Kant's Idealism: On the Character and Limits of Spatial Representation

Dissertation

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David Clark Heide, B.A.

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Dissertation Committee:

Lisa Shabel (Advisor)

Lisa Downing

Sukjae Lee

William Taschek

Abstract

I offer a new interpretation of Kant's argument for transcendental idealism according to which Kant rejects the metaphysical possibility that things in themselves are spatial (the so-called "neglected alternative") by arguing that all possible spaces are mere parts of the actual, subjective space given in *a priori* intuition. I claim that Kant establishes this by denying that it is possible to employ spatiotemporal predicates to conceive of any space that is wholly discrete from intuitive space. I argue that Kant develops a version of this argument as early as the *Inaugural Dissertation* and I go on to show how the doctrines he adduces in defending this argument help to resolve two longstanding criticisms of his critical philosophy. First, I argue that Kant can consistently uphold the intelligibility of noumenal causation because causal predicates are not subject to the representational limitations he upholds for spatiotemporal predicates. I close by arguing that Kant has available to him a considerably stronger argument against the possibility of non-Euclidean geometries than he is often taken to have and that this argument depends upon claims about the representational and referential capacity of spatial predicates that he defends in arguing for transcendental idealism.

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Vita

June 1999.....Tremper High School

June 2003.....B.A. Northwestern University

September 2003 to present.....Graduate Teaching Associate, Department of Philosophy, The Ohio State University

Fields of Study

Major Field: Philosophy

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Chapter 1: The Status of Transcendental Idealism

The last fifty or so years have been fruitful ones for interpreters of Kant in the English-speaking world. After a long period during which Kant's philosophy received little critical attention, since the middle of the twentieth century familiar Kantian topics have garnered renewed interest from philosophers equipped with the tools and perspective of Anglo-American analytic philosophy. Moreover, arguments long overlooked or forgotten in Kant's philosophy have been rediscovered, scrutinized and accorded their proper role in his system. The picture that has emerged is rich and compelling: it is a picture of a complex philosophical system developed from first principles and unified in its treatment of topics as apparently disparate as spatial cognition, atemporal causation, aesthetic judgment and moral duty. On this view, Kant is not as he has often been portrayed: he is neither a radical philosophical iconoclast nor the grand synthesizer of empiricism and rationalism. Rather, the view that emerges is of a philosopher with complex motives, who wrestled deeply with what he took to be the excesses of German rationalism while nevertheless remaining committed to many of its core principles, and who developed his philosophical positions incrementally rather than dramatically. This picture requires that Kant's interpreters take seriously his

earliest, pre-critical works and that they understand his mature project of transcendental idealism not as a standalone doctrine, but rather as an outgrowth and refinement of his earlier, less influential views.

All of this is to say: it is quite possible that Kant's system and its place in early modern philosophy have never been as well understood in the English-speaking world as they are today. Nevertheless, as Karl Ameriks has put it, "Kant scholarship has yet to have been overcome by consensus."[1] Though the general approach to Kant interpretation has been radically altered and improved over the last half-century, there remains considerable controversy over the structure and meaning of some of Kant's most central and famous arguments. For example, (limiting the scope just to issues that arise in the *Critique of Pure Reason*) still current are disputes over whether or not Kant's argument in the Transcendental Deduction has anti-skeptical aims, the specific structure of Kant's explicit anti-skeptical argument in the Refutation of Idealism and the role of transcendental idealism in that argument, Kant's theory of causation and freedom, Kant's conception of mathematical justification, and many more. And this list doesn't include a good deal of excellent recent work on the relation of Kant's critical philosophy to his pre-critical work and the German rationalist tradition more generally.[2]

The most visible and arguably most entrenched disagreement among Kant scholars has been over the meaning and justification of transcendental idealism. Kant gives several distinct arguments for the conclusion that space and time are

1 Ameriks (1992), 98.

2 I have in mind here recent work by Watkins (2005), Smit (2009) and Hogan (2009a), (2009b) and (2009c).

transcendentally ideal, but he presents the argument of the Transcendental Aesthetic as his primary argument for idealism; accordingly, interpreters of Kant's idealism must give a precise account of it. It is difficult to overestimate the importance of the doctrine of transcendental idealism for understanding Kant's philosophy in a systematic way and for appreciating the place of Kant's system in early modern philosophy more generally. Kant himself took transcendental idealism to be his most significant achievement, and he believed it to constitute a solution to (or dissolution of) a number of what he took to be serious problems with Leibnizian metaphysics. The lack of general consensus about the meaning of the doctrine and Kant's argument for it is particularly troubling because it threatens to confirm what Kant's severest critics have traditionally held: that transcendental idealism is not a consistent doctrine.[3]

It is Kant's transcendental idealism, the doctrines he adduces in the course of defending it, and the implications of those doctrines that are the central topics of the present work. A great many volumes have been written on this topic; I am accordingly aware that to say more about it is to run the risk of appearing to say what has already been said, or appearing to muddle an already crowded and confusing area of inquiry. Nevertheless, I believe that the questions I address here are significant enough, and the extant positions entrenched enough, that the topic is ripe for fresh treatment. Moreover, each extant position is committed to interpretive

3 This criticism has been developed in many specific versions. It is at least as old as Jacobi's charge, in a review of the *Critique* shortly after the publication of the first edition, that Kant's critical doctrine of the thing in itself is inconsistent. See Sassen (2000), p. 173. Contemporary interpreters who hold this position include Strawson (1966) and Guyer (1987). See below, pp. 37 – 9, for discussion of Guyer's central objection to Kant's transcendental idealism.

premises that its opponents cannot countenance; such *interpretive* disagreement reveals that something in our attempt to understand Kant's most important argument has gone awry. One of my primary aims in this work is to isolate these interpretive positions and to argue that the account that I endorse can retain what is right about each.

This dissertation proceeds in five steps. In the rest of this introductory chapter, I shall discuss in rather schematic fashion Kant's two major arguments for transcendental idealism and argue that it is the argument of the *Critique of Pure Reason* that requires a new accounting. I shall also set out what has historically been the most entrenched, and most threatening, objection to the argument for idealism in the *Critique*. This is the so-called "neglected alternative" objection, according to which, though Kant has indeed shown that space is a form of appearance, he has failed to show that it is *not also* a form of things in themselves. In setting this out, I discuss the objection as it was originally raised by Pistorius and in its more contemporary format by Paul Guyer. In the second chapter, I set out my own interpretation of the argument for idealism in the *Critique* and defend Kant against the neglected alternative objection. In the third chapter, I trace the origin of the argument – as I understand it – in Kant's *Inaugural Dissertation*, which is his final and major pre-critical work. In the fourth and fifth chapters I show how the principles Kant employs in his argument for idealism, when properly understood, provide Kant with a plausible defense against two classic objections to his position. First, I address Kant's repeated assertion of the intelligibility of noumenal causation. Commentators have often held that Kant is inconsistent in this assertion; I argue

that he is not, and I show that the intelligibility of noumenal causation rests in part upon an asymmetry between the forms of intuition and the forms of judgment that is motivated in large part by claims he adduces in arguing for idealism – claims I discuss in detail in Chapter 2. Second, in Chapter 5, I show that considerations Kant takes to bear on the ideality of space, and Kant's conception of geometry *as* a science of space, allow him a considerably stronger argument for the necessity of Euclidean geometry than he is often taken to have had. If this is right, then the development of non-Euclidean geometries in the 19th century does not by itself constitute a refutation of Kant's idealism.

1.1 Kant's Transcendental Idealism

Transcendental idealism is the doctrine that human experience is limited to the mere (spatiotemporal) appearance of an underlying supersensible (noumenal) reality, about which human subjects can know nothing. Kant took this doctrine to be a major advance in metaphysics – indeed, he took it to set once and for all the proper *boundaries* and *agenda* for all possible metaphysics – and he believed it to constitute the sole possible solution to a range of problems that emerge from the "dogmatic" Leibnizian metaphysical doctrines that dominated Germany during Kant's philosophical maturation. In this section, I aim to set the stage for the arguments I make in subsequent chapters by focusing (albeit briefly) on Kant's conception of synthetic *a priori* judgment – the notion in terms of which he most frequently characterizes and motivates his argument for transcendental idealism. I

shall also discuss the "regressive" argument of the *Prolegomena* and argue that it is problematic – so much so that in rendering transcendental idealism plausible a heavy burden is borne by Kant's argument for transcendental idealism in the *Critique*. I shall close this section by briefly outlining and discussing that argument.

1.1a Transcendental Idealism and Synthetic *a priori* Judgment

Kant holds that the doctrine of transcendental idealism gives the only possible answer to the question "how are synthetic judgments *a priori* possible?" [B 19][4] It is this question that Kant uses to frame the *Critique of Pure Reason* and Kant often couches his objections to his predecessors in terms of their failure to recognize the possibility of synthetic *a priori* judgment.[5] Accordingly, I shall briefly discuss what Kant has to say about synthetic *a priori* judgment as a way of introducing the topics that will occupy me in the rest of the present work.

Kant conceives of an exhaustive division among representations into intuitions and concepts, each of which is distinctive of a particular faculty: intuitions belong to sensibility and concepts belong to the understanding. Kant conceives of intuitions as affording the subject a perceptual relation to the objects of experience: intuitions arise in virtue of *affection* by an object. Concepts, by contrast, are possible

4 As is standard, I will cite passages from the *Critique of Pure Reason* according to their first edition and second edition page numbers: e.g., [A 35/B 62]. I will cite Kant's other writings according to their volume and page numbers in the Berlin Academy edition of Kant's works: e.g., [Ak. 11:341]. I have followed the Guyer and Wood translation of the *Critique of Pure Reason* and I have followed Gary Hatfield's translation of the *Prolegomena*. (Citations to the *Prolegomena* also include a page reference to the Hatfield translation.)The other translations I've used are noted in the Bibliography section at the end of the paper.

5 He explicitly says that Hume fails to see this possibility and that his account of causation suffers accordingly. See *Prolegomena* [Ak. 4:257-8, p. 7]. Kant also criticizes Leibniz frequently for holding that all truths are analytic. For representative passages, see the Amphiboly [A 268/B 324 – A 292/B 349]

independently of any causal relation to their potential objects. Accordingly, Kant takes sensibility to be a passive faculty of representation because it cannot generate representations independently of affection; the understanding is active insofar as it is possible to conceive of non-actual possibilities, in the absence of any perceptual experience that corresponds to the content of one's thought.[6]

Kant takes judgments to come in two varieties: analytic and synthetic. The components of judgments are, by Kant's lights, concepts, and all judgments are composed of (at least) two concepts: a subject concept and a predicate concept. An *analytic* judgment is one for which the predicate concept is "contained" in the subject concept. One concept is contained in another when it serves as a "mark" of the concept in which it is contained. For example, the concept human contains (at least) two marks, which are themselves concepts: rational and animal. By Kant's lights, then, the judgment "a human is an animal" is an analytic judgment: the predicate concept animal is contained in the subject concept human – it is part of its definition. Kant takes analytic judgments to be merely "clarificatory": such judgments merely clarify the meanings of the subject concepts. Analytic judgments do not, by Kant's lights, expand our knowledge because they do nothing more than make explicit what one *already represents* in grasping the subject concept. Kant holds that synthetic judgments, by contrast, are "ampliative."[7] In a synthetic judgment, one represents the subject concept by attributing to it a predicate that it

6 This distinction emerges most clearly in the B-Introduction [B 1 – B 6] but see also the opening of the Transcendental Aesthetic at [A 19/B 33].

