Metaphysics Renewed: Kant's Schematized Categories and the Possibility of Metaphysics

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ABSTRACT: This article considers the significance of Kant's schematized categories in the *Critique of Pure Reason* for contemporary metaphysics. I present Kant's understanding of the schematism and how it functions within his critique of the limits of pure reason. Then I argue that, although the true role of the schemata is a relatively late development in Kant's thought, it is nevertheless a core notion, and the central task of the first *Critique* can be sufficiently articulated in the language of the schematism. A surprising result of Kant's doctrine of the schematism is that a limited form of metaphysics is possible even within the parameters set out in the first *Critique*. To show this, I offer contrasting examples of legitimate and illegitimate forays into metaphysics in light of the condition of the schematized categories.

ALTHOUGH SCHOLARSHIP ON KANT has traditionally focused on Kant's Transcendental Deduction of the *a priori* categories, the significance and development of his schematized categories is attracting more recent attention.[1] Despite interpretive difficulties concerning the schemata and its place in the overall project of the *Critique of Pure Reason* (henceforth, *CPR*), it is becoming clear that Kant's schematized categories offer a key insight into the task of the Transcendental Doctrine of Elements and nicely connect these purposes with John Locke's emphasis on experience-grounded knowledge.[2] I want to echo the judgment that this curious and somewhat interpolated doctrine is valuable for grasping Kant's attempt at carving out a niche between doggedly empirical and rational considerations. In fact, only through this element of his thought can one appreciate the true force and scope (as well as the limitations) of his critique of transcendent metaphysics.

I begin by briefly identifying Kant's understanding of *a priori* categories, empirical concepts, and intuitions. Then I distinguish his schematized categories from the former types of representations and explain their role in the *CPR*. Finally, I argue that in light of the doctrine of schematized categories, the principles of the *CPR* are consistent with contemporary analytic approaches to metaphysics broadly construed.

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[1]Recent Kant scholars who stress the importance of the schemata are Henry Allison, *Kant's Transcendental Idealism* (New Haven CT: Yale Univ. Press, 2004); Moltke Gram, *The Transcendental Turn* (Miami FL: Univ. Press of Florida, 1985); Sarah L. Gibbons, *Kant's Theory of Imagination: Bridging Gaps in Judgment and Experience* (Oxford UK: Clarendon Press; New York NY: Oxford Univ. Press, 1994); Wayne Waxman, *Kant and the Empiricists: Understanding Understanding* (New York NY: Oxford Univ. Press, 2005); and Paul Guyer, *Kant and the Claims of Knowledge* (New York NY: Cambridge Univ. Press, 1987). A major historical figure who emphasized the role of the schema was Martin Heidegger in his *Kant and the Problem of Metaphysics* (Bloomington IN: Indiana Univ. Press, 1997), viz., pp. 62–88.

[2]Immanuel Kant, *Critique of Pure Reason*, trans. and ed. Paul Guyer and Allen W. Wood (New York NY: Cambridge Univ. Press, 1998).

To illustrate this point, I examine two relevant discussions in contemporary meta-physics in light of Kant's account, the first of which (arguably) ought to be deemed legitimate beyond the first *Critique*, but the second of which fails in principle to engender knowledge.

I

In the first part of this section, I introduce Kant's *a priori* categories for the sole purpose of establishing some relevant background for the ensuing discussion of the schematized categories in the second part of this section. Specifically, my discussion of *a priori* categories serves as a condition for recognizing the significance of the schematized categories as vital to the project of delineating the limits of knowledge. In light of this task, I do not assess the success or failure of Kant's Transcendental Deduction of *a priori* categories.

The *a priori* categories follow from the notion of judgment.[3] This is not surprising since the etymological origin of "category" is one and the same with what is designated by the English-language term "predicate." For example, in the *Categories* Aristotle understands a category as the most general type of predicate that can be truly said of any given subject.[4] Although Kant follows Aristotle in the task of identifying categories, he rejects Aristotle's own list of categories as methodologically unprincipled in its execution.[5] Whereas Aristotle "rounded them up and stumbled on them, and first got up a list of ten of them, which he called categories (predicaments)" (A81/B107), Kant claims that his own list of categories is "systematically generated from a common principle, namely, the faculty for judging (which is the same as the faculty for thinking)" (A80–81/B107).[6] So strong is the link between

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[3]In fact, some scholars hold a preeminent position for the forms of the judgment for understanding the deduction of the categories. For example, Béatrice Longuenesse says that: "Neither the argument of the Transcendental Deduction of the Categories, that is, the demonstration of the role of the pure concepts of the understanding in any representation of an object, nor the System of Principles of the Pure Understanding, can be understood unless they are related, down to the minutest details of their proofs, to the role that Kant assigns to the logical forms of our judgments, and to the manner in which he establishes the table of categories or pure concepts of the understanding according to the 'guiding thread' of these logical forms." Béatrice Longuenesse, *Kant and the Capacity to Judge*, trans. Charles T. Wolfe (Princeton NJ: Princeton Univ. Press, 1998), p. 5.

[4]Aristotle, *Categories*, trans. J. L. Ackrill, in *The Complete Works of Aristotle*, ed. Jonathan Barnes (Princeton NJ: Princeton Univ. Press, 1995).

[5]This claim by Kant, however, turns out to be not entirely fair. There was a long tradition beginning with Simplicius and continuing through the Middle Ages in which the sufficiency of the Aristotelian categories was assessed. For more on this, see Giorgio Pini, "Scotus on Deducing Aristotle's Categories" in *La tradition médiévale des Catégories (XIIe–Xve siécles): XIIIe Symposium européen de logique et de sémantique médiévals*, ed. J. Biard and I. Rosier (Louvain, Belgium: Peters, 2003); and Paul Symington, "Thomas Aquinas on Establishing the Identity of Aristotle's Categories" in *Medieval Commentaries on Aristotle's Categories*, ed. Lloyd Newton (Boston MA: Brill Academic Publishers, 2008).

