or Bolzano', *Archiv für Geschichte der Philosophie* 84 (2002) 319–333. In this essay, Kasabova is (by and large) repeating points made by Rainer Stuhlmann-Laeisz in his *Kants Logik* (Berlin: de Gruyter, 1976). Both Kasabova and Stuhlmann-Laeisz construe this sort of normativity as 'trivial'.

On this, compare Frege's remark in the 'Preface' to *Grundgesetze* I (Jena: Pohle, 1893): 'Every law, which says what is, can be taken as prescribing that one should think in accord with it [Jedes Gesetz, das besagt, was ist, kann aufgefasst werden als vorschreibend, es solle im Einklange damit gedacht werden]' (xv).

*ought* to  $x$ . For the ‘ $x$ ’ in question here (‘think’) must then be taken as referring ambiguously to both first-order thinking and a second-order sort of thinking *about thinking*, rather than just thinking *simpliciter*. Even so, it would seem that this option in the end would be the more promising candidate, since it allows for a reading of the ‘sollen’ passages that enjoys greater consistency with Kant’s published doctrines. Can we do any better than this?

Let me conclude this part by exploring another somewhat more indirect interpretive route, one which draws on Kant’s well-known claim that practical reason has a kind of priority among our higher faculties, such that ‘all interest is ultimately practical and even that of speculative reason is only conditional and is complete in practical use alone’ (2<sup>nd</sup> *Kritik* 5:121).<sup>76</sup> In this light, I would like to offer the following suggestion: An element of normativity can be conferred upon logical law *from without* (‘accidentally’, so to speak), if we consider thinking and reasoning as a necessary ‘means’ for the fulfillment of our moral end. That is, insofar as practical philosophy shows us that we are categorically obligated (i.e., *ought* unconditionally) to have volitions that take such-and-such form, and insofar as we have to think (rather than not-think) in order to will according to such forms, it would follow that we would be categorically obligated to think. If logic

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<sup>76</sup> On the priority of the practical, compare also Jäsche’s *Logic*: ‘In the end everything comes down to the practical, and the practical worth of our cognition consists in this tendency of everything theoretical and all speculation in regard to its use. This worth is unconditioned, however, only if the end toward which the practical use of the cognition is directed is an unconditioned end. The sole, unconditioned, and final end (ultimate end) to which all practical use of our cognition must finally relate is morality’ (9:87).

tells us what thinking is, and gives us criteria by which we can tell whether we are thinking or not, then it thereby tells us which mental states we *ought* to be in.

We can elaborate this proposal as follows. Suppose we can imagine that we as humans possess the freedom *not* to think – perhaps, to indulge in (e.g., hallucinatory) mental states which are ‘less than a dream’ (A112). Then it might be argued that logical laws could function as hypothetical imperatives in this case, i.e. imperatives of the form: ‘if it is your intention to think, then you ought/must *x*’. Now, according to Kant, the moral law itself functions as a categorical imperative, as it sets forth an ‘end in itself’ for us as humans, an end which binds all of our acting and willing unconditionally. Yet thinking is surely a ‘condition’ for such acting/willing, by virtue of the fact that it enables the formation (representation) of the requisite maxims. Since Kant takes it as axiomatic (‘analytic’) that, in being necessarily obligated to will the end in itself, we are likewise necessarily obligated to will all of the means (here: thinking) necessary to arrive at that end,<sup>77</sup> this would therefore imply that the intention to think is itself one that is for us categorically imperative to maintain.

Yet even if we find an argument of this sort to provide a convincing way to confer a sort of normativity upon logical laws, it does little to resolve the suggestion in Jäsche’s passage that we might *think* otherwise that we *ought*. We

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<sup>77</sup> Kant claims that this end-means point is ‘analytical’ in the *Groundwork*: ‘Whoever wills the end also wills (insofar as reason has decisive influence on his actions) the indispensably necessary means to it that are within his power. This proposition is, as regards the volition, analytic’ (4:417).

would therefore still need to broaden the sense of ‘thinking’ at issue in Jäsche’s text beyond the technical ‘logical’ sense that we have hitherto explored, so that ‘thinking’ could be used here to denote simply ‘being’ in various kinds of mental states, states which (on this hypothesis) might not even possess discernible logical structure. On the basis of Kant’s remarks in the B-Deduction (§16), it would seem, however, that the sphere of possible *thinking* in the logical sense coincides with the sphere of possible *conscious* mental states; if the ‘I think’ cannot accompany a representation, then it is ‘nothing for me’ (B132). If we take logical laws to tell us which types of mental states we *ought* to occupy, and these are those which are ‘thoughts’ in the logical sense, then (by the above argument) it would seem that Kant should take the intention to be conscious rather than unconscious as something that is categorically imperative for us. In any case, it seems difficult indeed to make sense of our *understanding*, rather than simply our *mind*, being in such unconscious states, with this being something that the understanding ‘does’, but ‘ought’ not to do.

Perhaps, then, no fully satisfactory reconciliation between these passages and the constitutive reading is possible. Let me conclude, then, by reiterating my claim that these difficulties are less substantial than those brought about by the straightforward acceptance of the normative interpretation of Kant’s logic that is *prima facie* suggested by the Jäsche passage. For it would seem that the constitutive reading alone makes good sense of why it is that (as we again noted in

§49) throughout the Critical period, Kant consistently *distinguishes* between logic and all practical-normative disciplines, classifying logic under the heading of formal philosophy, and classifying practical philosophy (along with ontology) under the heading of material philosophy. Ethics counts as ‘material’ because it deals with ‘objects’ of free volition. For humans it counts as normative, because it has to take into account something which lies outside of the forms of thought or reason itself – namely, our capacity for free choice [Willkür]. Logic, on the other hand, is ‘formal’ it deals solely with reason or thinking ‘in itself’, without reference to its cooperation or application to anything ‘beyond’ itself. Most importantly, it does not refer to any particular ‘end’ we might hope to bring about or ‘interest’ we might hope to satisfy by deploying our capacities for thought. In fact, given such considerations, it might well be argued, instead, that we should be much more surprised by the suggestion that the relation which obtained between logic’s laws and its subject-matter *is* to be characterized in precisely the same terms as that which obtains between ‘material’ philosophical principles and their subject-matter.

### C. The Ground of the Validity of Logical Laws

§53 At this point, I hope to have shown that several of Kant’s fundamental theses strongly imply that he takes the results of logical inquiry to provide us with an apriori theoretical *description* of the formal (essential) *constitution* of any possible

activity which could be counted as understanding, rather than providing a set of normative-practical *regulations* that our capacity for thinking *ought* to follow.<sup>78</sup> As I alluded to above, this interpretation is one which, in effect, takes Kant to uphold a *Leibnizian* conception of the relation between the logical laws and that which they are laws of – namely, the understanding. That is, Kant takes over the picture in which logical laws represent the *constitutive* possibilities of what both Kant and Leibniz call ‘understanding’ (or, more traditionally, the ‘intellect’).