7 Kant says that analytic judgments could be called "judgments of clarification" and synthetic judgments "judgments of amplification." [A 7/B 11]

does not already contain.[8] For example, the judgment "humans are gregarious" is a synthetic judgment: the concept gregarious is not contained in the concept human – it is not part of its definition – and thus to make the judgment is to determine a connection between the concepts that is *not already* determined merely by the subject concept alone.[9]

I turn now to Kant's conception of *apriority*. Kant takes *a priori* cognitions to be "independent of all experience and even of all impressions of the senses," and he holds that *a posteriori* cognition has its source in experience. [B 2] Before connecting Kant's conception of the *a priori* to his distinction between analytic and synthetic judgments, it is worth pointing out three ways in which Kant's definition of the *a priori* in terms of independence from experience might be misleading.

First, Kant does not mean to claim that *a priori* judgments may bear *no* relation to experience. Kant holds that some judgments involving concepts derived from experience – empirical concepts – are *a priori* judgments. For Kant, a judgment's *a priori* status is due primarily to the availability of an experience-independent *justification* for the connection between subject and predicate, and not

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8 Kant's clearest exposition of the analytic/synthetic distinction is as follows:

> In the analytic judgment I remain with the given concept in order to discern something about it. If it is an affirmative judgment, I only ascribe to this concept that which is already thought in it; if it is a negative judgment, I only exclude the opposite of this concept from it. In synthetic judgments, however, I am to go beyond the given concept in order to consider something entirely different from what is thought in it as in a relation to it, a relation which is therefore never one of either identity, or contradiction, and one where neither the truth nor the error of this judgment can been seen in the judgment itself. [A 154-5/B 193-4]

9 By Kant's lights, a judgment of the form "A is B" is an analytic judgment when the analysis of A reveals that B is already contained in it. So, e.g., if A is properly analyzed as BC, then the judgment "A is B" is logically equivalent to the judgment "BC is B." Synthetic judgments contain concepts that do not provide for such an analysis.

to the origin of the concepts involved. Kant holds that some relations among the components of empirical concepts can be determined entirely *a priori* even in spite of the concept's origin in experience.[10] Thus, the conception of *apriority* associated with Kant's question about the possibility of synthetic *a priori* judgments crucially involves the notion of *justificatory* independence from experience.

Second, Kant confers *a priori* status not merely upon judgments, but also upon individual representations (both concepts and intuitions), bodies of knowledge, and faculties of representation. In at least some of these cases, Kant appears to be employing a different conception of the *a priori* – indeed, it sometimes seems to refer to the origin of the state or faculty in question. Whether Kant's notion of "independence from experience" is ambiguous, or whether his conception of *apriority* involves several closely related notions, are interesting questions, but I won't immediately pursue them here. At least with respect to judgment, the notion of "independence from experience" that Kant has in mind seems quite clearly to be justificatory in nature.[11]

Third, some recent commentators have doubted whether "independence from experience" – either justificatory independence or some other, related notion – is Kant's core notion of *apriority*.[12] On their view, Kant primarily uses "*a priori*" in the scholastic – and the Leibnizian – sense according to which to know something *a priori* is to know it through its metaphysically sufficient determining ground. On this

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10 See *Prolegomena* Ak. 4:267, p. 17. Kant writes: "analytic judgments are still *a priori* judgments even if their concepts are empirical."

11 See Kitcher (2006) for a useful and wide-ranging discussion of the senses in which Kant uses "*a priori*."

12 See Smit (2009) and Hogan (2009a), (2009b) for discussion of this new approach.

view, to know some proposition *a priori* is to know the metaphysically sufficient reason why the proposition obtains (i.e., the metaphysical ground of the state of affairs in question). At least some who hold this view claim that the more familiar notion of the *a priori*, according to which it refers to justificatory independence from experience, is entailed by this more basic, metaphysical conception.[13] Whether the more familiar notion is indeed entailed by this conception of *a priori* knowledge as knowledge through the determining ground is a crucial question, for Kant's explicit discussions of *a priori* knowledge heavily favor the justificatory notion. Though we will have occasion to discuss again this older sense of *a priori* knowledge,[14] I shall for the most part hew to Kant's explicit pronouncements on the matter in the *Critique* and discuss *a priori* knowledge in terms of justificatory independence from experience.

In light of these preliminary explications of the relevant notions, it is clear that analytic judgments are *a priori* judgments: since an analytic judgment merely clarifies what is already represented in the subject concept, no justificatory resources are required beyond mere grasp of the concepts in question. Synthetic judgments, by contrast, are most naturally conceived as *a posteriori*: synthetic judgments require a new connection between subject and predicate. Since the justification for such a connection cannot be had merely in virtue of grasping the concepts (by hypothesis, the connection is not a matter of the meanings of the concepts), such justification would appear to require an appeal to experience – and

13 See Smit (2009), p. 219 – 29.
14 See below, Chapter 1, pp. 58 – 60.

hence to involve justification by appeal to non-conceptual representation, i.e., intuition.[15] So, for example, the judgment that humans are gregarious is a synthetic judgment because the predicate gregariousness is not contained in the concept human and it is also an *a posteriori* judgment because the justification for attributing gregariousness to human requires experiences of humans as gregarious, which in turn requires intuition.[16]

Let's return now to the question with which Kant frames the entire project of the *Critique*: "how are synthetic judgments *a priori* possible?" The preceding discussion has helped to clarify the question's component notions. We can say with some clarity now what a synthetic *a priori* judgment would be: it is a judgment that asserts a non-conceptual connection between a subject and predicate concept, and that is justifiable entirely independently of any appeal to experience. One might understandably wonder whether such judgments are possible, for it would appear that synthetic judgments require justification by appeal to intuition, and it would appear that intuitions, conceived as involving a perceptual connection to experience, must all be *a posteriori*. Thus, it would appear natural to suppose that synthetic judgments are one and all *a posteriori* and *a priori* judgments are one and all analytic.[17]

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15 This argument requires the suppressed premise that the only possible sources of justification are conceptual relations and experience. This, of course, corresponds to Kant's division of representations into concepts and intuitions.

16 Note that Kant does not mean to deny that one can *think* that humans are gregarious independently of any experiences. But Kant conceives of a judgment as cognitively weightier than mere thought: it carries with it an implication of justificatory good standing.

17 Here, in setting out in rough fashion the role of transcendental idealism in Kant's philosophy, I follow the argument he presents for transcendental idealism in the *Prolegomena* and in the Introduction to the *Critique*, which begins from a premise concerning synthetic *a priori*

Kant denies this, and it is in his denial that the doctrine of transcendental idealism emerges. Kant holds that synthetic judgments are possible *a priori* in virtue of the possibility of *pure intuition*. Kant claims that the representations of space and time are *a priori* intuitions. Kant's arguments for the *apriority* and intuitivity of the representations of space and time are well-known and are the subject of some controversy. We shall have occasion to examine them in more detail in Chapter 2. Appeal to pure intuition renders possible synthetic *a priori* judgment: judgments that draw a nonconceptual connection between subject and predicate *a priori* are possible in virtue of the availability of appeal to *a priori* and nonconceptual representation. Crucially, Kant sees this account of the possibility of synthetic *a priori* judgment as requiring transcendental idealism. Kant holds that the fundamental *apriority* and intuitivity of the representations of space and time entail that space and time are not features of subject-independent reality, but rather are mere *forms of intuition*. Kant conceives the "forms of intuition" at least as subjectively contributed and ineliminable conditions of all experience: human experience has a necessary spatiotemporal form, a fact that is guaranteed by the fact of *a priori* intuition. Accordingly, the *a priori* intuitions of space and time reveal nothing about the nature of reality, but rather only facts about the form of possible human experiences. Because the objects of experience are spatiotemporal, and because space and time are mere subjective forms of intuition, the objects of

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judgment. This is surely the most accessible presentation of transcendental idealism, but as we shall see in the following subsection, the argument is problematic. Kant does not assume the possibility of synthetic *a priori* judgment in his argument in the *Critique* – rather, he argues *for* its possibility on the basis of considerations about spatial representation –and, as I shall argue, this renders it initially less problematic than the argument of the *Prolegomena*. For criticism of the argument of the *Prolegomena*, see below pp. 13 – 27.

experience are *appearances* of the underlying, but supersensible, *things in themselves*, which Kant claims are not spatiotemporal.

Thus, Kant's most explicit characterization of the role of transcendental idealism in his philosophy is that the doctrine is required in order to account for the possibility of synthetic *a priori* judgment. This is, so far, only the roughest sketch of the role of transcendental idealism in Kant's philosophy. In order better see why Kant frames his theoretical philosophy in terms of the possibility of synthetic *a priori* judgment, and precisely how transcendental idealism provides for that possibility, it is worth discussing why Kant demands that systematic philosophy allow for the possibility of synthetic *a priori* judgment in the first place. Whether this demand is reflective of a non-question-begging criticism of the methods of his opponents and predecessors, or, conversely, is reflective merely of a unique and unargued conception of knowledge and the nature of systematic inquiry is an important question and one that I will address below. I turn now to Kant's explicit arguments for transcendental idealism.

1.1b Kant's Regressive Argument for Transcendental Idealism

Kant offers at least three explicit arguments for transcendental idealism. Perhaps the most prominent of them is the regressive argument of the *Prolegomena*. Kant provides two separate arguments for transcendental idealism in the *Critique*: one in the Transcendental Aesthetic and one on the basis of the antinomies of pure

reason, in the Transcendental Dialectic.[18] Kant presents the argument of the Transcendental Aesthetic as perhaps the central argument of the *Critique*: he opens the book with it. A good deal of what I aim to do in the present work is to offer a viable interpretation of the argument of the Transcendental Aesthetic. That argument is in need of plausible defense for at least two reasons. First, extant interpretations remain problematic. I shall discuss those in Chapter 2.[19] Second, the more accessible argument of the *Prolegomena* has long been taken to fail, and dramatically so. If this is indeed right, then the argument of the Transcendental Aesthetic must bear the central burden in Kant's program. It is worth understanding the argument of the *Prolegomena*, then, if only to stress the importance of properly interpreting the arguments of the *Critique*.

The argument for transcendental idealism in the *Prolegomena* is, properly speaking, a "transcendental" or "regressive" argument; Kant says he is arguing according to the "analytic" method. Analytic, or regressive, arguments have a characteristic structure: a particular body of knowledge is assumed to have a certain status and the argument proceeds to identify and affirm the conditions of the possibility of the body of knowledge having the status in question. In the *Prolegomena*, Kant declares that the principles of mathematics and natural science are synthetic *a priori* judgments and proceeds to identify the conditions of the possibility of these principles having this status. Kant argues that such synthetic *a*

18 The argument of the Antinomies is an indirect argument for transcendental idealism: Kant infers idealism from the fact that one can derive a contradiction on the assumption of realism. The argument of the Antinomies will largely not concern me here, not least because Kant presents it as secondary to the argument in the Transcendental Aesthetic. See Ameriks (2003), Introduction, for a clear discussion of the argument for idealism in the Antinomies.

19 See pp. 55 – 60.

priori judgments are possible only if human subjects have pure intuitions of space and time, which in turn is possible only insofar as space and time are mere subject-dependent forms of intuition and spatiotemporal objects are mere appearances. Thus, Kant identifies transcendental idealism as a condition of the possibility of the synthetic *a priori* status of the principles of mathematics and natural science.[20]

This argument is open to two serious potential lines of objection. First, the argument appears to assume the necessity of Euclidean geometry insofar as it supposes that the judgments of 18th-century Euclidean geometry are synthetic *a priori*, and thus necessary. The second objection is that the argument itself begs the question: Kant merely *asserts* the synthetic *a priori* status of the principles of mathematics and the natural sciences. But many of Kant's philosophical opponents would have denied that synthetic *a priori* judgments are even *possible*. The first objection has a distinguished history.[21] In Chapter 5, I consider whether Kant has at his disposal a plausible argument for the necessity of Euclidean geometry; I shall accordingly postpone further discussion of the objection until then.[22] Insofar as Kant *does* merely assume that there are synthetic *a priori* judgments, the second criticism is apt: the flat assumption of a claim his opponents deem false appears to render the argument question-begging. And in the *Prolegomena*, Kant appears to do precisely

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20 This argument occurs in the *Prolegomena*, Ak. 4:280 – 294, pp. 32 – 45.