[6]See Gilbert Ryle, "Categories" in *Collected Papers, Volume II: Collected Essays* (New York NY: Barnes and Noble, 1971). There Ryle offers an interesting distinction between Aristotle and Kant on the categories in relation to the forms of judgment. He says that Aristotle's way of getting the categories "is an 'alphabetic' theory of factors and a simple 'juxtaposition' theory of their combinations; Kant's is a 'syntactical' theory about the combinations of factors, and consequently a 'syntactical' theory about the types of those factors—or so I interpret his cryptic utterances about 'functions of unity,'" p. 178.

categories and the faculty for judging that he says that "categories are nothing other than . . . [the] functions for judging, insofar as the manifold of a given intuition is determined with regard to them. Thus the manifold in a given intuition also necessarily stands under categories" (B143).[7] From this connection, reflection on the faculty of judging can serve as an epistemological clue for systematically discovering the categories. Since a category is that which is given in experience as most necessary and universal, Kant looks to Aristotelian logic—which he calls "general logic"—in order to distinguish categories from each other. However, general logic comprises the boundaries of reason itself and as such is devoid of any content (A55/B79). Because of this, general logic cannot give the conditions of intuition and is rendered insufficient for providing the manifold in a given intuition that "necessarily stands under categories" (B143). Therefore, he posits a "transcendental logic" to span the distance between general logic and possible intuitive content. Although not empirical but *a priori*, transcendental logic is related to objects of experience in general by having a "manifold of sensibility that lies before it *a priori*, which the transcendental aesthetic has offered to it, in order to provide the pure concepts of the understanding with a matter" (A76–77/B102). In this way different classes of universal judgments ground the categories and determine, along with the aesthetic *a priori* conditions of time and space, the nature of intuitions and phenomena.

Kant fills out this view of *a priori* categories in his treatment of the Metaphysical and Transcendental Deductions.[8] Here he sets forth a working account of categories as "concepts of an object in general, by means of which its intuition is regarded as determined with regard to one of the logical functions for judgments" (A95/B128). Categories are described as containing in themselves some of the general conditions of any given object of knowledge or cognition.[9] Specifically,

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[7]In a footnote to his chapter entitled "The Transcendental Deduction of the Categories" in *The Cambridge Companion to Kant*, Paul Guyer states that the pure categories are "the semantic correlatives of the syntactical features of judgments." *The Cambridge Companion to Kant*, Paul Guyer (New York NY: Cambridge Univ. Press, 1992) p. 158n13.

[8]For the sake of clarity, I will set forth some preliminary definitions (or at least limiting indications) of some of Kant's basic working terminology relevant to understanding the meaning of the schematized categories. By the term "object" Kant means "that in the concept of which the manifold of a given intuition is united" (B137). Thus, an object is marked by a unity and identity of a variety of empirical features ("feature" having a most vague sense) that can be known. In his *A History of Philosophy: Volume VI, Wolff to Kant* (Mahwah NJ: Paulist Press, 1960), Frederick Copleston, S.J., suggests that the term "representation" is a rather useful vague term used to "cover a variety of cognitive states," p. 236. Finally, as described in the editor's introduction of *CPR*, Kant understands the term "intuition" to mean the "singular and immediate representations of particular objects by means of the senses," p. 34. That is, he holds an intuition to be "opposed to the concept, which is merely the mark of intuition" (A19/B33; a note inserted in Kant's own copy). It is noted that "intuition" and "object" are understood by referencing the other term. What this suggests is that a temporal understanding of a process by which first the intuition is had and then an object is constructed, is to be avoided in favor of an interpretation that seeks to isolate the various components of knowledge and experience as they are given in general. Beyond this, much can be—and has been—said about the intricacies involved in the definitions of each of these terms (not to mention the vicissitudes of interpretive translation from the German). However, at this point I wish only to give a working understanding of them in order to serve our main purpose of understanding the nature of the schematized categories.

[9]In his "The Language of Categories: From Aristotle to Ryle, Via Suárez and Kant," in *L'elaboration du vocabulaire philosophique au Moyen Age* (Turnhout, Belgium: Brepols, 2000), Jorge J. E. Gracia sug-

categories are what universally determine any specific intuition according to any judgment whatsoever (which implies that categories are, among other things, the most general logical conditions of all knowledge). Categories are the most universal and necessary components required for any cognition that may be an instance of knowledge. Categories perform their universal unifying function for cognition due to their origin in the concept of the understanding and are derived fully from the mind itself. Furthermore—and most importantly for the lesson to be learned from the first *Critique*—for any cognition established as knowledge, it is necessary for categories to be filled by empirical intuition; for without intuition, categories are completely blind (A51/B75). In this way, the categories "apply universally to all objects of possible cognition" (A79/B105).[10]

An *a priori* category is distinguished from an empirical concept. By "empirical concept" Kant means a "concept that includes a synthesis in it . . . [that is] borrowed from [experience]" (A220/B267).[11] On one hand, empirical concepts are indeed concepts in that they do not relate to an object directly (Kant refers to a concept as a "representation of a representation") and are not singular. On the other hand, as empirical, their content is "borrowed from experience." For example, with the empirical concept "dog," meaning is abstracted from a particular object and serves as the way through which various particular dogs are understood. Unlike the *a priori* concept "substance," which has its origin and source entirely from the understanding itself, the concept "dog" has its very content derived from experience and is closer to actual perceptions or empirical intuitions (or more specifically, a synthesis of sensible appearances). Despite this difference, it does not mean that empirical concepts are entirely independent from *a priori* categories. Obviously, "dog" is understood in filled empirical intuition as a substance throughout the duration of one's experience of it.[12]

With this in mind, we move to an analysis and discussion of the first chapter of the Analytic of Principles called "On the schematism of the pure concepts of the understanding" (A137–47/B176–87). I divide this short chapter into three

gests that Kant refers to the categories with terms such as "concepts of understanding (*Verstandesbegriffe*), representations (*Vorstellungen*), conditions of thought (*Bedingungen des Denkens*), modes of knowledge (*Verstande reine Erkenntnisse*), forms of thought (*Gedankenformen*), and functions (*Funktionen*) of judgments (*Urteile*)," p. 344.

[10]Amie Thomasson, "Categories" in *Stanford Encyclopedia of Philosophy*, http://plato.stanford.edu/entries/categories, last accessed June, 2009.