On this shared conception, logical laws should be seen as explicating what ‘understanding’ or ‘reasoning’ is, independently of considerations of what ends we might wish to achieve with these capacities, or what interests they might be useful for realizing.<sup>79</sup> Indeed, for Leibniz, the absolute priority of understanding to will is a fact that makes an essential contribution to his argument against the Cartesians and their doctrine of the creation of the so-called ‘eternal truths’. Descartes in several of his letters and in corners of his published writings had suggested that, if we are to take God’s omnipotence seriously, in its absolutely unconditioned freedom, then surely it must be God’s will that is responsible for

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<sup>78</sup> In this regard, too, I think we can see Kant as anticipating Husserl’s conception of ‘pure logic’ as an exercise in ‘grounding’ our thinking in its principles by ‘phenomenological *description*’ rather than a strict axiomatic or nomological deduction; cf., *Cartesianische Meditationen* §10. I will return to this point below. For a helpful discussion of some of the similarities between Kant and Husserl on this point, see Paul Ricoeur, ‘Kant and Husserl’, in his *Husserl: An Analysis of his Phenomenology* (Evanston: Northwestern, 1967).

<sup>79</sup> As Kant puts it in the 2<sup>nd</sup> *Kritik*: ‘That which is required for the possibility of any use of reason as such, namely, that its principles and affirmations must not contradict one another, constitutes no part of its interest but is instead the condition of having reason at all; only its extension, not mere consistency with itself, is reckoned as its interest’ (5:120).

validity of these principles, for bringing these particular truths into ‘being’; moreover, surely God was perfectly free to do otherwise.<sup>80</sup> In taking this route, however, we ‘unknowingly destroy all of God's love and all his glory’, as Leibniz puts it in §2 of his *Discourse on Metaphysics*, since (as he asks there),

why praise [God] for what he has done if he would be equally praiseworthy in doing the exact contrary? Where will his justice and wisdom reside if there remains only a certain despotic power, if will holds the place of reason, and if, according to the definition of tyrants, justice consists in whatever pleases the most powerful? (G iv.428)

In fact, in *Discourse* §2 Leibniz advocates the following general principle: that ‘all acts of will presuppose a reason for willing and that this reason is naturally prior to the act of will’ (ibid.); the case of reason and God’s will is simply that, one case, though a particularly striking one. This manifests Leibniz’s commitment to the

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<sup>80</sup> See his letters: to Mersenne, April 15 & May 27, 1630; to Mesland, May 2, 1644; to Arnauld, July 29, 1648; to More, February 5 1649; and see the Fifth and Sixth Replies to Objections (by Gassendi and Mersenne’s friends) to his *Meditations*. The examples given in the 1644 letter to Mesland and the 1648 letter to Arnauld are particularly striking: ‘God cannot have been determined to make it true that contradictories cannot be together, and therefore...He could have done the opposite’ (AT VI.118); ‘I would not dare to say that God cannot make a mountain without a valley, or bring it about that 1 and 2 are not 3. I merely say that he has given me such a mind that I cannot conceive a mountain without a valley, or a sum of 1 and 2 which is not 3; such things involve a contradiction in my conception [in meo conceptu]’ (AT V.224). In most of these texts, Descartes argues that neither understanding nor will can be given priority in God, and often identifies God’s understanding and his will. For a discussion of the function of this doctrine in Descartes’ thought that raises concerns especially close to those of the present Chapter, see Harry Frankfurt, *Demons, Dreamers, and Madmen: The Defense of Reason in Descartes’ Meditations* (Indianapolis: Bobbs-Merrill, 1970), and his ‘Descartes and the Creation of the Eternal Truths’, *Philosophical Review*, 86.1 (Jan 1977), 36-57.

principle of sufficient reason, that nothing – not even God’s volition – happens without a reason.<sup>81</sup>

Leibniz argues that the reason for God’s willing can be found in his *essence*, which is something that His will did not in turn bring into being. And here as well (i.e., in *Discourse* §2) that Leibniz locates ‘the eternal truths of metaphysics and geometry and consequently also the rules of goodness, justice, and perfection’; far from being ‘merely the effects of the will of God’, they are ‘only the consequences [suites] of his understanding [entendement], which, assuredly, does not depend on his will, any more than does his essence’ (ibid.).<sup>82</sup>

In Leibniz’s construal of the priority and independence of the *divine* understanding to volition, we can find a near-perfect model for the sort of independence of understanding from will that we have seen Kant uphold in the *human* case. Both the Leibnizian divine understanding and the Kantian human understanding are ‘free’ in the sense of being fully self-sufficient ‘sources’ of

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<sup>81</sup> Leibniz discusses this principle of sufficient reason in a variety of places, including perhaps most famously his 1710 *Theodicy* and his 1715-16 correspondence with Samuel Clarke (see especially Leibniz’s 2<sup>nd</sup> Letter, §1; 3<sup>rd</sup> Letter, §§7-8; and 4<sup>th</sup> Letter, §§1-5). Leibniz writes in II.21.13 of the *Nouveaux Essais* that the principle that ‘nothing happens without a reason [rien n’arrive sans raison]’ is a ‘fundamental axiom’ of his thought, ‘without which the existence of God and other great truths could not be properly demonstrated’ (G v.164).

<sup>82</sup> For the identification of God’s nature, his understanding, and the source of the relevant ‘happy necessity’ of reason, see *Theodicy*, §191: ‘This so-called *fatum*, which binds even the Divinity, is nothing but God’s own nature, his own understanding, which furnishes the rules for his wisdom and his goodness; it is a happy necessity, without which he is neither good nor wise’ (G vi.230). In his April 3, 1716 letter to Louis Bourguet, Leibniz makes the even more general claim that ‘ideas or essences are all founded [fondées] on a necessity which is independent of wisdom, convenience, and choice’ (G iii.592). (The inclusion of ‘wisdom [sagesse]’ here is possibly a slip, since in *Theodicy* §7, Leibniz identifies ‘wisdom’ and ‘understanding [entendement]’, and claims that God’s ‘understanding is the source of *essences*’ (G vi.107).)



principles of their activity, as well as in the sense that the ‘activity’ of understanding itself is something which is ‘spontaneous’; it ‘follows’ from these constitutive principles alone. That is, I think we can and should take over what Leibniz says of the ‘soul’ and of ‘substances’ in general in *Discourse* §§32-33 and apply it to the understanding itself, since both Leibniz and Kant take the capacity for thinking to have ‘a perfect spontaneity...such that everything which happens to it is a consequence [suite] of its idea or of its being’ (G iv.458).