21 See, e.g., Russell (1996), 456-61. Russell includes here a number of objections against Kant's philosophy of mathematics, one of which is the criticism that Kant evidently held that Euclidean geometry was necessary *because* he took pure intuition to be describable by Euclidean theorems and he took pure intuition to be essential to mathematical reasoning.

22 Properly speaking, this objection is often taken to work against *both* the regressive argument of the P*rolegomena* – which we are examining now – *and* the synthetic argument of the *Critique* – which we shall examine in the next chapter. I shall argue, however, that Kant does not appeal to the necessary status of Euclidean geometry *as a premise* in his argument for idealism in the *Critique*.

that. Nevertheless, it is worth asking whether Kant elsewhere adduces any considerations that support the notion that the judgments of mathematics and natural science are indeed synthetic *a priori*. And it is worth asking whether *these* considerations are ultimately successful, or whether they rely on assumptions that themselves are question-begging.

Kant's most visible discussion of the importance of synthetic *a priori* judgment comes in the Introduction to the *Critique*. There, Kant simply asserts that the foundational principles of mathematics and natural science are synthetic *a priori* judgments. If Kant is right, then his demand that theoretical philosophy allow for the possibility of synthetic *a priori* judgment is straightforwardly grounded in the *fact* of synthetic *a priori* principles that govern the sciences; the demand accordingly seems quite reasonable. Of course, Kant took himself to be the first to have understood that the foundational principles of mathematics and natural science have a synthetic status. (He takes them to be uncontroversially *a priori*.) Accordingly, Kant must provide an argument to the effect that the judgments in question are in fact synthetic.

Any argument for the possibility of synthetic *a priori* judgment is undeniably controversial, given Kant's philosophical context. Leibniz endorsed a conceptual containment theory of truth according to which all true propositions are true in virtue of the containment of the predicate concept in the subject concept.[23]

23 This is not technically accurate. Propositions of the form "A is B" are true, by Leibniz's lights, because B is contained in A (i.e., A is properly analyzed as containing B). Propositions of the form "C is not D" are true because a proper analysis of C reveals that it contains the opposite or negation of D in it. See Leibniz, *On Freedom*, Ariew and Garber (1989), 95.

Accordingly, all propositions known to be true are so known on the basis of conceptual analysis. Leibniz, then, denies the possibility of *synthetic truth* altogether.

Kant's central argument for the syntheticity of mathematics is an argument by elimination: he argues that such judgments are not analytic and therefore are synthetic.[24] Kant's attempts to demonstrate that such judgments are not analytic in two distinct ways. The first strategy is simply to assert that they are not analytic:

> To be sure, one might initially think that the proposition "7 + 5 = 12" is a merely analytic proposition that follows from the concept of a sum of seven and five in accordance with the principle of contradiction. Yet if one considers it more closely, one finds that the concept of the sum of 7 and 5 contains nothing more than the unification of both numbers in a single one, through which it is not at all thought what this single number is which comprehends the two of them. The concept of twelve is by no means already thought merely by my thinking of that unification of seven and five, and no matter how long I analyze my concept of such a possible sum I will still not find twelve in it. [B 15]

Notably, this argument for the syntheticity of mathematics[25] is not much of an *argument*: it amounts to little more than a denial of its analyticity and it surely would remain unsatisfactory to any philosopher with an argument for its analyticity

24 This argument includes the implicit premise that judgments are exhaustively classified as either analytic or synthetic.

25 Of course, Kant can help himself to the claim that *some* of the principles upon which geometers rely in proofs of geometric theorems are analytic: certain identities and definitions play a role in demonstrating geometric theorems. However, Kant writes: "To be sure, a few principles that the geometers presuppose are actually analytic and rest on the principle of contradiction; but they also only serve, as identical propositions, for the chain of method and not as principles...." [B 16] Thus, Kant appears to deny that such identities are properly *mathematical* truths; rather, they are logical principles employed by the geometer as a means of adducing the required inferences.

– and, indeed, against any conception of truth according to which all truth is analytic.[26]

Kant's second strategy for arguing for the syntheticity of mathematics is a slight improvement: he argues that mathematical justification and proof require an appeal to non-conceptual resources. He writes:

> Give a philosopher the concept of a triangle, and let him try to find out in his way how the sum of its angles might be related to a right angle. He has nothing but the concept of a figure enclosed by three straight lines, and in it the concept of equally many angles. Now he may reflect on this concept as long as he wants, yet he will never produce anything new. He can analyze and make distinct the concept of a straight line, or of an angle, or of the number three, but he will not come upon any other properties that do not already lie in these concepts. But now let the geometer take up this question. He begins at once to construct a triangle. Since he knows that two right angle together are exactly equal to all of the adjacent angles that can be drawn at one point on a straight line, he extends one side of his triangle, and obtains two adjacent angles that together are equal to two right ones. Now he divides the external one of these angles by drawing a line parallel to the opposite side of the triangle, and sees that here there arises an external adjacent angle which is equal to an internal one, etc. In such a way, through a chain of inferences that is always guided by intuition, he arrives at a fully illuminating and at the same time general solution of the question. [A 716-7/B 744-5]

And in a further discussion of the proposition "7+5 = 12," Kant makes a similar point:

> One must go beyond [the] concepts, seeking assistance in the intuition that corresponds to one of the two, one's five fingers, say, or...five points, and one after the other add the units of the five given in the intuition to the concept of seven. For I take first the number 7, and, as I take the fingers of my hand as an intuition for assistance with the concept of 5, to that image of mine I now add the units that I have previously taken together in order to constitute the number 5 one after another to the number 7, and thus see the number 12 arise. [B 15-6]

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26 Though Leibniz doesn't use the term "analytic," Leibniz holds that all true propositions are true in virtue of the containment relationship between subject and predicate.

In this argument, Kant contends that the demonstration of a mathematical truth – that the interior angles of a triangle sum to 180 degrees or that 7 + 5 = 12 – requires appeal to resources independent of the concepts alone, i.e., to "intuition." Kant's thought, evidently, is that the fact that mathematicians appeal to experiential resources in order to demonstrate their theorems provides some insight into the status of the theorems (or judgments): were they analytic, no such appeal would be required.

This argument for the very possibility of synthetic *a priori* judgment – a possibility he simply assumes in the regressive argument for idealism in the *Prolegomena* – is clearly open to objection. One might readily contend, against Kant, that the fact that geometers *do* draw triangles in order to prove theorems about triangles doesn't show that they *must* draw such triangles: perhaps geometers appeal to experiential evidence merely as a heuristic device designed to render explicit the underlying conceptual (containment) relations between subject and predicate. Alternatively, one might grant that Kant has indeed shown appeal to experience to be indispensable to mathematical proof, but that the force of the necessity remains ambiguous. If the sense in which the geometer must appeal to experiential evidence is merely psychological – perhaps geometric demonstrations *sans* diagrams are beyond the cognitive capabilities of humans – then one might remain unconvinced that, e.g., the concept triangle doesn't (in some suitable logical or semantic sense) *contain* the predicate has angles that sum to 180 degrees.[27] Both

27 Indeed, if Kant hasn't shown the necessity to be more than psychological, then the claim that geometers must appeal to diagrams to prove their theorems is a claim a Leibnizian could

of these objections rely on the thought that facts about mathematical practice don't obviously bear on questions about the semantic features of mathematical representations. Kant's discussions of mathematical judgment frequently include appeal to features of mathematical practice, so Kant appears to be relying on precisely the connection in question. Still, he fails to explicitly demonstrate a principle that would underpin this connection.

Thus, even though Kant is not guilty of overtly begging the question – he provides some argument for the actuality of synthetic *a priori* judgment – the arguments he explicitly makes in the *Critique* are problematic. These criticisms reveal Kant's initial presentation of transcendental idealism as the solution to the problem of synthetic *a priori* judgment – a strategy he explicitly employs in the *Prolegomena* and in the Introduction to the *Critique* – to be lacking. Kant fails to argue convincingly for the possibility of synthetic *a priori* judgment, and merely assuming such a possibility would appear to beg the question. Accordingly, these criticisms raise two additional and crucial questions for interpreters of Kant's idealism. First, does Kant offer elsewhere a compelling reason to believe that synthetic *a priori* judgment is possible? Second, to what extent do Kant's other arguments for transcendental idealism succeed? In the remainder of this section, I

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agree to (at least in principle). Leibniz held that certain legitimate conceptual analyses were beyond the limits of human cognitive powers. He held that such analyses were *infinite* and thus were performable only by God. Those propositions that require infinite analysis are, by Leibniz's lights, contingent propositions. To be sure, Leibniz denied that mathematical truths are contingent. What I mean to point out, however, is that a Leibnizian could grant Kant's point about the required appeal to experience in the demonstration of certain mathematical truths without thereby denying that mathematical concepts contain all of the predicates true of them: the Leibnizian might simply assert that the containment relations hold even though the requisite analysis is psychologically unavailable.

shall briefly address the first of these questions. I shall argue that Kant indeed has something more compelling to say about the need for philosophy to admit the possibility of synthetic *a priori* judgment. But I shall also argue that this alone is not likely to satisfy someone not already convinced. In the subsequent section, I shall stress the importance of Kant's argument for transcendental idealism in the Transcendental Aesthetic: because his regressive argument for idealism remains problematic, all the more weight is borne by an argument for idealism that purports to assume nothing at the outset.

A plausible way of understanding Kant's demand that philosophy recognize the possibility of synthetic *a priori* judgment is to understand the demand as a reaction to Leibniz's doctrine of pre-established harmony. In part as a solution to the mind-body problem, Leibniz proposed that finite substances do not causally interact with one another. The activities of finite substances are coordinated (or pre-established) by God such that the substances act in perfect harmony with one another, despite failing to enter in any causal relations with one another. Thus, the appearance of causal interaction is saved, but the problems associated with the interactionist thesis are resolved. Part and parcel of Leibniz's pre-established harmony is the claim that individual finite substances represent – or "reflect" – the states of other finite substances. Leibniz's theory of representation, then, is non-causal: finite minds represent the states of other finite substances without standing in any causal relation to them.[28]

28 See, e.g., *A New System of Nature*, Ariew and Garber (1989), 143 – 147. Leibniz says that "God originally created the soul (and any other real unity) in such a way that everything must

Kant's demand for the recognition of synthetic *a priori* judgment can readily be seen as incorporating a wholesale rejection of, and response to, the Leibnizian theory of representation. In a now justly famous letter to Marcus Herz in 1772, Kant describes the work he is doing toward a new system of metaphysics:

> While I was thinking through the theoretical part in its whole extent and the reciprocal relations of its sections, I noticed that there was still something essential that was lacking, which I (like others) in my long metaphysical inquiries had failed to consider and which indeed constitutes the key to the whole secret of the metaphysics that had until then remained hidden to itself. I asked myself, namely: on what ground rests the reference of what in us is called representation to the object? If the representation contains only the way in which the subject is affected by the object, then it is easy to see how the representation corresponds to the object, as an effect to its cause, and how this determination of our mind can *represent* something, i.e., how it can have an object. The passive or sensuous representations thus have a graspable reference to objects, and the principles that are derived from the nature of our soul have a graspable validity for all things insofar as they might be objects of the senses. Likewise, if that in us which is called representation was active with regard to the object, i.e., if the object were produced by the representation itself (as one thinks of divine cognitions as the archetypes of things), then the conformity of the representation with the objects would also be able to be understood. And so one can at least understand the possibility of both an archetypal intellect, upon whose intuition the things themselves are grounded, as well as an ectypal intellect, which attains the data of its logical activity from the sensuous intuition of things.... In the Dissertation I was satisfied to express the nature of intellectual representations merely negatively: namely, that they were not modifications of the soul brought about by the object. However, I had passed over in silence the question as to how else, then, a representation referring to an object is possible without being affected by the object in some way. I had said: sensuous representations present things as they *appear*, and intellectual one present things as they *are*. But whereby are these things given to us if not by the way in which they affect us? And if such intellectual representations rest upon our inner activity, whence comes the agreement that they are to have with objects that, after all, are by no means produced by them?[29]

In this long passage Kant declares that the notion of the objectivity or reference of a representation is intelligible only insofar as a causal relation exists between the

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arise for it from its own depths, through a perfect *spontaneity* relative to itself, and yet with a perfect *conformity* relative to external things." (143)

29 Carus (1977), 118-119.

representation and its object. Kant does not deny that representational *content* is possible independently of a causal relation to an object: he holds that purely intellectual representations (Kant terms them "pure concepts" in the *Critique*), which do not arise in virtue of a causal relation to objects, are meaningful. But he denies that such representations can *refer to an object* independently of any causal connection to the object.[30] Accordingly, Kant holds that two types of "intellect" are intelligible: an "archetypal" intellect, for which the representation causes the object, and an "ectypal" intellect, for which the object causes the representation. Since Kant thinks that only God could possibly have an archetypal intellect, he concludes that the human mind is ectypal. By Kant's lights, an ectypal intellect can be explained only by positing *intuitions*, which are representations that arise only as the result of a causal relation to the object of representation and are strictly distinct from intellectual representations. Intellectual representations are possible independently of any causal contact with sensible objects. Ultimately, Kant holds, intellectual representations (or pure concepts) refer only in virtue of their "agreement" with, or applicability to, sensible intuitions, which themselves refer in virtue of their origin in a causal relation to sensible objects.

The clear implication of this passage is that the pre-established harmony does not provide an intelligible account of the representation relation. Leibniz's theory fails as an account of representation because it fails to account for the objectivity of a representation except by appeal to God as guarantor of the

30 Kant shall ultimately argue that intellectual representations, or "pure concepts," refer only in virtue of their applicability to intuitions. See Section 26 of the Transcendental Deduction: B 159 – 65.

appropriate relation between representation and object. In light of this, it is easy to see why Kant demands that philosophy recognize synthetic *a priori* judgment. Kant argues that the objectivity of a judgment requires a referent in possible experience. By Kant's lights, experience is possible in part because of a causal relation to the objects of our representations. Kant also affirms the (at the time) uncontroversial claim that the principles of mathematics and natural science are strictly *a priori*. In light of these commitments, the problem Kant sets for himself can be put thusly: how can the strictly *a priori* principles of mathematics and natural science bear a relation to possible experiences sufficient for objectivity and reference? A proper resolution to this question requires the possibility of synthetic *a priori* judgment: the judgments of mathematics and natural science must be both *a priori*, but also require a relation to possible experience, and thus must be synthetic judgments.

Because Leibniz fails to recognize the causal requirement for objectivity and reference, he fails to draw a distinction *in kind* between sensible and intellectual representations: he deems all representations "perceptions" and distinguishes among them only in terms of their degrees of "clarity." Sensible perceptions, by Leibniz's lights, lack clarity, and are thus "confused." By Kant's lights, this is tantamount to supposing that all representations are intellectual representations.[31] In part because he fails to distinguish distinct types of representations, Leibniz fails to allow himself the resources to draw a strict analytic/synthetic distinction because the distinction requires (by Kant's lights) a strict distinction between sources of justification, which in turn requires a distinction between sensible and intellectual

31 See, e.g., A 275-7/B 331-3 and A 40/B 57.

representation. Thus, it is possible to see Kant's demand for the recognition of the possibility of synthetic *a priori* judgment as a reaction to Leibniz's non-causal theory of representation, and a spelling out of the epistemological requirements of his own causal theory. On this story, Kant does more than simply *assert* the possibility of synthetic *a priori* judgments: he makes a case for their possibility by revealing his commitment to a theory of representation according to which causal relation to possible experience is a condition upon the objectivity of any non-trivial judgment. Judgments that require a relation to experience cannot be analytic judgments.

Though I take this account of Kant's emphasis on synthetic *a priori* judgment to be considerably more compelling than the account explicit in the Introduction to the *Critique* and in the *Prolegomena*, it is ultimately not without its problems. For Kant's rejection of Leibniz's theory of representation – as I have presented it here – fails to take into account the diverse philosophical pressures to which Leibniz was responding in developing the theory of representation that accompanies his pre-established harmony. On the one hand, Leibniz was attempting to provide a resolution to a longstanding debate over the intelligibility of intersubstantial causation in early modern philosophy. On Leibniz's solution, intersubstantial causation is not possible, and thus, from this point of view, he has good reason to deny Kant's causal condition upon the objectivity of representation. On the other hand, Leibniz's commitment to the predicate containment theory of truth, though not *inconsistent* with a causal condition upon objectivity,[32] doesn't require that

32 I say that the predicate containment theory of truth is not inconsistent with the causal condition upon objectivity and reference because it is compatible with Leibniz's theory of

judgments bear a relation to possible experiences in order to be truth-evaluable, and hence doesn't require relation to possible experience as a condition upon objectivity.

All of this is to say that Leibniz's commitments to the theory of representation that Kant calls into question is not unmotivated. To be sure, Kant rejects the pre-established harmony as a metaphysical thesis, and he denies the predicate containment theory of truth. But he does not foreground these Leibnizian commitments, nor his rejection of them, and to give an account of Kant's regressive argument for transcendental idealism as ultimately depending on an unstated but fundamental divergence from Leibniz on the intelligibility and possibility of intersubstantial causation would seem to require either a certain lack of textual fidelity, or a commitment to essentially replacing the argument in question with a better one.[33]

Ultimately, then, Kant's most famous and visible argument for transcendental idealism remains unconvincing – at least insofar as its central premise seems to incorporate an unargued rejection of one or more central epistemological commitments of his chief philosophical opponent. This is not to deny, of course, that

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truth to hold that conceptual containment relations are undergirded by real causal connections.

33 This is not to say that there is not a powerful story to tell about the motivation for, and connection among, many of Kant's mature positions that involves Kant's rejection of Leibniz's pre-established harmony. See Watkins (2005) and Hogan (2009c) for views that portray Kant as endorsing a fundamental commitment to intersubstantial causation, which underpins and motivates a great many of the positions that together make up his mature, critical philosophy. Hogan sees this commitment as required by Kant's commitment to libertarian freedom. Neither author, however, goes so far as to suppose that Kant's regressive argument for transcendental idealism is rendered unproblematic by his axiomatic rejection of the pre-established harmony. It is potential accounts of *this* sort that I am objecting to here.

the notion of synthetic *a priori* judgment remains central to Kant's epistemology; it's only to say that an argument that simply asserts its possibility – or an argument that requires the flat denial of theses that preclude its possibility – is unpromising. For this reason, the argument of the Transcendental Aesthetic in the *Critique* takes on a particular significance for interpreters of Kant. Kant portrays the distinction between the regressive argument of the *Prolegomena* and the argument of the Transcendental Aesthetic as follows:

> In the *Critique of Pure Reason*, I worked on this question *synthetically*, namely by inquiring within pure reason itself, and seeking to determine within this source both the elements and the laws of its pure use, according to principle. This work is difficult and requires a resolute reader to think himself little by little into a system that takes no foundation as given except reason itself, and that therefore tries to develop cognition out of its original seeds without relying on any fact whatever. *Prolegomena* should by contrast be reparatory exercises; they ought more to indicate what needs to be done in order to bring a science into existence if possible, than to present the science itself. They must therefore rely on something already known to be dependable, from which we can go forward with confidence and ascend to the sources, which are not yet known, and whose discovery not only will explain what is known already, but will also exhibit an area with many cognitions that all arise from these same sources. The methodological procedure of prolegomena, and especially of those that are to prepare for a future metaphysics, will therefore be *analytic*. [*Prolegomena* 4:274-5, p. 25-6]

Kant claims that the argument of the *Critique* takes nothing as given except "reason itself," whereas the regressive argument of the *Prolegomena* simply assumes as given some body of knowledge and proceeds to explain the as-yet unknown conditions for the possibility of the knowledge in question. If the foregoing is correct, it is precisely this assumption of the possibility of the knowledge in question – Kant's commitment to the analytic method – that renders the argument problematic. But Kant promises that the argument of the Transcendental Aesthetic

can demonstrate transcendental idealism without this controversial assumption, merely by taking "reason" as given. Thus, in light of the problems with the regressive argument, the argument of the *Critique* bears a heavy burden for Kant's idealist program. In that argument, Kant purports to establish the synthetic *a priori* status of all spatiotemporal judgments simply *via* an examination of the content of spatiotemporal representation. That is, Kant aims to *prove* that spatiotemporal judgment is synthetic *a priori* via an analysis of spatiotemporal representation. If this is right, then surely Kant is freed from some of the criticisms I have raised against his assertion of synthetic *a priori* judgment above. It is to that argument that I now turn.

1.2 Kant's Argument for Transcendental Idealism in the *Critique*

A significant portion of the present document is an attempt to offer a satisfactory interpretation of Kant's argument for idealism in the *Critique*. For a full accounting of this argument and its genesis, then, I direct the reader to chapters 2 & 3. What I aim to do here is set out the argument in schematic fashion, highlight the difference between this argument and the regressive argument of the *Prolegomena*, and discuss the central objection to the argument with which I shall occupy myself in subsequent chapters.

Kant opens the Transcendental Aesthetic by arming himself with a distinction between intuitions and concepts: intuitions are immediate representations, while concepts are representations used to think objects by means

of qualitative "marks," and are thus "mediate" representations. [A 19/B 33] He also defines "the undetermined object[s] of empirical intuition" as "appearances." An immediate question, then, concerns the extent to which appearance and reality converge. Kant shall deny that they share any features. Kant's basic aim is to argue that reflection upon the given content of the representation of space reveals an absolute disharmony between appearance and reality: he shall argue that space is not a feature of reality (i.e., of things in themselves), and is therefore *merely* a subjective form of appearance. Appearances, then, are not things in themselves, and since human experience is limited to the appearances, human experience reveals no features of underlying reality.

The ensuing argument proceeds roughly as follows. First, in the "metaphysical exposition" of space, Kant presents four arguments: two for the *apriority* of the representation of space and two for the *intuitivity* of the representation of space. Notably, Kant presents these arguments as assuming nothing but the representational content of the representation of space. Then, in the "transcendental exposition," Kant argues that the possibility of representing space both *a priori* and intuitively – i.e., the possibility of representing a feature of sensible objects prior to experience of them – entails that space is the *form of sensible intuition*: it is a subject-dependent feature of sensible objects. Kant immediately concludes that a) space is not a feature of reality, and therefore that b) space is merely a form of sensible intuition. If space is merely a form of sensible intuition, then sensible objects, because they are spatially extended, are mere appearances, and not also things in themselves.

One way to understand transcendental idealism is to situate it with respect to what Kant took to be the serious competitor positions on the nature of space. Kant aims in arguing for transcendental idealism is to discredit Leibnizian and Newtonian theories of space. According to Newton, space is a subject-independent substance that exists metaphysically independently of the objects it contains. According to Leibniz, space is a set of relations among ultimately non-spatial finite substances, and is ideal in the sense that it arises in virtue of perceptual relations among finite substances.[34] Kant sides with Newton on the question of priority: space is prior to, and serves as a metaphysical condition upon, empirical objects. But Kant sides with Leibniz in holding that space is itself not a substance and that it is ideal. The result of this position is transcendental idealism: space is a subjectively supplied condition upon empirical objects, which are thereby shown to be merely appearances of an underlying non-spatiotemporal reality.