[11]The above definition of an empirical concept is constructed from a longer, more complex sentence from Kant that I now quote in its entirety: "A concept that includes a synthesis in it is to be held as empty, and does not relate to any object, if this synthesis does not belong to experience, either as borrowed from it, in which case it is an empirical concept, or as one on which, as *a priori* condition, experience in general (its form) rests, and then it is a pure concept, which nevertheless belongs to experience, since its object can be encountered only in the latter" (A220/B267). Also, the idea of an empirical concept is set off from an *a priori* one: a concept "is mediate, by means of a mark, which can be common to several things. A concept is either an empirical or a pure concept, and the pure concepts, insofar as it has its origin solely in the understanding (not in a pure image of sensibility) is called *notio*" (A320/B377).

[12]For this reason, as Gibbons explains in *Kant's Theory of Imagination*, "empirical concepts—in spite of the fact that they clearly possess a relation to sensible intuition—will also require schemata," p. 59. This means that empirical concepts, in order to be brought under the category of substance, require schematization.

sections.[13] The first discusses the need for and nature of the schematism in terms of the applicability criterion (A137–40/B176–79). The second discusses the schema of sensible concepts (A 140–42/B179–81). The third section discusses the schema of non-sensible concepts, or pure concepts of the understanding (A142–47/B181–87). In this chapter he further identifies the objectivity of the categories through an examination of how they are given in experience. At the level closest to experience, categories are available as schematized in sensible concepts. But at a level less evident and more formal to experience, there is made available to reflection a presentation of categories as schematized prior to the schema of sensible concepts. These are identified as schema of non-sensible concepts. I will treat each section in turn.

Kant first addresses a preliminary question: Is a schematism even required? In order to account for experience, is anything further required beyond the pure concepts of the understanding and sensible intuitions? Certainly Kant thought so.[14] He answers this question by identifying the incommensurability between empirical intuitions and *a priori* categories. Whereas empirical intuitions are able to be represented according to the manner of sensibility (sensible representation), *a priori* categories—as radically non-empirical—cannot in themselves be represented under such a form. In fact, Kant's problem follows from his emphasis on empirical and *a priori* concepts as having different sources. It seems that his argument for their separation is too strong. Thus, Kant's question becomes how it is even possible for an intuition to be brought under an *a priori* category, which logically underlies the very possibility of experience itself. Kant sees the resolution of this problem in the schemata.

However, critics claim either that only a limited number of concepts require schematism or that the schematism is not required at all.[15] They claim that Kant's appeal to something beyond the deduced categories, the synthesis of imagination and their relation to time (which are all discussed in the Deduction), shows that he is either admitting that his deduction fails or that the schematism chapter is redundant.

Regarding the question of whether the schematism section is an implicit admittance of failure, a compelling distinction in support of Kant's approach has been advanced in recent commentary on this problem. There are two relevant questions regarding the application of the categories: (1) *whether* the categories are connected to empirical intuition through imagination and time and (2) "*how* this concept is expressed in sensible terms."[16] Since (2) is not addressed in the section on the Deduction—but is taken up in the schematism section—and since it is a relevant

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[13]For a similar, yet different, break-down of the chapter see Guyer, *Kant and the Claims of Knowledge*, pp. 157–81.

[14]For defense of Kant's schematism doctrine, see Henry Allison, *Kant's Transcendental Idealism*, pp. 173–98; Gibbons, *Kant's Theory of Imagination*, pp. 53–78; and Guyer, *Kant and the Claims of Knowledge*, pp. 157–81.

[15]See n13 above.

[16]Allison, *Kant's Transcendental Idealism*, p. 175 (italics mine). This distinction is also made by Gibbons, *Kant's Theory of Imagination*, pp. 53, 54; and Eva Schaper, "Kant's Schematism Reconsidered," *Review of Metaphysics* 18 (1964–1965): 277.

question, the doctrine of the schematism is not a sign that Kant thinks that his Deduction is deficient.

Against the criticism that the schematism section is unnecessary or redundant, it is clear that Kant believes that the schematism doctrine serves an epistemological function for the *a priori* categories themselves. Despite much effort in establishing the *a priori* categories, Kant acknowledges that such an understanding of the categories is rather incomplete. In a passage that comes after his Metaphysical Deduction he admits that he has deliberately not provided definitions for *a priori* categories, although he "should like to be in possession of them" (A83/B108). However, by this admission Kant is not merely withholding from the reader a proper definition (or as he says, "real definition") of the *a priori* categories. Rather, he states further on in the Analytic of Principles (in which he discusses the general distinction of all objects into phenomena and noumena[17]) that although a conception of each *a priori* category can be made distinct from other concepts, no real definition can be given for "a single one of them" (A241). Although they can be made distinct from other concepts, no "clear mark" can be given for them to make distinct their "objective reality" (A241/B299). It seems that although he has already deduced the categories, Kant treats them vaguely here because he wants to identify the *a priori* categories precisely as unconditioned by experience, despite the fact that the latter is a necessary condition of knowledge. Further clarification of categories *is* possible, however, through an examination of them insofar as they are schematized—precisely because they provide the appropriate connection to empirical intuitions and hence the necessary condition for knowing of them. The schematized categories further supplement our understanding of *a priori* categories insofar as they are made conceptually distinct through our experience of them as they are given (obliquely) in intuition and as that which conditions the objects of our sensation. This is indicated in his promise that "in the sequel I will analyze these concepts [*viz.*, categories] to the degree that is sufficient" (A83/B106). They can be more clearly identified in our grasp of the unconditioned component of our actual experience. Schematized categories, as related to intuition, allow us to make sense of *a priori* categories by making them available for reflection and explication precisely as *a priori* components *of* experience. Whereas the categories follow from the principles of judgment, they are also, as Sarah Gibbons says, "products of the imagination . . . [which provide] the conditions for the recognition of *instances*."[18] Although in the Deduction Kant makes a sharp distinction between the principles of judgment and empirical intuition, the conditions for the recognition of instances provide a way of obtaining a better understanding of categories that are presupposed by such instances.

The fact that the schematism helps one to understand more fully *a priori* categories deflects the objection of H. A. Prichard. Prichard claims that the schematism signals a failure of the Transcendental Deduction to prove the objective validity of the categories.[19] For, although the objective validity of the categories is indicated

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[17]See esp. A235–60/B294–315.