Similarly, neither a Leibnizian nor a Kantian ‘understanding’ is ‘free’ to adhere to any other law (nor to be ‘lawless’). It simply *is* that which accords with the logical law; the ‘essence’ of understanding is wholly expressed by logical laws.<sup>83</sup> These laws are not things that either Leibniz or Kant suggest that the understanding ‘ought’ to live up to, or ‘ought’ to act in accordance with, but are rather laws which articulate the very form of ‘being’ of understanding itself. These laws are necessary principles which both Kant and Leibniz think must be seen as mere ‘consequences’ of the very idea of ‘understanding as such’ *on its own*,<sup>84</sup> consequences which, in particular, ‘obtain’ prior to any considerations of what can or cannot, or should or should not, be willed.

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<sup>83</sup> As we shall see below, for Kant, however, there will be something essentially problematic in saying that the logical laws are ‘eternally’ true, given the inability to prove the immortality of the thinking subject. Kant will also have difficulties with Leibniz’s identification of the forms and laws which govern our understanding with those which will characterize God’s, since ours is a finite, discursive intellect, which requires acts of synthesis, while God’s intellect is an infinite and intuitive. Nevertheless, these differences, though substantial, do not affect the point at issue.

<sup>84</sup> Cf., our above discussion of the understanding’s *self-sufficiency* as a ‘ground’ of its own apriori concepts, §46.

In this regard, keeping the Leibnizian heritage of Kant's independence-claim is something which, I suggest, can provide an extremely useful interpretive corrective when we approach Kant's own views. Keeping Kant's Leibnizianism in mind will help us avoid ascribing to Kant, not only the 'normativist' position concerning logical laws that we criticized at length in the previous sections, but also any kind of crude constructivism or conventionalism about logical principles.<sup>85</sup>

Yet in the present part of this Chapter, I want to attend to something at least as interpretively and philosophically fruitful – namely, I want to develop the grounds for, and draw out the consequences of, the fundamental *disagreement* that Kant has with Leibniz, over the particular nature of the understanding which enjoys such an independent constitution. For in fact, focusing upon Kant's departure from Leibniz will help us bring more precision to our initial worries which arose above (in **A**), concerning the possibility that Kant is wandering too close to a kind of 'faculty-Platonism'. This is because, as we have already touched upon above, what is the heart of their dispute is in a nutshell the fact that Kant rejects Leibniz's thesis that the understanding whose principles are expressed in

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<sup>85</sup> Here I follow Karl Ameriks (*Interpreting Kant's Critiques*), and also Charles Parsons, 'Kant's Philosophy of Arithmetic'. In his 'Rethinking Mathematical Necessity', Hilary Putnam makes a very nice point about Kant's demurral from this non-conventionalist approach, which will allow us to anticipate some of the topics below, concerning the nature of the 'grounding' of logic: 'Carnap's conventionalism...was an *explanation* of the origin of logical necessity in human stipulation; but the whole point of the Kantian line is that logical necessity neither requires nor can intelligibly possess any 'explanation'" (248). See below, §54.

these necessary laws to be, in the first instance, the *divine* understanding (though Leibniz admits that we too share this understanding to some degree). Kant, by contrast, insists from the start that we must take these universal and necessary laws to follow from, or characterize, an essentially *finite* or *discursive* – or, in a word, non-divine – understanding.<sup>86</sup>

In other words, getting clear on Kant's rejection of Leibniz's account of the 'ground' for the validity of logical principles for our understanding will allow us to return once again to the third fundamental question that was sketched in the opening section of this Chapter (§45) – namely, the question of the *ontological* status of the understanding itself. In the rest of the present section, then, I will lay out what we might call, following Robert Adams, Leibniz's 'theological ontology of logic'.<sup>87</sup> This will put us in a position to recognize, in the next section (§54), the extent to which Kant quite self-consciously 'de-theologizes' and 'de-ontologizes' the ground of the validity of logic. In the conclusion of that section (and with it, the conclusion to this thesis as a whole), we can then take stock of the qualifications that Kant's account will introduce into the very meanings of 'universality' and 'necessity', insofar as they can be used to characterize logical laws. This will raise questions as to whether or not these principles are correctly

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<sup>86</sup> Here I depart from James Conant's otherwise highly instructive reading of Kant's relation to Leibniz on logical doctrines in his 'The Search for Logically Alien Thought'. Conant thinks that, in Kant's definition of logic, 'the reference here is not just, as Descartes would have it, to the necessary rules for *our* finite thought (as opposed to some other kind of thought, say God's infinite thought), but rather to the rules necessary for thought as such' (130).

<sup>87</sup> Adams, *Leibniz: Determinist, Theist, Idealist* (Oxford: Oxford, 1994), 184.

described as ‘eternal’ truths in a Kantian framework, or even in the end merit the label ‘truths’ at all, in a full-blooded sense of the term. Such questions about the ontology and temporality of the logical principles will prove to be of special interest, since Kant takes the universality and necessity of logical laws to be established independently of, and indeed in spite of, the fact that he thinks there can be no apriori proof *either* for God’s existence, *or* of the eternality (immortality) of our soul and its capacities.

But before we get started, however, I want to highlight a more general, and in some ways, more straightforward point on which Kant and Leibniz differ as to the nature of logic – namely, a difference in their relevant estimations of the *formality* of logic. This difference is intimately connected with the divergence that will be in focus in what follows, as I hope will become clear as we proceed.

We have already seen above (especially in **II**) that Kant uniformly rejects any straightforward inferences of ontological or metaphysical consequences from logical principles, or worse, the simple identification of logic with ontology, as many of his rationalist predecessors had done.<sup>88</sup> Leibniz himself, for instance, states quite openly in a letter from 1678 (most likely to Countess Elizabeth) that he has ‘recognized that the true metaphysics is *scarcely different* from the true logic’. And what is especially significant for our purposes is the reason Leibniz gives for

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<sup>88</sup> For a discussion of some examples of this identification in, e.g., Baumgarten and Wolff, see John MacFarlane’s ‘Frege, Kant, and the Logic of Logicism’, *Philosophical Review* 111 (2002). As I argue in **(II)**, I think that MacFarlane underestimates the radicality of Kant’s own conception of the ‘formality’ of logic.

such an identification: he writes that ‘metaphysics is natural theology, and the same God who is the source of all goods is also the principle of all knowledge’, because ‘the idea of God contains [renferme] within it absolute being, that is, what is simple in our thoughts, from which *everything that we think* draws its origin [origine]’ (G iv.292; my ital.).