As we have already seen, Kant's argument for idealism in the Transcendental Aesthetic is extraordinarily complex: it involves five distinct arguments that together supply Kant with the premises he takes to be required to infer transcendental idealism. Moreover, the argument is extraordinarily compressed: the argument itself lasts a mere several pages. Kant's aims in the individual arguments of the metaphysical and transcendental expositions have not always been clear to

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34 Indeed, Kant opens the Aesthetic by framing his argument precisely in terms of these two extant positions:

> Now what are space and time? Are they actual entities? Are they only determinations or relations of things, yet ones that would pertain to them even if they were not intuited, or are they relations that only attach to the form of intuition alone, and thus to the subjective constitution of our mind, without which these predicates could not be ascribed to anything at all? [A 23/B 37-8]

his readers and (perhaps as a result) the overall structure of the argument has to many remained opaque. Accordingly, the scholarly literature on the Transcendental Aesthetic is voluminous. A full accounting of every component of the argument, along with discussion and evaluation of the important scholarly contributions to understanding them, is too vast a task for any single work: breadth could be achieved only by sacrificing significant rigor and attention to detail. As a way of isolating the specific task(s) I take this work to address, I want briefly to discuss the general contours of the scholarly literature on the Transcendental Aesthetic.

1.2a Interpreting the Transcendental Aesthetic

The secondary literature on Kant's main argument for idealism very roughly divides into three distinct, but tightly related, approaches. One body of literature aims at careful analysis of the individual components of the argument without attempting to reconstruct the argument as a whole or working toward a verdict on the ultimately defensibility of transcendental idealism. So, for example, some commentators attempt only to get clear on Kant's notion of intuition or his conception of the *a priori;*[35] others focus on the specific arguments of the metaphysical and transcendental expositions without thereby explicitly emphasizing the role that these specific arguments play in the overall argument for idealism in the Aesthetic.[36] Still others turn to the particular notions and arguments in the Aesthetic as a means of gaining insight into Kant's other doctrines, e.g., his

35 See, e.g., Horstmann (1989), Howell (1973), Kitcher (1987), Kitcher (2006), Smit (2000) and (2009), Thompson (1972), Warren (1998) and Wilson (1975).

36 See, e.g., Shabel (2004).

philosophy of mathematics and his philosophy of natural science.[37] This body of literature plays a crucial role in the overall debate over Kant's idealism insofar as it analyzes and clarifies the notions and arguments upon which reconstructions of the overall argument depend.

A second group of commentators focuses on reconstructing the overall argument for idealism and (sometimes) defending a particular interpretation against objections, both traditional and new. This body of literature is characterized by its attention to the overall systematic structure of the argument. Work that falls into this category typically aims to render coherent an argument known for its obscurity, and I include here both historical interpretations and contemporary rational reconstructions.[38]

The final group approaches transcendental idealism by attempting to clarify the meaning and metaphysical status of the doctrine. These commentators are concerned primarily with understanding the *doctrine* of transcendental idealism, and less with Kant's specific *argument* for it. I include here in particular the secondary literature concerning four topics: 1) the dispute between proponents of the "metaphysical" reading of transcendental idealism and proponents of the "epistemological" or "methodological" interpretation;[39] 2) the debate over whether appearances and things in themselves are numerically identical, or instead are

37 See, e.g., Carson (1997), Friedman (1992) and (2000), Parsons (1964) and (1969) and Hintikka (1965), (1967) and (1969).

38 A representative sample includes Allais (2010); Allison (2004), ch. 4; Ameriks (2003), ch. 1; Falkenstein (1995); Guyer (1987), ch. 16 and (2008); Hogan (2009a) and (2009b); Langton (1998); Parsons (1992); Setiya (2004); and Shabel (forthcoming).

39 See Allais (2007); Allison (1996) and (2004), chs. 1 – 3; and Guyer (1987), ch. 15.

distinct types of objects;[40] 3) the meaning of Kant's thesis of epistemic humility with respect to noumenal reality;[41] and 4) the relation between Kant's idealism and the doctrines of his predecessors.[42] Such work often attempts to defend transcendental idealism by clarifying its meaning in light of the objection that it is inconsistent.

Insofar as the secondary literature succumbs to natural divisions, the above characterization is apt. However, it nearly goes without saying that the above characterization of the secondary literature on the Transcendental Aesthetic is imperfect: it obscures the very limited extent to which any of the inquiries in question can be accomplished without significant attention to the others, and it obscures the fact that many of the leading commentators on Kant have in single works simultaneously addressed all of these questions in impressive systematic fashion.[43] For, it is difficult to see how one could systematically interpret the argument for transcendental idealism without significant attention to the individual arguments and notions at play in the argument. And it is not obvious how one might reconstruct the argument for idealism without taking a stand on, e.g., whether the doctrine is ultimately metaphysical or epistemological in nature, or the meaning of the appearance/thing-in-itself distinction. Likewise, one's stand on these latter issues gain relevance in proportion to the extent to which one reveals the *argument* for the idealistic position from which these doctrines flow as defensible.

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40 See Allais (2004) and Robinson (1994).

41 See Ameriks (2000), Hogan (2009b) and (2009c), Langton (1998); Watkins (2005) and Wood (1984).

42 See Mattey (1983) and Wilson (1971) and (1984).

43 I include among this group Allison (2004), Falkenstein (1995), Guyer (1987) and Van Cleve (1999).

Nevertheless, for my own purposes, it is worth distinguishing among these approaches if only to situate and defend the approach taken herein.

The present work falls somewhere between the second and third approaches. My primary aim in Chapters 2 and 3 is to systematically interpret the argument for transcendental idealism, and the strategy I employ is constrained by what I take to be the particular meaning of transcendental idealism. In the last two chapters, I aim to defend Kant's idealism against the charge of inconsistency by addressing two traditional criticisms in light of the interpretation of the first two chapters. I do not attempt here a full accounting of every component notion and argument at play in Kant's overall argument for idealism; however, my interpretation requires significant attention to questions about the meaning of, for example, Kant's conception of an intuition. I shall address such issues as they come up.

In the following section, I shall set the stage by presenting what I take to be the most significant systematic challenge to Kant's argument for idealism and address what I take to be the constraints on an interpretation that might successfully overcome this challenge. I shall do this in part by pointing out what I take to be the shortcomings of extant interpretations.

1.3 The Neglected Alternative

Recall the rough sketch of Kant's argument for idealism in the Transcendental Aesthetic. Kant argues that the representation of space is an *a priori*

intuition, and therefore that space is a subjective form of intuition. Kant then infers that space is not a feature of things in themselves, and concludes that space is *merely* a subjective form of intuition. The argument, then, proceeds roughly as follows:

1. The representation of space is an *a priori* intuition
2. Space is a necessary form of appearance (from 1)
3. Therefore, space is not a property of things in themselves (from 1 & 2)
4. Therefore, space is *merely* a form of appearance

The most important systematic challenge to this argument dates at least to Pistorius's 1786 review of Schultze's *Elucidations of Professor Kant's 'Critique of Pure Reason.'* In the review, Pistorius seeks to defend a theory of space and time according to which they are

> relational concepts that are not merely grounded in the nature of our sensibility, and that do not merely constitute its subjective form, as Mr. **K** argues, but that would also have to be considered as grounded in the nature of the **things in themselves** that appear in space and time. In this way, a roughly Leibnizian concept of space and time would emerge.[44]

Pistorius defends this relational conception of space by arguing that Kant's objections to it – and thus Kant's defense of transcendental idealism – fail. According to Pistorius, Kant's arguments for the *apriority* of space, though they indeed warrant

44 Sassen (2000), 94.

the claim that space is a subjective form of intuition, fail to warrant the stronger, idealistic claim that space is *merely* a subjective form of intuition. He writes:

> The essential limitation of our power of thought renders the concepts of space and time necessary conditions of our sensibility, and the unavoidable feeling of this limitation bids us to always expect that objects along with our sensibility must stand in relations of space and time. We cannot differentiate objects either from ourselves or from one another, unless we place them in part outside of ourselves, that is, intuit them in space, and in party successively, that is, perceive them in time. But none of this precludes the possibility that the concepts of space and time can also have an objective foundation.[45]

In this passage, Pistorius grants Kant's two arguments for the *apriority* of space in the metaphysical exposition. There, Kant argues, first, that a condition upon representing objects as distinct from each other and from ourselves is that they are represented as occupying distinct spatial regions. In his second argument, he claims that the representation of space is necessary for the representation of objects at all, and is thus an *a priori* condition on experience. Pistorius points out that one can grant both of these arguments, and thus accept that space is a necessary form of experience, without thereby granting that space has *no other* status, i.e., an objective, *an sich* status.[46]

Pistorius raises here for the first time the possibility of the so-called "neglected alternative": the possibility of a spatial harmony between appearances and things in themselves, i.e., the possibility that space is *both* a subjective form of

45 Sassen (2000), 97.

46 Pistorius explicitly defends a Leibnizian conception of space, according to which spatial representation arises from *both* a necessary perceptual constraint provided by the subject *and* from a relation to reality. In this sense, Pistorius's understanding of the representation of space is that it is a "relational concept."

intuition *and* that it is an objective feature of things in themselves. If this objection has merit, then Kant's argument for transcendental idealism is invalid: Kant's inference from (2) to (3) in the argument as it is represented above is unwarranted. Notably, the neglected alternative objection to Kant's argument for idealism in the Transcendental Aesthetic has proved to be lasting: it remains the most entrenched objection to Kant's idealism.

Among recent versions of the neglected alternative objection to Kant's transcendental idealism, perhaps the most notable is Paul Guyer's.[47] Guyer argues that the *Critique*'s valuable contribution is its analysis of experience and that this project is separable from the idealism.[48] In arguing that Kant's idealistic project fails, Guyer relies on a version of the neglected alternative objection. According to Guyer, in order for Kant to show that space has a merely subjective status, he must demonstrate the following claim:

(1) If (*x* is an object and we perceive *x*), then necessarily (*x* is spatial).[49]

However, Guyer argues that Kant's arguments for the apriority of space at best entail:

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47 Guyer (1987), ch. 16.

48 Guyer's position is broadly Strawsonian insofar as both think that Kant's idealism is separable from his analysis of experience and that the idealism is hopeless. Among the important ways that Guyer goes beyond Strawson is in his historical sensitivity and holistic attention to other of Kant's writings that bear on the project(s) of the *Critique*; Strawson's method is that of rational reconstruction. Guyer also explicitly frames portions of his work as a response to Allison (1984), who denies the separability of idealism from the analysis of experience, and portions of whose work are explicitly framed as a rejection of the Strawsonian program in Kant studies.

49 Guyer (1987), 366.

(2) Necessarily (if *x* is an object and we perceive *x*, then *x* is spatial).[50]

Guyer's point is that an argument for the ideality of space that depends upon the necessary conditions for experience must show that the objects of experience are *necessarily* spatial rather than simply that it is a necessary feature of the human mode of perception that only spatial objects can be perceived. Objects that are merely contingently spatial can satisfy (2), but they cannot satisfy (1). Guyer explains, then, why (2) is required for Kant's argument for idealism:

> On Kant's conception, spatiality cannot be necessarily true of some objects (representations) and contingently true of some others (things in themselves), for then it is not necessarily true of any objects at all; if it is to be necessarily true of any objects at all, it must be necessarily true of all objects of which it is true. Since we cannot assert that spatiality is necessarily true of things in themselves – but can assert that it is necessarily true of some objects – it thus follows that it is not true of things in themselves at all.[51]

If space is necessarily true of some objects, then it is not contingently true of others. Since the necessary features of things in themselves cannot be made available *a priori*, and since, if (2) is true, we can know *a priori* that space is a necessary feature of the objects of perception, it follows that the objects of perception are not things in themselves, and that things in themselves are non-spatial.