[18]Gibbons, *Kant's Theory of Imagination*, p. 61.

[19]H. A. Prichard, *Kant's Theory of Knowledge* (Oxford UK: Clarendon Press, 1909), p. 246.

in the Deduction, their meaning requires further specification, specification that is provided through Kant's schematism. Instead of constituting "a new *deduction* of objectively valid principles for experience in which the supposition that the categories have already been identified and justified plays almost no role at all," as Paul Guyer claims, Kant is instead filling in our understanding of the already deduced categories. The problem of the necessity of the schemata for the applicability of the categories to empirical intuition will be addressed below after the doctrine as a whole has been presented.[20]

The vexing relation between categories and sensibility addressed in the schematism chapter can be couched in part by the (English) term "homogeneity": it would seem that in principle the *a priori* and the empirical cannot be made homogenous. Yet, Kant points out that we do in fact experience two such seeming non-homogeneous features in a single homogeneous intuition. To illustrate this point, he offers an example of a unified cognition of an empirical concept of a round plate (A137/B176). With such a cognition there are two seemingly different notions related in a single intuition: namely, the empirical concept of a (round) plate—of which we have a general notion since we have all experienced plates and can for the most part make accurate judgments as to which objects are plates—and the pure geometric concept of a circle—about which one can offer a strict definition and represent pictorially, etc. In fact, the only way in which we can think of a round plate is as a homogeneous (unified or fully integrated) intuition of the empirical concept of a plate subsumed under the pure geometric concept of a circle.

However, Kant does not intend this illustration to address completely the specific problem posed about the schematism of *a priori* concepts. This is because the empirical concept of a plate and the pure geometrical concept of a circle are not as entirely non-homogeneous as are empirical intuitions and *a priori* concepts; a "plate" and a "circle" are both closely related to their sensible representations, even if both cannot be represented fully as an image.[21] One can refer to images that are meant to represent the concepts "plate" and "circle" in appropriate contexts (such as, for the latter, in a geometrical discourse), yet one cannot represent the *a priori* category "substance" by appeal to some image in the same way. That is, the empirical concept "plate" can be seen to be homogenous with the pure concept of a geometric circle because both are directly related to intuition (in some common way). Kant says, therefore, that "plate" and "geometric circle" are in fact homogenous concepts. But this is not the case with non-empirical *a priori* categories and intuitions, since these are *per se* not connected with intuition at all; they "can never be encountered in any intuition" (A137/B176). In this case, there is incommensurability between the vagaries of empirical appearances and the universality, unity, comprehensibility, and stability of pure concepts of the understanding. Thus, Kant states that some third type of formal representation, which has both an intellectual and sensible status, is required to unify them.

[20]Both Warnock and Bennett question the need for the doctrine of the schemata to account for the applicability of the categories to empirical intuition. G. J. Warnock, "Concepts and Schematism," *Analysis* 8 (1949): 77–82; J. Bennett, *Kant's Analytic* (Cambridge UK: Cambridge Univ. Press, 1966), p. 146.

[21]In *Kant and the Claims of Knowledge*, Guyer points out that Kant holds that in this section Kant is showing "that there is an 'immediate' relation between pure and empirical concepts," p. 165.

Kant suggests that a key for determining this "third thing" is to reflect specifically on non-empirical representations that are nevertheless filled in intuition in order to identify some element that is synthetically (not analytically) found in each of these representations.[22] In other words, the key is to identify some further accompanying representation in our experience that has a quality similar to the pure concepts of the understanding that can possibly serve the role of facilitating homogeneity. Along these lines, Kant says that time is found always in such a synthesis of concepts of the understanding and identifies it as the third crucial representation that makes the transcendental schema possible. Since time is both universal and *a priori*, it is homogenous with categories. But time also is homogenous with appearances since every empirical intuition contains some relation to time.[23] Thus, it is time that connects disparate representations in experience. As a consequence, Kant states that "an application of the category to appearances becomes possible by means of the transcendental time-determination that, as the schema of the concept of the understanding, mediates the subsumption of the latter under the former" (A139/B178).

The way in which Kant describes the schematic relation of time to the categories and appearances is somewhat surprising, and yet through this description we can see why time's uniqueness allows it to play its mediating role between sensibility and *a priori* categoricity. He says that time is found *in* empirical intuitions while empirical intuitions are subsumed *under* categories. This brings to mind the characteristic of time as intrinsically a function of sensible experience while categories are a formal component. At the same time, it is also true to say that intuitions are subsumed *under* time—since the latter is homogenous with the pure concepts of the understanding—and that categories are *in* their objects—insofar as one may point to a rock and say that it is a substance. This is because time itself has its own formal identity and can be thought of as a kind of prior determination of experience in its own right. Thus, time shows itself to have characteristics of being both a "space" in which sensibility occurs, and a determination or form of sensibility. Thus, due to these unique characteristics of time, it fits the role of being the appropriate *a priori* conditioning of sensibility that provides unification of all cognitions at all levels of intelligibility (including categorial intelligibility of experience).

There is also another way of showing that the schematism of time is a necessary mediating representation between empirical representations and *a priori* concepts of the understanding. This is suggested by the fact that without time there can be no phenomena (categorized objects of intuition) at all. As discussed in the Transcendental Aesthetic, both appearances and their *a priori* conceptual determinations

[22]In Kant's own words, he indicates a synthesis "in the most general sense . . . [as] the action of putting different representations together with each other and comprehending their manifoldness in one cognition" (A77/B103). For a helpful discussion of Kant's notion of "synthesis" see Michael J. Young, "Function of Thought and the Synthesis of Intuitions," in *The Cambridge Companion to Kant*, pp. 101–22.

[23]For Kant, appearance is an ambiguous term. In his *A History of Philosophy: Wolff to Kant*, Copleston suggests two meanings for the term: "'appearance' should mean the content of a sense intuition when this content is considered as 'undetermined' or uncategorized, while 'phenomenon' should mean categorized objects. In point of fact, however, Kant often uses the term 'appearance' (*Erscheinung*) in both senses," pp. 236–37.

can only be expressed and made possible in time. Since categories can only have appropriate use and intelligibility in empirical intuitions, time "contain[s] the general condition under which alone the category can be applied to any object" (A140/B179). The transcendental condition of time is sufficiently general insofar as it is the formal condition for the manifold of all representations given in the inner sense (A37/B54). As a result, since any object of knowledge is given as an appearance in intuition, the form of every intuition is time, and time, insofar as it is the universal and necessary condition for all objects, is able to mediate categories with the objects of sensation.