This last commitment – the containment within God’s ‘idea’ of all of the material for thinking – has important consequences for the manner in which Leibniz characterizes what logic has to say about relations between ideas or concepts *as such* – whether of ‘complete’ individual concepts or ‘abstract’ concepts of ‘species’, but also whether of things existent or of mere ‘essences’ or ‘possibilities’, as he calls them in a letter to Antoine Arnauld of the same year (July 4/14, 1686). Leibniz’s criterion for a ‘possible’ concept is quite broad; as he says later in this same letter, anything counts as possible if one can form a true proposition from it (G ii.55).<sup>89</sup> Furthermore, Leibniz takes there to be certain truths which are ‘eternal’, and which ‘concern equally the possible and the existent’ (NE II.14.26; G v.140). Straightaway then, whatever ‘concepts’ are involved or contained in ‘eternal truths’ themselves are possible in this sense (since there are clearly true propositions involving them). So too are concepts which can function in substitution-instances of these eternal truths – instances

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<sup>89</sup> This raises delicate though interesting questions concerning what Leibniz can say about true propositions which state of a putative concept (‘round square’) that it is impossible, but let us bracket these for now. For some discussion, see Benson Mates, *The Philosophy of Leibniz*, 67-8; see also C 513; G iv.424; see as well, **IV §34**.

like ‘A perfect square is a square’, or any other judgments of the same form involving any other concept which ‘does not imply a contradiction’ (as Leibniz also notes in this letter).

Now, at this point, we might think that the only thing to which Leibniz is ‘existentially’ committed is something like a realm of possible concepts, and we have noted above (V, §43) that this is a quite weak sense of ‘existence’ indeed. What is striking, however, is that in this letter, as elsewhere – for example, in his 1697 ‘On the ultimate origination of things’ – Leibniz claims that these *possibilia* nevertheless also all ‘exist in a certain realm of ideas’ – a realm which he locates ‘in God himself’ (G vii.304-5; my ital.). And with this, Leibniz confers upon all *possibilia* the same sort of ‘existence’ that pertains to divine being itself.

But what is perhaps even more striking in this later piece (‘Origination’) is that Leibniz seems to argue *from* the eternity of the truth of the relations which can obtain even among what are otherwise mere *possibilia*, to the need for an ‘absolute or metaphysically necessary subject’ in which these truths can enjoy their ‘eternal’ being. In fact, Leibniz makes precisely such an argument in an early fragment from 1677 and again in his 1710 *Theodicy* and again in his 1714 *Monadology*. Let me give a brief reconstruction of this argument as it appears across these works. In *Theodicy* §184, Leibniz claims that ‘All reality must be founded on something existent [chose d’existent]’ (G vi.226). In *Monadology* §44, Leibniz draws the first part of the relevant inference, that ‘if there is reality in

essences or possibilities, or indeed, in eternal truths, this reality must be grounded in something Existent and Actual' (G vi.614). Of course, we would then need a further unstated premise for the conclusion to follow, but this would simply make explicit something else Leibniz clearly thinks to be true – namely, that there *is* something 'real' in the eternal truths, presumably because they are *truths*.

In general, as the *Nouveaux Essais* tells us, 'an idea is real...if it is possible, even when nothing existent corresponds to it' (II.30.1; G v.245). But in particular, ideas involved in *truths* are said to involve something real. Leibniz writes explicitly on this point in the early note from August 1677, where he sketches this sort of proof, emphasizing that, since the truth of eternal truths 'does not depend on our thought [a nostra cogitatione], there must be something real [aliquid reale] in it' (Ak. VI.4.7, 18).<sup>90</sup>

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<sup>90</sup> The note continues with the following summary: 'Briefly: the truth of necessary propositions is eternal. Truth is something whose reality is independent of our thought. The reality of something eternal certainly exists always. But then the truth of necessary propositions exists always. Therefore, a certain necessary Being exists' (ibid.). Leibniz gives a similar proof in his 1688(?) *Specimen inventorum de admirandis naturae Generalis arcanis*: 'If there were no eternal substance, there would be no eternal truths; and from this GOD too can be proved, who is the root of possibility [radix possibilitatis], for his mind [mens] is itself the region of ideas or truths [regio idearum sive veritatum]' (G vii.311). See also a letter to John Bernoulli, May 1699: 'the Divine essence is, so to speak, the region of eternal truths, so that it is through the existence of God that truths about non-existent possibles are made real, and they would otherwise lack a subject and support' (GM iii.586; from Adams, *Leibniz*, 177).

Now, Leibniz admits, in these sections (§184) of *Theodicy* that 'It is true that an atheist may be a geometrician', but insists that 'if there were no God, geometry would have no object', since 'without God, not only would there be nothing existent [rien d'existant], but there would be nothing possible' (G vi.226-7). In NE III.3.14, he likewise emphasizes the independence of *possibilia* from both our thinking and what is 'actually' in nature: 'man's combining [joignant] or not combining such and such ideas – or indeed their being or not being actually combined in nature – has no bearing on essences, genera, and species, since they depend only upon possibilities, and these are independent of our thought [pensée]' (G v.272).

Let us postpone for the moment the evaluation of this argument. It is enough for now to have highlighted its key moments: eternal truths like those of logic – to the extent that they are ‘true’, and to the extent that this truth does not depend on *our* thought – must have their truth grounded in something or other.<sup>91</sup> Leibniz takes this to imply that there must *be* something ‘actual’ or ‘existent’ that makes them true, and furthermore that this something must be ‘up to snuff’ (so to speak) if it is to *always* be there to make them true, since their truth is (after all) ‘eternal’.<sup>92</sup>

I mentioned Frege earlier, and readers might have noted the parallels between Leibniz’s argument here and those given by Frege for the ‘subject-independence’ and ‘timelessness’ of his ‘third realm’, and with it, of the ‘truths’ of

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<sup>91</sup> Adams (*Leibniz*) makes this point by claiming that there is ‘a thesis clearly presupposed, but not fully articulated, by Leibniz [in the *Monadology*, etc.] – that whatever is true (or possible), there must *be* something by virtue of which it is true (or possible)’ (178).