Guyer goes on to argue that

50 Ibid.
51 Guyer (1987), 366-7.

> [T]he absolute necessity of the truths of geometry or of the more general truths about spatiality hardly follows from the conditional necessity that objects must conform to the requirements of our geometry if we are to succeed in perceiving them. Yet a conditional necessity of the form of assumption [2] would seem to be the only kind of necessity that we could ever arrive at by an investigation construed, in Lockean fashion, as *an exploration of the limits of our own cognitive faculties* – which is to say, by a Copernican revolution as Kant apparently intended that to be understood. Discovering by some sort of examination of it that our cognitive constitution limits us to perception of objects satisfying some constraint *C* can surely reveal to us only that whatever objects we do perceive must satisfy *C*, not that there is some stronger sense in which they *necessarily* satisfy *C*.[52]

By Guyer's lights, then, the neglected alternative remains, even in light of Kant's argument for idealism: Kant fails to establish (1), and thus fails to establish that the objects of perception are *necessarily* spatial. But, Guyer argues, this is precisely the claim he needs if he is to infer that space is *merely* a subjective form, and not also an objective form.[53] Thus, Kant leaves open the possibility that space is a property *both* of appearances *and* of things in themselves.

The neglected alternative objection, then, remains perhaps the most formidable objection to transcendental idealism. The heart of the present work is a defense of Kant's argument for idealism from the neglected alternative objection, and I shall do it in two stages. In the following chapter, I shall present an interpretation of Kant's argument for idealism according to which Kant is able to rule out the neglected alternative. In Chapter 3, I shall argue that a version of this argument is present in the *Inaugural Dissertation*. Though I will have much more to

52 Guyer (1987), 367.

53 Note that on Guyer's construal of the argument, Kant might validly infer that the *objects of perception* are ideal; he simply is unable to rule out a correspondence between the objects of perception and things in themselves. It is this correspondence that he must rule out in order to establish his idealism. See my discussion of this in Chapter 2.

say – and in considerably more detail – as we go along, for now I want to indicate the very basic outline of the interpretation I endorse in chapters 2 and 3.

Both Pistorius's original rejection of the argument and Guyer's contemporary revival of the neglected alternative objection are compelling, but they suffer from a common interpretive weakness: neither devotes significant enough attention to the role that Kant's arguments for the *intuitivity* of space play in his overall argument for idealism. Both Pistorius and Guyer reject Kant's argument because they deem Kant's claim that space is an *a priori* condition upon the objects of perception insufficient to warrant the ideality of space. But Kant aims to establish this claim in his arguments for the *apriority* of space, which comprise only half of the metaphysical exposition. Kant also goes to great lengths to demonstrate the immediacy and singularity (i.e., the intuitivity) of spatial representation in that section, and he accordingly presents these considerations as serving as a premise in his argument for idealism. Neither Pistorius nor Guyer, however, considers in any detail whether an argument for idealism can be uncovered in these arguments, or whether these arguments in conjunction with Kant's *apriority* arguments suffice to rule out the neglected alternative.

My interpretation of the argument in Chapter 2 takes precisely these possibilities very seriously: I take Kant's argument for idealism to depend crucially on the insight that the object of an *a priori* but *immediate* representation could only be something subject-dependent. This insight requires premises supplied by Kant's arguments for the intuitivity of spatial representation. I hold that this claim, together with a heretofore unappreciated claim about the representational content

of spatial *concepts*, plays a central role in ruling out the possibility that space is more than merely a subjective form – a possibility that, by my lights, is not "neglected," but is in fact deliberately rejected.

In Chapter 3, I examine the argument for the ideality of space in the *Inaugural Dissertation*. Such an inquiry serves two purposes. First, the considerable evidence that Kant relies in the ID on an argument similar to the argument of the Aesthetic (as I interpret it) bolsters my interpretation of the argument of the Aesthetic – an argument that has prompted many widely divergent interpretations – because it reveals a continuity between Kant's earliest attempt to argue for idealism and his mature attempt. Second, by critically examining the argument of the ID – and I shall argue that it ultimately fails – we are able to see precisely which background considerations new to Kant's mature critical philosophy are crucial to the Aesthetic's success in overcoming the neglected alternative objection.

In this brief sketch of the argument of the Aesthetic, I have left a great deal unsaid. I have only barely delved into the specific details of that argument, and though I have detailed the positions of two commentators who object to that argument, I have not yet noted the positions of the most prominent sympathetic defenders of it or what I take to be those positions' shortcomings. Because these are tasks that will be most fruitfully addressed while arguing for my own interpretation, I shall postpone them to Chapter 2. Likewise, I have said very little about Kant's pre-critical philosophy by way of discussing the relevance of the ID; I shall sketch the overall aims of that work – and their difference from those of the *Critique* – at the beginning of Chapter 3, before developing an interpretation of its argument.

Before closing this introductory section, I want briefly to discuss a couple of interpretive positions and pitfalls associated with the argument for idealism in the Aesthetic, and I want to point toward two potentially problematic associated doctrines, which I shall take up in the second half of this work.

1.4 The Meaning of Transcendental Idealism

One would not be far from the truth if one characterized Anglo-American Kant scholarship since midway through the last century in terms of two related, high-profile disputes over the meaning of transcendental idealism.[54] The first arises from a perceived textual inconsistency within the *Critique*: sometimes Kant appears to identify things in themselves and appearances, but at other points he seems to say that they are numerically distinct objects. Accordingly, commentators have alternately defended so-called "one-world" views, according to which things in themselves and appearances are numerically identical, and so-called "two-world" views, according to which they are not. Both one-world and two-world views come in a number of distinct varieties, and it is accordingly difficult to characterize them more specifically than simply in terms of their commitment to the numerical identity (or lack thereof) of appearances and things in themselves. The most influential two-world position has amounted to a kind of phenomenalism: the spatiotemporal objects of experience (the appearances) are phenomenal objects, or representations, and are thus subject-dependent, while nonspatiotemporal things in

54 I mentioned above that one could characterize an entire interpretive approach to Kant's idealism in terms of its emphasis on these disputes. See above pp. 32 – 3.

themselves are wholly subject-independent.[55] One-world views, on the other hand, can be differentiated in terms of how they characterize the appearance/thing-in-itself distinction, given that the distinction, on these views, cannot be between *types of object*. One prominent family of views characterizes it as a distinction between relational (or extrinsic) and intrinsic properties of things.[56] Another important position characterizes the distinction in epistemic terms as a distinction between distinct *ways of considering* objects.[57] To consider things as they *appear* is to consider them in relation to sensibility, and thus as spatiotemporal; to consider things *as they are in themselves* is to consider them independent of any relation to sensibility, and thus as independent of the spatiotemporal forms of intuition.

An orthogonal, but overlapping, dispute concerns the metaphysical commitments (or lack thereof) of transcendental idealism. Proponents of the *epistemological* or *methodological* interpretation of transcendental idealism hold that it carries minimal metaphysical import.[58] Kant's claim that space is merely a form of intuition is a claim about semantic and epistemic features of spatial representation: space cannot be *conceived* as a wholly subject-independent feature of reality in virtue of its status as an *a priori* condition upon sensibility. Notably, proponents of the methodological interpretation take this claim to have no ultimate metaphysical import: it is merely a claim about the *a priori* constraints upon how human subjects are equipped to consider the objects of experience and involves no

55 Notable proponents of this view are Guyer (1987), Strawson (1966), and Van Cleve (1999).
56 Lantgon (1998) and Allais (2004) hold this view.
57 This view is due to Prauss (1974) and Allison (1984).
58 Proponents of this interpretation, broadly speaking, include Allison (1976), (1984), (1996) and (2004); Bird (1962), Horstmann (1989) and Robinson (1994).

commitment to the metaphysical status of subject-independent reality. It is a commitment to this methodological interpretation of transcendental idealism that motivates characterizing the distinction between appearances and things in themselves as a purely epistemic distinction between ways of considering the objects of experience. (See above paragraph.) Against this methodological interpretation, a number of commentators defend a fully metaphysical version of transcendental idealism, according to which Kant's claim that space is merely a subjective form of intuition indeed carries significant metaphysical import: noumenal reality (construed either in two-world fashion as a distinct set of objects, or in one-world fashion as the intrinsic properties of the objects of experience) lacks the metaphysical feature of spatiality. One-world metaphysical views typically hold that the subject-independent objects of experience have subject-dependent features (space and time);[59] two-world metaphysical views simply hold that spatiotemporal objects are wholly distinct from things in themselves.[60] I shall have more to say about this dispute below.

Though my aim in the present work is to approach Kant's idealism by developing a systematic interpretation of his main argument for idealism, and not by immediately attempting to comment upon or resolve these disputes – indeed, I am skeptical that one *could* resolve these disputes without studious attention to Kant's own arguments – I offer this brief characterization of them in order to lay the groundwork for later discussions in which I will discuss them in connection with the

59 The two central proponents of this position are Allais (2004) and (2007) and Langton (1998).

60 I include here Guyer (1987) and (2008) and Hogan (2009a), (2009b) and (2009c).

interpretation set forth here. For now it will suffice simply to sketch which of these debates I aim to engage and on which I take a neutral stand.

The only commitment with which I begin this work is to the metaphysical reading of transcendental idealism. Though the methodological view offers an attractive characterization of Kant's overall *position*, extant methodological accounts of Kant's *argument* are open to serious systematic objection, and are therefore inadequate. I shall discuss these inadequacies in Chapter 2.[61] Aside from this commitment, however, I aim in the present work to remain neutral between one-world and two-world characterizations of the appearance/thing-in-itself distinction. This is not to say that the argument as I interpret has no bearing on the issue – it does. But the topic is so vast and so well-explored that I shall merely note the points at which I think my interpretation might, in future work, bear on this issue.

1.5 The Implications of Transcendental Idealism

To this point, I have situated and briefly described the project of the first two chapters of the present work: in them I aim to offer a new systematic interpretation of Kant's main argument for idealism and to trace its origins to the *Inaugural Dissertation*. In closing this introductory chapter, I want to describe in similarly schematic fashion the project of the second half of this work. In Chapters 4 and 5, I set out to show that the interpretation offered in the first two chapters can be employed to defend Kant against two significant objections to transcendental

61 See below, pp. 115 – 118.

idealism. The first is the charge of inconsistency associated with Kant's commitment to noumenal causation. The second is the charge that transcendental idealism fails in light of the development of non-Euclidean geometries.