But what about space? Should not space as the other necessary *a priori* condition of sensibility also be involved in the schematization of categories?[24] The answer to this question lies in distinguishing between the schematization of sensible concepts versus non-sensible *a priori* categories (the transcendental schemata). Such a distinction is based on Kant's focus on differing levels of representations, the transcendental schemata being at the more universal level of cognition. At the level of sensible concepts—which are closer to that of empirical intuition—the schemata of space and time are both required because they deal with outer-sense also. However, the transcendental schemata *per se* require only time for their schematization and are in themselves further from particular empirical intuition and deal specifically with the form of sensibility itself. So, it is true to say that some (but not all) concepts require space but all concepts require time for their schematization.

With this point in mind, Kant next moves to a discussion of what is involved in the schematism of sensible concepts (A140–42/B179–81). Although Kant does not mention the concerns of such thinkers as Locke, Berkeley, and Hume about the nature of abstract ideas, this debate certainly seems to be what Kant has in mind. Kant can be seen to throw his own epistemological consideration into the debate with his ideas on the schematization of concepts in space and time. What puzzles these empiricists is whether mental images are necessary and sufficient for sensible concepts. For Kant, the schemata of sensible concepts are both equated with sensible abstract concepts and, unlike Berkeley and Hume, are not equated with images (A140/B179). However, in a gesture of sympathy to Locke's empiricism, he holds that the imagination is the source of abstract ideas. The imagination, for Kant, is "the faculty for representing an object even without its presence in intuition . . . [and that] the imagination, on account of the subjective condition under which alone it can give a corresponding intuition to the concepts of the understanding, belongs to sensibility" (B151).[25] Thus, every abstract sensible concept is always identifiable in

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[24]Henry Allison, in *Kant's Transcendental Idealism*, makes the same point: "Even granting the intuitive nature of transcendental schemata, however, it is often wondered why Kant is preoccupied with time in the Schematism and appears to ignore space. Not only does space supposedly have coequal status as a form of sensibility; but since transcendental time-determinations concern the relations of appearances in (and to) time rather than the nature of time itself, they necessarily involve reference to spatial objects and/or properties. Indeed, Kant himself seems to confirm this in the General Note of the System of Principles added in the second edition, when he remarks that in order to establish the objective reality of the categories, we need not merely intuitions but outer intuitions (B291)," p. 217.

[25]For a more in-depth discussion of the theories of ideas held by Locke, Berkeley, and Hume in relation to the concerns of Kant, see Waxman, *Kant and the Empiricists*.

some particular intuition or image.[26] Kant gives the example of placing five points in a row and suggests that it may be hard to distinguish the notion of the number five from an image of the number five: "if I place five points in a row . . . , this is an image of the number five" (A140/B179).

The distance between schema and images becomes more apparent if one takes a further step back and thinks of the concept of a number in general. At this point, one realizes that the schema (or abstract concept) of number is not a particular image but rather "the representation of a method for representing a multitude (e.g., a thousand) in accordance with a certain concept than the image itself" (A140/B179). The phrasing of this sentence is interesting since Kant claims that a concept or judgment is a "representation of a representation" (A68/B93). One can see that Kant is making his original idea of "sensible concept" more explicit by referring to it as a representation of a representation and as the rule or method whereby an image may be identified or generated. Basic notions of particular geometric shapes and numbers are not reduced to mere images but instead express a schema or a set of rules. This schema or set of rules functions either to claim that an image represents a corresponding pure sensible concept or for generating a particular image that represents such a pure sensible concept. Thus, from a schema of a triangle one can generate any sort of triangle (scalene, isosceles, right, equilateral), whatever the size, and can identify that a representation of each type of triangle indeed represents the concept of a triangle. Thus, Kant agrees with the position of Locke that was so repugnant to Berkeley, *viz.*, that "a triangle . . . must be neither oblique nor rectangle, neither equilateral, equicrural, nor scalenon; but all and none of these at once."[27] The schema of a triangle is not just knowledge of the definition or general concept of a triangle but it is a homogenous representation that contains both the formal or general concept of a triangle and the determination of it according to the rules or predeterminations of space and time (not an actual determination of it).[28]

It can be seen, then, that space is a required element in the schematization of the *a priori* categories of sensible concepts of outer sense. Kant describes outer sense as that property of our mind by means of which "we represent to ourselves objects as outside us, and all as in space. In space their form, magnitude, and relation to one another is determined, or determinable" (A22/B37). Thus, the categories as constituents of various objects of outer sense cannot be given as such without being schematized by space. The figure of a triangle (as given through the category of quality) cannot be given at all unless the conditions of space have been determined by the category of quality. This schematization of a category through space allows

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[26]In *Kant's Theory of Imagination*, Sarah Gibbons puts it this way: "Schematism, then, specifies not (conceptual) rules, but the conditions for the recognition of *instances*; it does so by specifying the conditions under which the (spatio-temporal) *given* is 'in harmony' with the categories," p. 61.

[27]This passage by Locke is quoted and subjected to assault in George Berkeley, *Principles of Human Knowledge and Three Dialogues* (New York NY: Oxford Univ. Press, 1999), p. 14.

[28]To use slightly different language, in the words of Otfried Höffe, in *Immanuel Kant*, trans. Marshall Farrier (Albany NY: State Univ. of New York Press, 1994), sensible concepts "are rules which provide a manifold of given sense impressions with unity and determinacy. . . . A concept is nothing but the form of a material given by the senses, and what is given by the senses is nothing but the material of a determining form."

for the actual intuition of a geometric triangle. However, as we shall see below, time is the logically prior condition (even to space) in the possibility of any intuitive object to be given as it is subsumed under the categories.[29]

Next, at the heart of Kant's chapter on the schematism, is a treatment of the schematism of non-sensible concepts (*a priori* categories), referred to as the transcendental schemata (A142–47/B181–87). This section is central to his comprehensive account of the nature of experience in the third chapter of the Analytic of Principles (*viz.*, "System of all principles or pure understanding"). The main difference between the schematism of non-sensible pure concepts of the understanding and that of sensible concepts is that the former is logically prior for experience and understanding to the schematism of sensible concepts. In other words, the schematization of *a priori* categories allows for the possibility of sensible concepts. Furthermore, the transcendental schemata requires only time for their schematization, whereas sensible concepts require both time and space. Although there is an overall synthetic nature of empirical intuition and direct experience, *a priori* categories can be understood to be schematized at different levels—with sensible concepts given under the schemata of time and space (A146/B185).