<sup>92</sup> Much of the preceding is summarized nicely in *Nouveaux Essais*, IV.11.14: ‘As for ‘eternal truths’, it must be understood that fundamentally they are all conditional; they say, in effect: given so and so, such and such is the case [telle chose posée, telle autre chose est]. [...] But it will be further asked in what is this connection grounded [fondée], since there is a reality in it which does not mislead. The reply is that it is grounded in the linking together [liaison] of ideas. It will be asked where these ideas would be if there were no mind, and what would then become of the real foundation [fondement reel] of this certainty of eternal truths. This question brings us at last to the ultimate [dernier] foundation of truth, namely to that Supreme and Universal Mind [Esprit] who cannot fail to exist and whose Understanding is indeed the domain [Region] of eternal truths. St Augustine knew this and expresses it pretty forcefully. And lest you should think that it is unnecessary to have recourse to this Mind, it should be borne in mind that these necessary truths contain [contiennent] the determining reason and regulating principle of existent things – the laws of the universe, in short. Therefore, since these necessary truths are prior to the existence of contingent beings, they must be grounded [fondée] in the existence of a necessary substance’ (G v.428-9).



logic,<sup>93</sup> though of course what might seem to be a significant difference has emerged – namely, that Leibniz takes this realm to be (in some sense) ‘in’ what he calls the ‘divine understanding’. (Here, though, it is worth mentioning Frege’s remark in his late essay ‘Der Gedanke’, that ‘the task [of logic] could perhaps be represented rather as the investigation of *the* mind [Geist]; of *the* mind, not of minds’ (*Kleine Schriften*, 359).) But even so, a question similar to one which plagued Frege can equally be pressed upon Leibniz himself at this point – concerning how it is so much as possible for *our* apparently non-eternal minds or understandings to ‘grasp’ these eternal entities – or in Leibniz’s case, to be able to

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<sup>93</sup> See, for example, the ‘Preface’ to his *Grundgesetze* I: a truth ‘remains true even if everyone should later hold it as false. If being true is independent from being recognized as true by anyone, then the laws of truth are not psychological laws, but boundary stones set in an eternal foundation, which our thought can overflow but not dislodge’ (xvi). Or again, his 1897 ‘Logic’: ‘People sometimes raise the question whether the laws of logic can change with time. The laws of truth, like all thoughts, are always true if they are true at all. Nor can they contain a condition which might be satisfied at certain times but not at others, because they are concerned with the truth of thoughts and if these are true, they are true timelessly’ (PW, 148). (In ‘Über Sinn und Bedeutung’ Frege argues that the objectivity (or even: ‘objecthood’) True and the False ‘are recognized, if only implicitly, by everybody who judges something to be true – and so even by a skeptic’ (35).) Though, to anticipate, see also his later 1918 essay, ‘Der Gedanke’, where Frege says that ‘thoughts’ are not in their essence ‘actual [wirklich]’, yet admits that they cannot be wholly ‘unactual’, since we can ‘grasp’ them.

A related argument for ‘idealities’ from the nature of truth is given by Edmund Husserl in the ‘Prolegomena’ §24 to his 1900-1 *Logische Untersuchungen*. ‘The truth itself is, however, raised above time: i.e., it makes no sense to attribute temporal being to it, nor to say that it arises or perishes. [...] Such absurdities are unavoidable if the fundamental distinction between ideal and real objects, and the corresponding distinction between ideal and real laws, is disregarded or misunderstood’; cf., §36: ‘What is true is absolutely, intrinsically true: truth is one and the same, whether men or non-men, angels or gods apprehend and judge it. Logical laws speak of truth in this ideal unity’; cf. §39 on ‘timelessness’ of truth, and the ‘timeless realm of ideas’.

peer into the mind of God himself.<sup>94</sup> For Leibniz clearly takes us to know at least some ‘eternal’ truths!

Leibniz is quite clear on his views on this front. He writes in III.4 of the *Nouveaux Essais* that it is the very same ideas that are in God which are *in us* as well, and ‘in us’ before we have any thoughts at all, and whether or not we actually ever think of them. In fact, as we can see from NE IV.5.2, despite whatever differences in the degree of the ‘perfection’ or ‘extension’ of the ideas we grasp, we nevertheless share an intellectual community with both God but also the angels.<sup>95</sup>

§54 As we move now to Kant, I want to begin with a point of agreement that helps bring out the value of putting Kant in a Leibnizian context. In the last section we touched upon the fact that, in knowing a logical truth, Leibniz takes me to know something that is ‘in’ me, and know something about the necessary structure of my own understanding – indeed, that is how I come to know these

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<sup>94</sup> In the 1897 ‘Logic’, Frege admits that ‘this process is perhaps the most mysterious of all’ (PW, 145).

<sup>95</sup> In this, then, I think we should agree with the spirit behind Donald Rutherford’s estimation that Leibniz ‘thus assumes that the human mind possesses ideas that correspond in both structure and content to the divine ideas that ground metaphysical possibility’ (*Leibniz and the Rational Order of Nature*, 75), even if, in a certain sense of the content of ideas (i.e., with regard to their ‘extension’), there are infinite ‘differences’. As Adams points out (*Leibniz*, 188), this is a modification of Malebranche’s doctrine that we see all things in God, such that, for Leibniz, they are *not only* in God. Gottfried Martin (*Leibniz: Logic and Metaphysics*, §20) adds to this Plato, Plotinus, and Augustine. For a reference to Augustine in this regard, see *Nouveaux Essais*, G v.429.

truths in the first place, through acts of reflection upon my own mind. As he writes in NE I.1.5, ‘it cannot be denied that the senses are inadequate to show their necessity, and that therefore the mind [esprit] has a disposition (as much active as passive) to draw [tirer] them from its own depths [de son fonds]’; hence ‘the fundamental proof [preuve originaire] of necessary truths comes from the understanding alone’, and ‘our mind...is the source of [necessary] truths’ (G v.76).<sup>96</sup>

In the first *Critique*, Kant too defines the understanding [Verstand] as ‘the capacity to bring forth representations by itself [das Vermögen, Vorstellungen selbst hervorzubringen]’ (B75). More specifically, as he says in the B-edition Preface, ‘the understanding’ is something ‘whose rule I have to presuppose in myself [in mir] before any object is given to me, hence apriori, which rule is expressed in concepts apriori’ (Bxvii). The ‘secure indications [Kennzeichen]’ of apriori cognition, Kant tells us in the B-Introduction, are quite close to those which Leibniz himself had identified: ‘necessity and strict universality’ (B4). And like Leibniz, Kant takes our access to such necessary and universal truths to

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<sup>96</sup> Cf., *Nouveaux Essais*, Preface: ‘Reflection is nothing but attention to what is within us, and the senses do not give us what we carry with us already. In view of this can it be denied that there is a great deal that is innate in our minds, since we are innate to ourselves, so to speak, and since we include Being, Unity, Substance, Duration, Change, Action, Perception, Pleasure, and hosts of other objects of our intellectual ideas?’ (G v.45). Leibniz thinks we need innate ideas to account for the possibility of knowledge of necessary truths, and discusses these ideas as things contained in the understanding itself; cf., NE I.1.18: ‘*the square is not a circle*...might be called innate, for in thinking it one makes a subsumption or application of the principle of contradiction to that which the understanding itself provides [fournit]’ (G v.79).