Kant says that intuitions are passive representations and arise as the result of "affection" by subject-independent objects. Because space is meant to be a mere form of intuition and the spatial objects of experience mere subject-dependent appearances, Kant commits himself to the doctrine that the appearances are the causal effects of an underlying and unknowable supersensible reality, i.e., of things in themselves. This commitment immediately generates a significant problem: Kant appears to violate his own commitment to epistemic humility with respect to things in themselves in committing himself to this doctrine of noumenal causation. Indeed, some commentators have supposed that the problem lies even deeper. This commitment to noumenal causation requires that it be possible meaningfully to predicate causal properties of things in themselves. But Kant explicitly restricts the meaningful use of *spatiotemporal* predicates to the appearances (this is, I shall argue, part and parcel of his idealism) and a number of commentators have understood Kant as imposing a similar restriction on the categories, of which causality is one. Thus, for these reasons, Kant's critical system has appeared inconsistent. These are the worries that led Jacobi to his famous pronouncement that "without this presupposition [of the thing in itself], I could not find my way into the system, whereas with it I could not stay there."[62]

62 Sassen (2000), 173.

In Chapter 4, I provide a solution to the more fundamental criticism that Kant is inconsistent in holding that the categories can meaningfully be predicated of things in themselves. I argue that Kant is not inconsistent: he rejects a frequently and mistakenly assumed symmetry between the forms of intuition and the forms of judgment (the categories). Kant's restriction of the meaningful use of spatiotemporal predicates is motivated by his claims about the subject-dependence of objects of possible *intuitions* and the intuitive origin of spatiotemporal *predicates*. But Kant repeatedly denies that the categories have a sensible origin, and he offers no parallel argument for the ideality of the properties represented by the categories. Thus, Kant's treatment of the forms of intuition diverges from his treatment of the categories in such a way that he is not systematically required to uphold a parallel restriction of the meaningful use of the categories. On my reading, Kant aims in the Deduction merely to show that the categories *can* be meaningfully applied to the spatiotemporal manifold; he need not – and does not – argue for the further claim that such an application constitutes their *only* meaningful use.

In Chapter 5, I take up the criticism that Kant's commitment to the necessity of Euclidean geometry renders his transcendental idealism hopeless in light of the development of non-Euclidean geometries in the 19th century. While in Chapter 2 I show that Kant's main argument for idealism does not explicitly take the necessary truth of Euclidean postulates as a premise (contra Kant's regressive argument for idealism), Kant nevertheless remains committed to the necessity of such postulates in light of the fact that he takes spatial perception to be Euclidean and his commitment to the necessary truth of the principles that govern spatial perception.

I show in this chapter that the considerations about the singularity of spatial representation that Kant adduces in arguing for the ideality of space provide Kant with a stronger argument for the necessity of Euclidean geometry than he has often been taken to have (even if he never explicitly formulates this argument). On the interpretation I set out here, a non-Euclidean geometry is a purely formal (conceptual) set of axioms and theorems that describe a possible space in which Euclidean postulates do not hold. But Kant must deny that such a geometry is possible. Such a geometry would require a set of concepts that count as *spatial* concepts but that do not describe the space given in *a priori* intuition. In Chapter 2 I show that Kant holds that *all* spatial representation – both intuitive and conceptual – represents only spaces that are parts of the single space given in *a priori* intuition. In this context, that principle affords Kant the resources to reject the possibility of non-Euclidean geometries: insofar as a concept purports to describe a possible *space*, it is descriptive of intuitive space; insofar as it purports to describe non-intuitively given relations, it is not a spatial concept at all. Thus, Kant must deny that non-Euclidean concepts can be properly *spatial* at all, and thus cannot constitute a "geometry." A central project of Chapter 5 is to show that extant interpretations on the role of pure intuition in Kant's philosophy of mathematics have failed fully to appreciate the implications of this argument.

1.6 Concluding Remarks

In this introductory chapter, I aim to have set out the central considerations in play over discussions of Kant's transcendental idealism. And I aim to have situated the project of this dissertation within that context. There are without a doubt a great many topics associated with Kant's idealism that I won't cover here. Some of them I have already mentioned: I don't aim to provide a fully accounting of Kant's doctrine of epistemic humility with respect to things in themselves, and I won't engage in further extended discussion of the one-world/two-world debate. Moreover, this dissertation does not include a full accounting of Kant's place in the German rationalist tradition and his relation to Leibniz – an important topic in its own right. These topics are already the subject of a good deal of secondary literature, and my aim is not to give a complete and full accounting of Kant's idealism. Rather, my aim is to argue for a particular interpretation of his most prominent argument and show how this interpretation helps resolve what I take to be some pressing tensions. In this way, the present work is of limited scope (but not, I hope, limited appeal). Without further ado, I shall get to the details.

Chapter 2: Kant's Rejected Alternative

In this chapter, I set out to offer an accounting of Kant's argument for transcendental idealism in the Transcendental Aesthetic. I shall do so by way of showing how Kant is able to respond to the most entrenched objection to his idealism: the so-called "neglected alternative" objection.

Among Kant's most notorious claims is the following:

> Space represents no property at all of any things in themselves nor any relation of them to each other, i.e., no determination of them that attaches to objects themselves and that would remain even if one were to abstract from all subjective conditions of intuition. [A 26/B 42]

What precisely this claim means and why exactly Kant took himself to be justified in making it have been sources of controversy among Kant's interpreters since the publication of the first edition of the *Critique of Pure Reason* in 1781. In particular, commentators have supposed the argument of the Transcendental Aesthetic to be invalid: for all that Kant has shown in his arguments for the *apriority* and intuitivity of spatial representation, mightn't things in themselves be spatial anyway?[63] More carefully, the criticism is that Kant's arguments in the Aesthetic, though they may warrant his claim that space is a subjective form of intuition, and hence pertains to

63 Kant took his arguments for the transcendental ideality of space to run parallel to his arguments for the transcendental ideality of time. Whether or not this symmetry holds is an important question, but not one that I will take up here. In this chapter, and throughout much of the document, as is custom among many of Kant's commentators, I will discuss only his theory of space.

appearances, do not entail the further claim that space is definitively *not also* a form of things in themselves (or the claim that is meant to follow: that space is merely a subjective form, i.e., is transcendentally ideal). After all, the objection goes, things in themselves might take a spatial form even if we can never cognize them as such, and Kant's arguments seem to address only the conditions of cognition. Kant, then, is supposed to have failed to rule out the possibility of a spatial harmony between appearances and things in themselves. This possibility – that space is both a subjective form and an objective form – is known as the "neglected alternative."[64] If Kant has indeed failed to argue convincingly against such an alternative, then he only invalidly infers that space is merely a subjective form, which is the meaning of his claim that space is transcendentally ideal.

In what follows, I shall argue that close attention to the Transcendental Aesthetic yields an argument for the ideality of space that indeed rules out the so-called "neglected" alternative. In particular, I'll show that Kant commits himself there to three claims that together entail that space has a merely subjective metaphysical status – i.e., that space is transcendentally ideal. Specifically, Kant commits himself in the Aesthetic to the claims that: a) that which is represented in *a priori* intuition is absolutely singular; b) *a priori* intuition is incapable of presenting to the subject any feature of any wholly subject-independent things; and c) the content of any spatial *concept* is determined by the representational content of *a*

64 Among Kant's contemporaries, Pistorius and Trendelenburg both criticized Kant for leaving open this neglected alternative. The reinvigoration of Kant studies in the second half of the twentieth century has seen a reemergence of this criticism. Paul Guyer is the most influential recent commentator to criticize Kant on this count. See Guyer (1987), chs. 15-16, esp. pp. 354-69. See also Guyer (2008) for a condensed discussion of this criticism.

priori intuition.[65] These three claims, together with a thesis linking conceivability and possibility, entail that all possible spaces are parts of the actual, but metaphysically subjective, space given in *a priori* intuition. Since things in themselves cannot be intuited *a priori*, and hence do not populate the space given in *a priori* intuition, and since no non-intuitive space is possible, things in themselves are not spatial. Accordingly Kant takes himself to be warranted in concluding that "space is nothing other than merely the form of all appearances of outer sense, i.e., the subjective condition of sensibility, under which alone outer intuition is possible for us." [A 26/B 42]

My primary aim here is to point out and elucidate what I take to be Kant's argument for the ideality of space – an argument that, as I interpret it, has often been overlooked. But I do not mean ultimately to be defending certain of Kant's premises – at least, not beyond pointing out in a more or less schematic fashion what reasons Kant might have adduced in their favor. This interpretation of Kant takes seriously Kant's apparent commitment to the notion that *a priori* intuition, in virtue of its unique representational content, is a source of knowledge of necessary truths about the nature of space. Whether Kant is justified in this commitment is the subject of vast bodies of secondary literature and is too large a topic for a single work. I aim primarily to uncover the precise nature of this commitment and to illustrate its essential role in ruling out the possibility that things in themselves are spatial, which is a key step in his argument for the ideality of space. This is

65 Starting below, page 60, I shall term these three claims SINGULARITY, SUBJECTIVITY, and CONTENT, respectively.

significant in its own right, since so many commentators have found Kant's argument to be a rather embarrassing failure.

In the first section of the chapter, I shall briefly discuss the argument of the Transcendental Aesthetic, review the standard line of criticism and briefly outline what I take to be the shortcomings of some recent defenses of the argument. I shall go on, in the next section, to sketch my own interpretation of this argument. In subsequent sections, I shall argue that Kant is committed to this argument.

2.1 Kant's Argument for Transcendental Idealism

Kant's idealism involves two components: the claims that 1) space is a subjective form of appearances; and that 2) space is *merely* a subjective form of appearances. On the face of it, Kant argues for the subject-dependence of space by adducing two central claims about spatial representation: that it is *a priori* and that it is intuitive. Kant contends that the capacity to represent individual spaces, and objects that occupy them, requires the ability to represent a larger space that contains the individual spaces. Thus, the empirical representation of distinct objects occupying distinct spaces presupposes a representation of space. Kant also holds that the content of this representation is accessible independently of sensation.[66] It is in these senses that spatial representation is an *a priori* condition upon empirical representation. He goes on to argue that spatial representation is intuitive: one cannot represent more than a single space, and the relationship between the parts

66 These claims are the results of the first two arguments of the "metaphysical exposition." See A 23-4/B 38-9.

of space and the whole cannot be represented purely conceptually.[67] From these claims, Kant infers that space itself – that which we represent *via a priori* intuition – is a subjective *form of intuition*. He says that space is sensibility's "formal constitution for being affected by objects and thereby acquiring **immediate representation**, i.e., **intuition**, of them, thus only as the form of outer **sense** in general." [A 25/B 41] Kant appears to hold that the possibility of representing a necessary feature of all possible objects of empirical experience *a priori* requires that the feature in question be subject-dependent.[68] This is the first component of Kant's idealism.

However, without further argument or elucidation, Kant immediately concludes that space is merely the form of appearance – and not, therefore, also an objective form of reality. On the basis of the arguments above, Kant infers that "space represents no property at all of any things in themselves" (op. cit.) and hence that "space is nothing other than merely the form of all appearances of outer sense, i.e., the subjective condition of sensibility, under which alone outer intuition is possible for us." (op. cit.) This is the second component of idealism. That commentators have found this argument to be uncompelling is no surprise: even if we grant Kant both that his characterization of the representation of space is correct and that space is a subjective form of experience, one might well wonder how Kant is able to draw any conclusion at all about how things might be apart from

67 These claims are the conclusions of the third and fourth arguments of the "metaphysical exposition." See A 25/B 39-40.

68 Kant argues that space is a subjective form in the section of the Aesthetic entitled the "transcendental exposition."

experience of them. Claims about the conditions under which objects must be experienced seem to imply nothing about these objects independently of the way they appear (nor about objects that do not appear at all in intuition). After all, it seems possible that the objects of experience could simply *be* as they *appear* to be. Short of simply assuming an absolute disharmony between the subjective form of intuition and the objective form of things in themselves, Kant appears to be in a poor position to rule out this so-called "neglected alternative." Thus, the argument for idealism in the Transcendental Aesthetic has often been taken to be a rather spectacular failure.

Among those who have attempted to defend Kant's argument for idealism, two strategies are particularly prominent. The *epistemological*, or *methodological*, strategy typically involves a deflationary reading of Kant's idealism, according to which it is non-metaphysical. This strategy attempts to make good on the thought that Kant's argument for idealism requires only premises about the nature of spatial representation. The *metaphysical* strategy takes Kant's idealism to be robustly metaphysical, but typically reveals his argument to require commitment to some substantive metaphysical doctrine about the nature of things in themselves. I shall briefly consider a prominent example of each type of strategy.