That time is the fundamental schema that allows *a priori* categories to be brought to objects is asserted in his discussion of how time functions as the homogenous concept between an object of intuition and each *a priori* category. We shall examine only the categories of substance and causality, since these categories show most intuitively the way in which the *a priori* categories are made amenable to objects of sensation through the concept of time.

Substance is an *a priori* category that relates to categorical judgments or categorical syllogisms (Every S is P; Every P is Q; Therefore, every S is Q). This gives rise to the relation of inherence and substance (*substantia et accidens*) (A80/B106). However, given the grounding of this category in a purely logical form (abstracted from any content) the category in itself cannot relate to any sensible object or intuition without integration through the schema of time. Without time there can be no persistence of an object; with the unschematized category of substance there can only be the notion of possible cognition (A147/B187). However, when the *a priori* category of substance is unified with time, both alteration and persistence are admitted, and hence, the persistence and alteration of an object is made possible. Time can be understood as homogenous with the category of substance since it does not itself alter or change but rather objects change *in* it. Time is the mark of an object that is in one state and then successively altered. On the other hand, substance is that which is stable through time and in which properties inhere.

Before moving to causation, it is noted that from an analysis of the schematization of substance alone it is evident both that categories require time and space for

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[29]At this point there is a discrepancy between the interpretation that I am offering here and that of Paul Guyer in *Kant and the Claims of Knowledge*. Although he acknowledges a role that space has in the use of the schematism, he says that they do "not figure in the actual schematization of them," p. 168. I disagree with his interpretation in that the schemata precisely have the role of making the pure concepts of the understanding possible in intuition. Although time is more fundamental to this task, space—an *a priori* condition of sensibility—is seen to play a similar intermediary relationship as time does.

their schematism and that empirical concepts also require schematism.[30] This is evident from the following chain of reasoning: substance is a category; every category requires schematization; empirical concepts are (for example) experienced as substances; therefore, empirical concepts are schematized. Deviations from this view, I think, are a result of treating levels of representations present in a synthetic experience independently of each other. It is more helpful in interpreting Kant to begin with a given synthetic experience and then to identify the mediate components between the intuited category and the empirical intuition; for, sometimes a category is mediated by the intuition of time only, but in other cases, time and space mediate the category. This interpretation is supported by Kant's very attempt to find the principle of homogeneity for the synthetic nature of experiences.

Causality is an *a priori* category that is grounded in hypothetical judgments or hypothetical syllogisms (if P is true of S, then Q is true of S; P is true of S; therefore, Q is true of S). This gives rise to the relation of causality and dependence (cause and effect) (A80/B106). But like substance, causality is also grounded in a logical form with no empirical content. Time allows for causality to relate to objects in the following way: when an object is given, something follows it successively. This point is an indication of one's temporal experience of appearances of objects as they are determined by the necessary rule of causality. It provides the necessary relation between two objects according to an *a priori* time determination and reveals itself in the intuition of ordered object alteration or succession. It also should be noted that this does not commit Kant to a merely temporal succession account of causation. On his view, time also schematizes causation of temporally simultaneous objects insofar as time is that which makes succession possible. In this sense, even when two objects occur simultaneously in time, there is still a relation of succession between them when related through cause and effect.

It appears that the necessary and universal concepts of cause and substance order (or determine) time in such a way that it can in-turn order (or determine) the intuitions that occur in time. Kant gives us a definition of the transcendental schemata as "nothing but *a priori* time-determinations in accordance with rules, and these concern, according to the order of the categories, the time-series, the content of time, the order of time, and finally the sum total of time in regard to all possible objects" (A145/B184–85).[31]

For Kant, as noted above, "we cannot even define a single one of them [the categories] without descending to conditions of sensibility, thus to the form of the appearances, to which, as their sole objects, they must consequently be limited, since, if one removes this condition, all significance, i.e., relation to the object disappears,

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[30]This point of view is not uncontroversial. In *Kant and the Claims of Knowledge*, p. 167, Guyer claims that empirical concepts do not require schematism. However, I think that his claim is ambiguous. On one hand, I agree with the claim that empirical concepts as empirical concepts do not require a schematism, but on the other hand, I hold that they do not require schematism at that level because they are already the product of a prior schematism of categorial representations through time and space.

[31]Although beyond the scope of the paper, Kant also mentions that there is a schematization of both the categories and the transcendental ideas with both the transcendental logic and general logics. The transcendental ideas are schematized according to general "logic in the three formal species of syllogisms . . . [and] the categories find their logical schema in the four functions of all judgments" (A405–06/B432).

and one cannot grasp through an example what sort of thing is really intended by concepts of that sort" (A240–41). But through the schematized categories, the condition of sensibility is met and so, consequently, a fuller definition can be given to the categories (as schematized).[32] I have illustrated this by showing how substance and causality, although *a priori* and unconditioned by experience, are nevertheless given in experience. In virtue of the role of schematization, a category can be made distinct from other concepts and its objective reality can become known. Having offered Kant's view of the schemata, in the final section I will discuss some important and overlooked ramifications of Kant's doctrine, especially regarding the possibility of metaphysics.

II

Although not frequently acknowledged as such in the traditional scholarship on Kant, the schemata is one of the core notions in the first *Critique*. A fully developed notion of the schemata was a relatively late development in Kant's thinking, yet he acknowledged that the doctrine, and more specifically the chapter on the topic, is "one of the most important."[33] In this section, I frame the importance of the schemata within Kant's overall project in the *Critique of Pure Reason* as well as offer a general assessment of the possibility and parameters of metaphysics in light of this doctrine—the full ramifications for metaphysics that it appears Kant did not realize.