consist in the examination of our own capacities in reflection, rather than something we can acquire through ‘mere’ sense-experience. As he famously puts it in the B-introduction (and as we have already quoted above, cf., §45), ‘experience teaches us, to be sure, that something *is* constituted thus and so, but not that it *could not be otherwise*’ (B3; my ital.).<sup>97</sup>

Of course, for Leibniz, in logical investigation, the thinking subject also comes to know something about the *divine* understanding, and in fact comes to know the very same thing that God knows. To quote again from *Nouveaux Essais*, we ‘come to possess the truth which is in his understanding’ (NE IV.5.2; G v.377-8). Indeed, we have seen how Leibniz takes the very ‘reality’ of these truths to *prove* the existence of God, insofar as they depend on the being of God’s understanding – and precisely not on the ‘being’ of *my* own understanding.<sup>98</sup>

And it is precisely here, of course, that the crucial differences between Kant and Leibniz begin to emerge. First of all, Kant takes the necessary and universal ‘validity’ of logical laws to be something we can demonstrate *prior* to

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<sup>97</sup> Indeed it is a well-known component of Kant’s Copernican Revolution that, as was true of Thales of old, Kant holds that, ‘in order to know [wissen] something securely apriori’, we must recognize that we can ‘ascribe to the thing [der Sache beilegen] nothing except what followed necessarily from what [we ourselves] had put into it [in sie gelegt]’ (Bxii). As he states later in the same B-edition Preface, ‘in apriori cognition nothing can be ascribed [beigelegt] to the objects except what the thinking subject takes out of itself [aus sich selbst hernimmt]’ (Bxxiii).

<sup>98</sup> Gottfried Martin, *Leibniz: Logic and Metaphysics* (Manchester, 1964) writes in §20 (entitled, ‘Truth as Divine Thought’): ‘The objective reality of truth consists in every true proposition being constantly thought by God; this is how Leibniz completes his ontology of truth. Truth is divine thought’ (99). There is a question about whether the *truth* of the proposition consists in God’s thinking it, or simply the *being* or reality of the truth. For some discussion, see Adams, *Leibniz*, 191.

demonstrating the existence of God – indeed *despite* the fact that we are *unable* to demonstrate God's existence. (Logic on its own is 'a proven doctrine' (B78).) And not only does Kant take the necessity and universality of logical laws not to *entail* the existence of God, he refuses to take this to entail the existence of any other object, necessary or otherwise. As he puts it in the first *Kritik*, 'nobody can dare to judge [urteilen] of objects and to assert [behaupten] anything about them merely with logic, without having drawn on antecedently well-founded information [Kundigung] about them from outside of logic' (B85).

Now, in light of the Kantian dualism of the faculties, we can see why, first of all, Kant thinks we must answer a question of 'quid juris?' – that is, with what right do we assume that the logical principles of our understanding, and that which can be derived from them (i.e., the categories), with what right can these be legitimately applied to the deliverances of some other independent faculty (the senses)? Answering this question is, in short, the task of the dark and pregnant section of the first *Kritik* entitled 'The Transcendental Deduction', which we cannot hope to take up here. But the mere presence of the Deduction indicates the extent to which Kant does not automatically assume that logical principles *must* be valid of the field of individual, existent objects, since we have access to these only through an entirely separate faculty (sensibility). Kant floats the possibility of a scenario in which such accord would not obtain at the beginning

of §13 of the B-Deduction.<sup>99</sup> It is because of the need for a further story about the understanding's relation to objects that, as Kant puts it in the B-edition preface, logic is 'obliged to abstract...from all objects of cognition and all the distinctions between them', such that 'in logic, therefore, the understanding has to do with nothing further than itself and its own form' (Bix).

Here we can finally bring our focus directly to the second significant departure that Kant makes from Leibniz. For if logic tells us nothing about any *object*, but concerns merely the form of understanding, it is equally clear that for Kant logic does not intend to tell us something about *every possible understanding*. Our 'human' understanding is 'peculiar' in that, as he puts it in the *Prolegomena* (§46) and elsewhere,<sup>100</sup> it is a *discursive* one, one which requires that its material 'be first gone through, taken up, and combined in a certain way' (KrV §10, B102), if a cognition or objective perception is to be achieved, that is, if we are to be presented with a thought of an object. The principles which guide this combination or synthesis of the material are what Kant calls the 'categories' or 'pure concepts' of the understanding, and the awareness that results from this synthesis is what Kant calls 'apperception' – a term itself with decidedly

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<sup>99</sup> '[A]pppearances could after all be so constituted [beschaffen] that the understanding would not find them in accord with [gemäß] the conditions of its unity, and everything would then lie in such confusion that, e.g., in the succession of appearances nothing would offer [gäbe] itself that would furnish a rule of synthesis and thus correspond [entsprüche] to the concept of cause and effect, so that this concept would therefore be entirely empty [leer], nugatory [nichtig], and without significance [Bedeutung]' (§13, B123).

<sup>100</sup> 'The specific [spezifische] nature of our understanding consists in thinking everything discursively, i.e., through concepts, hence through mere predicates...' (*Prolegomena* §46, 4:333).

Leibnizian overtones (cf., ‘Preface’, *Nouveaux Essais*, G v.46; etc.). Kant famously claims in the first *Critique* that we can ‘trace back’ all actions of our understanding to judgments, so that ‘the understanding in general can be represented as a faculty for judging’ (B94). It is then unsurprising that Kant models the most basic form of this synthetic apperceptive unity on the categorical *judgment*-form: ‘S is P’. In fact, as we noted above, Kant takes the copula ‘is’ to indicate the presence of such synthesis (KrV §19; B141-2).<sup>101</sup>

Hence, by making the distinguishing feature of our understanding its discursivity, and by explicating this in terms of judgmental synthesis, and finally, by taking such synthesis to be ‘represented’ by the copula, Kant builds it into his characterization of the traditional logic that it deals with *our* ‘specific’ discursive form of understanding (at B169-70). But, as he puts it in §57 of the *Prolegomena*, Kant thinks it would be an ‘absurdity’ to take our understanding to be an ‘archetype for *every* possible understanding’ (4:350-1). Kant thinks that God’s understanding, for example, would not be discursive like ours, as we see from his lectures on religion.<sup>102</sup>

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<sup>101</sup> Cf., §19: ‘[T]he aim of the copula [Verhältnißwörtchen] is [...] to distinguish the objective unity of given representations from the subjective’ (B141-2). This also allows for the metaphysical deduction of the categories in §10, and which ensures a general parallelism between purely logical forms and the categories. Leibniz too takes the logical particles as ‘marks’ of the action of mind, and as clues to the forms of understanding; cf., NE III.7.3, III.7.6, III.9.10. For a similar claim in Locke’s *Essay*, see above, §45.

<sup>102</sup> ‘We sometimes ascribe an *understanding* [Verstand] to God. To what extent can we do this? [...] Our understanding cannot cognize things otherwise than through certain general marks [Merkmale]; but this is a limitation of the human understanding, and this cannot occur [statt finden] in God. Thus we think of a maximum understanding, that is, an intuiting [anschauende]

Kant insists that we leave open the possibility of a non-discursive intellect, even though he admits that we can have no determinate representation ('no concept', as he puts it in the lectures) of any of these other possible forms of understanding.<sup>103</sup> Yet his refusal to rule out these as possibilities – however 'bare' – entails that the subject-matter of Kant's logic is in some sense *restricted* to understandings like our own. As he writes in §21 of the first *Kritik*, the principles of synthesis displayed in logic would be of 'no significance' to a non-discursive understanding,<sup>104</sup> but are rules only for an understanding that 'thinks' (B145), one whose 'knowledge' requires 'a special act of synthesis' (KrV §17, B137-9). Since these acts would be unnecessary, and since logical forms and principles explicate precisely this synthetic activity of a discursive understanding, it follows that the information provided within logic can only be taken as information about understandings which are of the same sort as our own.

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understanding. This gives us no concept at all...' (*Pölitz Vorlesungen über die philosophische Religionslehre*, 28:996). Leibniz too takes God's understanding to be intuitive, but does not take this to affect the structure or form of that which God understands; it is 'common' across both intuitive and 'inferring' intellects.

<sup>103</sup> Leibniz, on the other hand, thinks we do have distinct ideas of 'higher' spirits; cf., NE IV.4.5.

<sup>104</sup> B145: '[I]f I wanted to think of an understanding that itself intuited (as, say, a divine understanding, which would not represent given objects, but through whose representation the objects would themselves at the same time be given, or produced), then the categories would have no significance at all with regard to such a cognition. They are only rules for an understanding whose entire capacity consists in thinking, i.e., in the action of bringing the synthesis of the manifold that is given to it in intuition from elsewhere to the unity of apperception, which therefore cognizes nothing at all by itself, but only combines and orders the material for cognition, the intuition, which must be given to it through the object'.



Now, because of the possibility of other forms of understandings – however problematic they may be for us to represent – and especially because of the possibility that God would enjoy one of these other forms, we also have to admit the possibility that *things in themselves* are not governed or constituted by the principles that govern our understanding. This is because, e.g., God’s understanding (if anyone’s) would surely know things as they are in themselves, but as we have seen, he would not know them by way of the synthesis that is constitutive of our thought.

In his famous February 21, 1772 letter to Marcus Herz, in which he announces various breakthroughs which will culminate a decade later in the first *Critique*, Kant actually discusses a view quite close to the one we have seen in Leibniz, one put forward by (the post-Cartesian French Philosopher) Nicholas Malebranche. The sentiment expressed in Kant’s estimation of this position is telling:

Plato assumed a previous intuition of divinity [Gottheit] as the primary source [Urquell] of the pure concepts of the understanding and of first principles. Malebranche believed in a still-continuing perennial intuition of this primary being [Urwesen]. [...] [this] has – besides its vicious circularity in drawing conclusions concerning our cognitions – also this additional disadvantage: it encourages all sorts of wild notions and every pious and speculative brainstorm [Hirngespinnst]. (10:131)<sup>105</sup>

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<sup>105</sup> In this letter we also get a reaffirmation of the possibility of alternative types of intellect: ‘the possibility [Möglichkeit] of both an *intellectus archetypus* (an intellect whose intuition is itself the ground of things) and an *intellectus ectypus*, an intellect which would derive [schöpft] the data for its logical procedure [logische Behandlung] from the sensible intuition of things, is at least comprehensible [verständlich]’ (10:130).

A few years earlier in his 1770 ‘Inaugural Dissertation’ (*De mundi*), Kant had also rejected Malebranche’s position that we ‘see all things in God [nos omnia intueri in Deo]’, in favor of what he calls there a more ‘modest’ point of view (§22, scholium): ‘it seems more advisable to keep close to the shore of the cognitions granted to us by the modest character of our understanding [per intellectus nostri mediocritatem], rather than put out into the deep sea of such mystical investigations as Malebranche did’ (2:410).

From this we can turn back to the question which emerged in our above discussion of Leibniz, the question of what confers necessity and universality on logical principles. For what does Kant take to function as the ground of their special status? If not in the things that we are trying to know, if not in some more perfect understanding that we are trying to mirror – then where?

In the end, Kant seems to place the ‘ground’ of the principles of logic in *our* understanding *alone*.<sup>106</sup> The only agreement that we achieve when we ‘agree’ with the laws of logic is an agreement of the understanding *with itself*, as we saw

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<sup>106</sup> Gottfried Martin, (*Leibniz: Logic and Metaphysics*) §21: for Kant, ‘all geometrical truths, which are interpreted as statements about space, can only exist from the human point of view. We can then say that the difference between Leibniz and Kant is that Leibniz regarded geometrical truths as divine thought, while Kant looked upon exactly the same truths as human thought. This change from a theological to anthropocentric view of truth is perhaps the fundamental distinction between the two philosophers; Martin conjectures that ‘[p]erhaps this accounts for the many changes of attitude which, according to his own account, Kant underwent during the composition of the *Critique of Pure Reason*’. Robert Adams (*Leibniz*) would presumably take Kant to be offering an ‘anthropological’ account on which ‘the truths of logic and mathematics are true in virtue of some feature of *human* thought, which might be ideas in our minds, our intentions regarding our use of language, or proofs we have actually constructed’ (178).

above (III, §§27-28; cf., *Jäsche Logik* §VII 9:51). But then what can seem to have emerged from all of this is that Kant introduces what might be called an ‘anthropological’ ontology of logic, following Kant’s repeated emphasis that it is our human [menschliche] understanding under analysis.

This, however, is misleading in several ways. First of all, it covers over the force of Kant’s criticisms of a ‘Cartesian’ mode of establishing the *real* ‘objectivity’ of our understanding (let alone its status as a persisting substratum for thinking), we might wonder whether ‘ontology’ is truly the correct label here. Secondly, in light of Kant’s willingness to entertain the possibility of other non-human, yet still discursive, forms of understanding, perhaps with other forms of sensibility (B42-3, B72), we cannot introduce any apriori restrictions to the ‘human’.