The importance of the schemata is revealed in our ability to state the central claim of the first *Critique* in terms of the schemata; namely, according to the notion of homogeneity between empirical intuition and concepts. A main tenet of the first *Critique* is that judgments beyond all possible experience in empirical intuition can in no way be established as knowledge. This can be couched in language made familiar by our present discussions: any judgment in which there is no possible homogeneity between a categorial designation and a possible intuition can in no way be established as knowledge. To illustrate this point, we might note that Kant's judgment "A human soul is immortal and immaterial" cannot be established as knowledge because the category of substance that is expressed by it can in no way be made homogenous with the notion of immateriality or immortality through the schemata of time or space (since the schemata requires an appearance in order to act as a homogenizing representation). Substance cannot be represented in time as that under which an "immaterial object" is subsumed since there is no possible way for that which is immaterial to be given in time or space.

But if such a reinterpretation of Kant's *Critique* is correct, there may be a possible opening to a kind of anti-realist metaphysics consistent with his professed principles.

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[32]This was also H. J. Paton's position, as expressed in his *Kant's Metaphysics of Experience* (New York NY: Humanities Press, 1970): "It is only as schematized that the categories can have a *real* definition, since it is only because of their relation to the synthesis of time and space that we can establish their necessary applicability to all objects of human experience. We may, if we will, maintain that the schematized categories are the only real categories; for it is by them alone that we have knowledge of the universal character of real objects," p. 304.

[33]Kant, *Critique of Pure Reason*, 728n51 (this is an editorial note, not one of Kant's own footnotes).

There can be a metaphysics that goes beyond a mere critique of knowledge and that can serve as an authentic, although limited, *a priori* science along the lines of the schematized categories. As mentioned above, Kant holds that sensible and abstract concepts are not equated with the actuality of an image. Rather, an abstract concept involves the delimiting rules of application that ascribe the possibility of identifying a whole range of images as related to a given sensible concept. This is shown most precisely with mathematical concepts (e.g., "triangle") but also with sensible concepts (e.g., "dog"). On the one hand, the schematized categories do not go beyond experience or intuition because they are identified with inner and outer sense, and on the other hand—insofar as they are homogenous with the *a priori* categories—they are not reduced to actual empirical objects or images of them. Thus an ontology of the schematized categories can be both interesting and consistent with Kant's overall thought (within the restriction of possible intuition).

In fact, Kant may betray his belief that such a metaphysical approach is both useful and possible in his own order of procedure. If we look at Kant's "Refutation of Idealism" (A226–35/B274–87), found near the end of the second chapter on the Transcendental Doctrine of the Power of Judgment, we see Kant using the notion of categories as filled in intuition to resolve the metaphysical position of idealism (either the problematic form of Descartes or the dogmatic form of Leibniz). He tackles the metaphysical position of idealism, while ignoring the question about whether such a discussion does not lead to either paralogistic problems or antimonies of reason (as with other metaphysical investigations). To put it concisely, the "Refutation of Idealism" is "a proof . . . that self-consciousness requires experience of an objective realm."[34] On my analysis, it is no coincidence that his solution to the long-standing modern metaphysical problem of idealism comes after his explication of the schematized categories and their principles. In fact, the doctrine of schematized categories is appealed to in his refutation of idealism and used in the very theorem that he sets out to prove. He says that "the mere, but *empirically determined, consciousness* of my own existence proves the existence of objects in space outside me" (A226/B275, my emphasis). It is not the consciousness of the *a priori* categories that allow the problem of idealism to be settled; rather, it is the awareness of consciousness as empirically determined through which the matter may be settled.[35] And as we have seen, consciousness can only be empirically determined through the schemata.

Although the subject of metaphysics as dealing purely with the *a priori* fully abstracted from experience (*pace* Wolff) is ruled out by Kant, there is still a form of metaphysics that nevertheless seems possible. This would be a metaphysics that is grounded not in an experience of actual intuitions but in *possible intuitions*. Thus, the subject matter of such an ontology would involve transcendental concepts (i.e., the schematized concepts) that have a possibility of being filled in intuition or

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[34]Bennett, *Kant's Analytic*, p. 51.

[35]"The determination of my existence in time is possible only by means of the existence [*existenz*] of actual things that I perceive outside myself. Now consciousness in time is necessarily combined with the consciousness of the possibility of this time-determination; i.e., the consciousness of my own existence is at the same time an immediate consciousness of the existence [*existenz*] of other things outside me" (A226/B276).

those that are consistent with the form of intuition in general. Such an anti-realist, yet objective, ontology would present arguments that do not go beyond possible experience and admit of both counter-examples and pro-examples that delineate possible experience, thereby evading Kant's criticism of a metaphysics that "is beyond the circle of experience . . . [and may not be] refuted through experience" (A4/B8). This approach is similar to that of contemporary analytic metaphysics in which thought experiments serve as pro-examples and counter-examples to meta-physical positions. Yet this does not mean that merely through the doctrine of the schematism all metaphysical discussions escape Kant's critique. Rather, the *Critique* still serves in principle to limit avenues of investigations to those that do not go beyond what is schematically possible (since they have as their guiding rubric only logical possibility).

This point has been missed by many contemporary metaphysicians. The stan-dard reading of Kant is that all metaphysical pursuits are illicit. That is, there is a dichotomy in understanding Kant such that if one accepts his critique, one must necessarily reject the possibility of metaphysics, and if one accepts metaphysics they must reject Kant's critique. This has often produced either a dismissive atti-tude toward Kant's critique of metaphysics, or claims that Kant's radical restriction placed upon metaphysics is unwarranted.[36] Perhaps contemporary metaphysicians would be more sanguine about Kant's position if they saw that Kant desired to re-strict the legitimate employment of the categories to *possible* objects in space and time. This would not be an unsuitable response given that it is regular practice in the field of metaphysics today to appeal to possible intuitions to settle or challenge metaphysical claims.[37]

In order to explain the way in which Kant's schemata may open metaphysics beyond a critique of knowledge, I offer two illustrations. The first serves to exem-plify a type a metaphysical content that may be licit on Kant's principles, and one that involves a discussion that would seemingly not be allowed in light of Kantian considerations.