What we can note in conclusion is that Kant himself freely admits in the first *Kritik* that he is not intending to give a more radical account of ‘how our faculty of thinking is itself possible’ (Axvi-xvii).<sup>107</sup> Moreover, he famously floats

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<sup>107</sup> [One possible inquiry] deals with the pure understanding itself, concerning its possibility and the powers of cognition on which it itself rests; thus it considers it in a subjective relation, and although this exposition is of great importance in respect of my chief end, it does not belong essentially to it [i.e., to the Critique]; because the chief question always remains: ‘What and how much can understanding and reason cognize free of all experience?’ and *not*: ‘How is the faculty of thinking itself possible?’ (Axvi-xvii).

The strong sense that we are running up against ‘brute fact’ here – in the midst of a thorough-goingly *critical* project – is, of course, a feature of Kant’s views which has generated much debate, even in the immediate aftermath of the publication of the first *Kritik*. For some more recent discussions of this feature, see W.H. Walsh, *Kant’s Criticism of Metaphysics*: ‘I am inclined to think that, despite apparent evidence to the contrary, Kant does intend us to take the proposition that ours is a discursive intelligence as a *contingent empirical truth*, or rather as a philosophical conclusion from a whole series of such truths. [...] Unlike Wittgenstein, he is not content to leave everything as it is, if only because of his ambition to show that facts are not isolated, but often hang together in mutual support. But he is like Wittgenstein in believing that,

the possibility in the first *Kritik* that there may even be ‘a common but to us unknown root’ lying beneath our capacities for thinking and sensing (B29) – a remark seized upon first by the German Romantics and later Heidegger.<sup>108</sup> Yet Kant doesn’t take either of these admissions to impugn the apriori status of the findings of his critical analysis of these capacities.

Perhaps this confidence is due to the ‘modest’ or ‘humble’ nature of Kant’s overall target of explication, because Kant means to account only for the conditions of the possibility of human experience. Perhaps he thinks that reference to the principles of *our* understanding will be sufficient to account for certain universal and necessary features that he finds in our experience. In fact, as we can see from his remarks in the ‘Amphiboly’, Kant thinks he has shown that to demand more is to be ‘irrational’.<sup>109</sup>

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in the last resort, all a philosopher can do is say that the facts are thus and thus; he has no separate source of knowledge or independent insight of his own’ (§42, 253-4; my ital.). For a contrary interpretation, see A.C. Ewing’s *Short Commentary*: “Kant seems to hold that it is a *merely contingent fact* that we should have just these forms of judgment and no more, but it may be doubted whether he could have held this if he had envisaged what it meant. He certainly did not think of the Law of Excluded Middle as a *merely contingent fact*, yet the classification of judgments under the heading of Quality is based on it. Nor can I believe that he regarded it as a *merely contingent fact* that all judgments we can make are either universal or particular or singular and either problematic or assertoric or apodeictic. The classification seems based *necessarily* on the nature of judgment and not merely on the human mind’ (140; my ital.).

<sup>108</sup> On the problematic nature of this remark, and for an insightful criticism of Heidegger’s attempt to reconstruct Kant’s project around its basis, see in particular Dieter Henrich’s 1950 ‘On the Unity of Subjectivity’, reprinted in *The Unity of Reason* (Cambridge: Harvard, 1994).

<sup>109</sup> ‘If the complaints “That we have no insight into the inner [das Innere] in things’ are to mean that we do not understand [begreifen] through pure reason what the things that appear to us might be in themselves, then they are entirely improper and irrational [unvernünftig]; for they would have us be able to cognize things, thus intuit them, even without senses, consequently they would have it that we have a faculty of cognition [Erkenntnißvermögen] *entirely distinct from the human* [menschliche] not merely in degree but even in intuition and kind, and thus that we

Now, some will lament Kant's shift as tilting too far – perhaps irreparably so – towards what might now be called 'psychologism', despite Kant's own consistent rejection of the identification of logic with any at least empirical psychological investigation (see e.g., B78, etc.). These will stand, first, with Hegel,<sup>110</sup> and later with Frege – and after a run-in with Frege, with Husserl as well – who all criticize what they take to be the natural culmination of this train of thinking: an intellectually and even morally vicious relativism or skepticism.<sup>111</sup> Others, however might welcome Kant's 'de-theologization' of logic as a healthy attempt to face up to our finitude.

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ought to be, not humans, but beings that we cannot even say are possible, let alone how they are constituted [beschaffen]' (B333-4; my ital.).

<sup>110</sup> See e.g., Hegel's 1802 *Glauben und Wissen*: 'Kant has no other ground than simply experience and empirical psychology for the claim that the human capacity for cognition consists in its *essence* according to the way it *appears*' (*Werke*, II.325-6; my ital.).

<sup>111</sup> Both find a common target in 19th century Kantians like Benno Erdmann. In Frege's 1893 'Preface' to his *Grundgesetze* vol. I, Frege assesses the form of Kant's *Restrictionslehre* that he finds in Erdmann's work as follows: 'Accordingly, the possibility remains open [for Erdmann] of discovering humans or other beings who could make judgments that contradict our laws. What if this were to happen? [...] I would say: here we have a hitherto unknown kind of madness' (xvi). Similarly, in §40 of the 'Prolegomena' to his 1900-1 *Logische Untersuchungen*, Husserl writes of '[t]he possibility, therefore, that Erdmann has sought to establish, that other beings might have quite different logical principles', a possibility that Husserl thinks 'cannot be accepted'. He continues: 'An absurd possibility is an impossibility. One need only try to think out what his doctrine implies: that there might be peculiar beings, logical supermen, as it were, for whom our logical principles do not hold, but rather quite different principles, so that every truth for us is a falsehood for them. [...] We everyday logicians would say: such beings are mad, they talk of truth, yet destroy its laws, they say they have their own laws of thought, but they deny those on which the possibility of any such laws depends.'

Perhaps unsurprisingly, just like Frege, Husserl too tells us that his 'relation to [Leibniz] is relatively of the closest', in moreover is close to post-Kantians like Johann Friedrich Herbart only 'to the extent that Herbart, as against Kant, revived Leibnizian ideas' ('Prolegomena' §60). Strikingly, Husserl himself will later reject attempts like Leibniz's to ground the truth of certain principles via a 'doctrine of innate ideas' isomorphic to God's own ideas, as indulging in a form of 'theological psychologism' (cf., *Erste Philosophie*, I.§12), and develop his own form of 'transcendental philosophy'. But this too is a tale for another time.

In any case, we are here on the threshold of the ‘meta-critical’ problematic which would be so brilliantly and so relentlessly pursued by Kant’s successors. But this is another story altogether.

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