Perhaps Kant's *Critique* can allow for an ontology of the unity and identity of objects. Objects are given in experience. By "object" Kant means "that in the concept of which the manifold of a given intuition is united" (B137). Objects are the most determinate subjects of experience and outer sense. Given the variety of ways in which objects are presented, it is possible to discern different criteria that fundamentally distinguish them. For example, an influential metaphysical thesis about objects is that they (1) have determinate identity conditions, and (2) they are determinately countable.[38] Now, (1) means that if x and y are objects it is the case that "x is identical to y" is either true or false. For example, given the objects named by "Phosphorus" and "Hesperous," it is either true or false that "Phosphorus is Hespe-

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[36]For example, for a fairly standard view of Kant in relationship to contemporary metaphysics, see E. J. Lowe, *The Possibility of Metaphysics* (New York NY: Oxford Univ. Press, 2004), p. 24.

[37]In order to see this, one only need look at the fairly recent growth of literature on the role of thought experiments in philosophy and natural science.

[38]This illustration is taken loosely from chapter three in E. J. Lowe's, *The Possibility of Metaphysics*, pp. 58–83.

rus," even if the truth value of this proposition is not known. But (2) is the property of objects that makes the question, "how many?" have a determinate answer. Now, at this point, we have metaphysical discussion; these properties of objects are not trivial—one is able to argue for or against these properties of objects—and yet are related to the possibility of experience. Objects, as Kant says, have unity and are understood as such in experience.

Further metaphysical distinctions that do not meet the criteria of objecthood can be made about that which is given in experience. And, most importantly, these can be shown not to be objects in light of counter-examples grounded either in experience or possible experience. For example, there are entities (for lack of a better term) that meet (2) but not (1). An example of this: the electrons that orbit a nucleus in a particular atom. Supposing that there is more than one electron orbiting a nucleus, it is the case that there is a determinate number of them (this corresponds to their atomic number), but nevertheless it is impossible to tell which electron is which—in fact, arguably, there is no fact of the matter regarding this.[39] That is, although there is a fact about how many electrons there are, at the same time, there are no determinate identity conditions for the electrons themselves. However, it is also possible that there are entities such that they meet criteria (1) but not (2), entities that are possibly intuited or given in experience. David Lewis's imagined "atomless gunk"—a completely homogeneous stuff that is extended in space and infinitely divisible into parts—has been used as a pro-example to support the possibility of entities that have determinate identity conditions but yet are uncountable.[40] Although this stuff would have determinate identity, there is no fact that corresponds to the question of how many there are. The question about how many parts of the atomless gunk there are cannot be meaningfully asked (because it is purely homogenous). It would seem that the reason for the latter is that it lacks a principle of individuation or its own proper unity, which is "a principle which tells us what is to count as *one* instance of a given kind."[41] This still can be used as a pro-example even though no such atomless gunk actually exists because according to Kant it need only be an object of possible experience. So, it seems that a metaphysical distinction can be made between entities that are objects and those that are non-objects (and, seemingly, a further distinction can be made within non-objects). And there is no reason to think that Kant's *CPR* could in principle diffuse such an investigation, precisely since the schematism allows knowledge of that which is possibly filled in empirical intuition, and yet are related to the experienced world. One gets the idea that questions like these can be settled, even though properly metaphysical in nature.

A metaphysical discussion that Kant would say results in a paralogism of reason, and is therefore not licit, involves influential views in the philosophy of time. J. M. E. McTaggart wrote an influential paper in which he distinguishes different ontological designations of time, famously distinguished as A-series and B-series.[42] The main difference between these two designations is that A series propositions are true or

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[39]Ibid., p. 62.
[40]Ibid., p. 72.
[41]Ibid.
[42]J. M. E. McTaggart, *The Nature of Existence*, vol. 2 (Cambridge UK: Cambridge Univ. Press, 1927).

false in relation to the time in which they are asserted. These often are expressed by terms such as "presently," "yesterday," "soon," and so on. B-series statements are true or false regardless of when they are uttered. McTaggart argues in favor of a B-series account of time because A-series statements are inherently contradictory. It is impossible for the same event to have a conjunction of the properties "past," "present," and "future." He concludes that the B-series account makes the most sense and time is not real.

Against this, tensed accounts stick to the assertion that change can be accounted for in terms of A-series expressions while rejecting McTaggart's claim that A-series expressions are contradictory. They do this by taking time as ontologically basic. They deny that a given event possesses all A-properties at once because the passage of time supplies the distinction required of an event such that a past event is not equated with a present event. For example, the notions of saying that *x* is *F* and *x* was *F* are radically different. Some have criticized McTaggart's position as not taking this seriously enough when claiming that event *x* both *is present* and *is future*. Event *x* *is present* and *was future* and so there is no contradiction if the tenses used in ordinary language are taken to be ontologically significant.

How does this debate fare concerning Kant's *CPR*, even in light of his doctrine of the schematism? Clearly, Kant would reject such a discussion as irreconcilable with the basic conditions for knowledge. What possible experience can be used to appeal to one or another view? What possible intuition could demonstrate that a past event is radically different from a present event? On the other hand, the argument that grounds McTaggart's original objection against the A-series view of time is dependent on a mere use of reason or logical argument independent of the possibility of a filled intuition. It does not seem to be the case that "time is real" can be substantiated by appeal to conditioned experience or even to possible experience. There are no possible pro- or counter-examples that could support or undermine either claim.

I have tried to show the importance of placing the schemata in a central interpretive position for understanding Kant's whole project in the *Critique of Pure Reason*. The schematism unifies Kant's empiricist sympathies and motivations with his defense of the transcendental *a priori* conditions of experience. The so-called "Absolutist" successors of Kantian philosophy focused on the *transcendental* to the exclusion of the empirical, neglecting the strong empiricism of Kant, and passed on a *transcendent* metaphysics to posterity, as witnessed in the central concerns of Fichte, Hegel and Schopenhauer. The schemata shows Kant not only as an important critic of the rationalist tradition (despite the subsequent development of absolute idealism from his own legacy) but, perhaps even more importantly, as an authentic successor and contributor to a Lockean empiricist vision.