Henry Allison has argued that Kant's appearance/thing in itself distinction does not demarcate two distinct types of *object*, but rather two distinct ways of *considering* a single sort of object – the objects of experience. To consider an object as it appears is to consider it in its relation to experience, the form of which (the Aesthetic teaches us) is spatiotemporal. To consider things as they are in themselves

is to consider them independently of any relation to experience, and hence independently of the spatiotemporal form of experience. Accordingly, to consider them as they are in themselves is to consider them as non-spatial.[69] On Allison's initial formulation of this methodological interpretation of transcendental idealism, he accounts for the non-spatiality of things in themselves by interpreting it as the claim that it is impossible consider things *as spatial in themselves*. Allison says that this impossibility rests "partly on a stipulation concerning what is meant by considering things as they are in themselves" and that to suppose that one *can* consider things as spatial in themselves "is an obvious contradiction."[70]

This account, however, is open to significant worry: if the claim that things are spatial in themselves is a contradiction, then it would appear that transcendental idealism is an analytic truth: the negations of contradictions are, by Kant's lights, analyticities. In light of Kant's particular emphasis on the syntheticity of spatial truths (and on transcendental claims), it would be surprising to learn that the chief result of the Transcendental Aesthetic – a result Kant took to be a true "discovery" – is an analytic, and hence by Kant's lights formally unsubstantive, truth.[71]

On Allison's revised account, the non-spatiality of things in themselves is to be accounted for in terms of the impossibility of possessing epistemic warrant for

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69 This is the account offered Allison (1976) and (2004). Allison's account is indebted to Prauss (1974). Bird (1962) offers a similar approach and Robinson (1994) gives a distinct, but broadly similar account. For criticism of this view, see Van Cleve (1999), pp. 34 – 43 and 134-43.

70 Allison (1976), 319.

71 Allison has since given up the view that the non-spatiality of things in themselves involves an analytic necessity. See Allison (1996), ch. 1, pp. 8-9.

believing that things are spatial in themselves. On this view, in order to consider things as they are in themselves, I must consider them apart from any relation they bear to sensibility; accordingly, such considerations must not involve the *form* of sensibility – the representation of space. If such considerations are not spatial considerations, then one appears to be on poor epistemic footing in enquiring whether such things considered in themselves might have sensible properties. Insofar as one is warranted in attributing spatiality to any objects at all, one must already be considering the objects as appearances.[72]

While this account avoids construing transcendental idealism as a purely conceptual truth, it is an inadequate interpretation of Kant's non-spatiality claim. Kant holds in general that *all* non-analytic theoretical beliefs about things in themselves are unjustified: justification is provided by the possibility of experience, and to consider things in themselves is to consider them apart from the conditions of possible experience. If justification is impossible in general for claims about things in themselves, then explaining Kant's non-spatiality claim in terms of the impossibility of justification for it doesn't distinguish it from any other claim about things in themselves. It is given the same treatment as Kant's account of our epistemic ignorance of God and of the nature of things in themselves in general. But this account does not do justice to Kant's apparently unique treatment of the

72 Allison says that Kant's "idealism is not an ontological thesis about how things 'really are; (non-spatial and non-temporal), when seen from a God's-eye view. It is rather a critical thesis about the conditions of the cognition of things viewed from the 'human standpoint,' which is the only standpoint available to us. One can, of course, quarrel with Kant's claims that space and time are such conditions. What one cannot do is claim that it is possible *both* for space and time to be such forms *and* for things as they are in themselves to be spatial or temporal in any meaningful sense. Not only do we have no warrant for this, we could not conceivably get one." See Allison (2004), 132.

possibility that things are *spatial* in themselves. On a natural reading of the Aesthetic, Kant's point is to show that, though we cannot in general know the natures of things in themselves, we *can* know that they are not spatial. Allison's account assimilates Kant's non-spatiality claim with other claims about the noumenal, a strategy which appears contrary to the argument of the Aesthetic.

Those commentators who employ the metaphysical interpretation have typically taken Kant's argument for it to fail.[73] However, one recent interpretation casts the argument in a sympathetic light.[74] Desmond Hogan argues that Kant rules out the neglected alternative partly on the basis of his theory of libertarian freedom. He argues that Kant had committed himself by the time he wrote the *Critique* to the claim that noumena are free in the sense of lacking determining grounds. Hogan also attributes to Kant a conception of *a priori* knowledge according to which such knowledge is always knowledge of an object *via* its determining grounds.[75] If things in themselves lack determining grounds, our *a priori* knowledge of space cannot be knowledge of things in themselves. This conclusion, together with the assumption that we cannot know things in things in themselves empirically, entails that space is not a form of things in themselves.

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73 See, e.g., Guyer (1987), Strawson (1966) and Van Cleve (1999).

74 See Hogan (2009a) for an account of the non-spatiality of things in themselves. See also his (2009b) and (2009c) for discussion of the implications of this account for Kant's doctrines of epistemic humility and noumenal causation.

75 That Kant's fundamental conception of *a priori* knowledge is knowledge of something through its determining grounds is not a claim that has gotten a great deal of attention in the secondary literature. For a discussion of this conception of *a priori* knowledge in Leibniz, see Adams (1994), 109-10. Smit (2009) defends the view that this conception of *apriority* is fundamental for Kant.

This reading is original and provocative, and it deserves more attention that I will give it here. But I want very briefly to outline two initial worries one might have about it. First, it requires that we understand Kant as simply assuming a substantive metaphysical thesis about things in themselves at the outset of the Aesthetic: namely, that they are free.[76] This appears contrary to Kant's own stated aims.[77] Moreover, because Kant gives no obvious indication in the Aesthetic that such an assumption plays a significant role in the argument for idealism, the assumption must be taken as implicit. This is not decisive, but it marks an interpretive tension.[78]

Second, this interpretation does not appear to do justice to the content and structure of the Aesthetic itself. For the Aesthetic is presented as a self-contained

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76 Another recent sympathetic interpreter of Kant who pursues the metaphysical strategy is Langton (1998). On her view, appearances are to be identified with the extrinsic properties of objects, and the concept of a thing in itself is the concept of a thing taken purely intrinsically. The non-spatiality of things in themselves, for Langton, has to do with the relational nature of space – a nature that makes it incompatible with being a purely intrinsic property. Accordingly, it cannot be a property of things in themselves. As with Hogan's, this view of Kant has him implicitly taking for granted in the Aesthetic a substantive metaphysical claim about things in themselves. In Hogan's case, it is the claim that noumena are undetermined. In Langton's case, it is the claim that noumena have no extrinsic (or relational) properties.

77 In the Prolegomena, Kant contrasts the "analytic" method of argument he employs there with the "synthetic" method he employs in the Critique. Kant claims that in the Critique his arguments "develop cognition out of its original seeds without relying on any fact whatever." A natural way of interpreting this claim is that Kant means to be assuming nothing but what is given in the representation of space at the outset of the argument. If this reading is correct, then Hogan's metaphysical interpretation looks problematic. Kant, *Prolegomena to Any Future Metaphysics*, ed. and trans. Gary Hatfield. [Ak 4:274]

78 Hogan cites a number of passages from Kant's other writings and from his *Reflexionen* that reveal Kant's commitment to the notion that noumena are free and that they are therefore not knowable *a priori*. And he does cite a passage from Kant's argument for the ideality of time that he believes supports his interpretation: "if [time] were a determination or order inhering in things themselves, it could not precede the objects as their condition, and be known . . . *a priori* by means of synthetic propositions" [A 32-3/B 49] (This is Hogan's translation.) This passage is certainly consistent with Hogan's interpretation of the argument of the Aesthetic, but it does not decisively support it, since it is compatible with a conception of *a priori* knowledge according to which *a priori* knowledge simply gives us no insight into wholly subject-independent objects, regardless of whether we assume that they are undetermined.

argument for the transcendental ideality of space, an argument which appears to be premised upon the fundamental *apriority* and intuitivity of spatial representation. Though Hogan takes Kant's doctrine of *a priori* cognition to play an essential role in this argument, he appears to attach little importance to Kant's claim that the representation of space is an *intuition* the content of which is both singular and immediately present to the mind.[79] If this claim plays little role in generating the conclusion of the argument, then it is surprising that Kant devotes so much space in his famously compressed argument for idealism to arguing for these claims. This naturally leads one to believe that the singularity and immediacy of spatial intuition plays a role in generating Kant's idealistic conclusion.

Both the methodological interpretation and this recent metaphysical interpretation appear subject to philosophical or interpretive worries. In the following section I will set out in outline form a new interpretation of the argument of the Aesthetic, one which I take to avoid these worries.

2.2 The Argument for the Non-Spatiality of Things in Themselves

I will set out here what I take to be Kant's premises in his argument for the claim that "space is nothing other than merely the form of all appearances of outer sense, i.e., the subjective condition of sensibility, under which alone outer intuition

79 Hogan can allow that intuition plays an important role in the argument in the sense that intuition is the type of representation that gives us knowledge of space as a determined structure. But he doesn't appear to attach much importance to Kant's claim that space is a *singular* representation that involves an *immediate* relation to its object. But this claim would appear to be doing serious work for Kant. See below, pp. 62 – 73, for my own views about their role in the argument of the Aesthetic.

is possible for us." (op. cit.) The rest of the paper will be an elaboration of these premises.

Specifically, I believe Kant's argument is premised upon three central claims, which for the sake of simplicity I will call SINGULARITY, SUBJECTIVITY and CONTENT. I take each of these premises either to be a part of, or else to follow immediately from, Kant's initial arguments for the *apriority* and intuitivity of the representation of space.

> SINGULARITY: That which is represented in *a priori* intuition is absolutely singular.
>
> SUBJECTIVITY: It is not possible to intuit *a priori* any feature of any subject-independent thing.
>
> CONTENT: The content of spatial *concepts* is determined by the representational content of *a priori* spatial intuition.

SINGULARITY simply follows from Kant's conception of intuition. It says that it is not possible to represent *via a priori* intuition more than a single thing. SUBJECTIVITY is, by Kant's lights, entailed by the very notion of an *a priori* intuition. It is the claim that the accessibility of a representational content in *a priori* intuition entails the subject-dependence of that which is so intuited. Kant's makes this claim explicitly several times. I shall discuss what I take to be his argument for this claim. Finally, CONTENT is the claim that spatial *concepts* are subject to the representational constraints of *a priori* intuition mentioned in SINGULARITY and SUBJECTIVITY: spatial concepts can be used to *think* only the space represented in *a priori* intuition. CONTENT is not a claim that has generally been discussed in the literature on the

Aesthetic, but I shall argue in section 2.5 that Kant plausibly argues for it in the "metaphysical exposition" and that a number of comments he makes about the argument of the Aesthetic indicate his commitment to it. If this is right, then Kant's argument for idealism depends crucially upon the phenomenological singularity of spatial representation.

These three claims entail:

> NONSPATIALITY 1: It is not possible to represent in any way any space other than the single, metaphysically subjective space given originally in *a priori* intuition.

NONSPATIALITY 1 is a claim about the possible contents and referents of our spatial representations: it is a claim about what we can coherently represent. However, NONSPATIALITY 1, together with the claim that possibility requires coherent conceivability[80], entails:

> NONSPATIALITY 2: All possible spaces are parts of the actual, metaphysically subjective space given originally in *a priori* intuition.

NONSPATIALITY 2 is a denial that any non-intuitable space is metaphysically possible. Since all possible space are intuitable, and since things in themselves are not intuitable, I take the two NONSPATIALITY claims together to exhaust the content of Kant's claim that "space represents no property at all of any things in themselves." (op. cit.) It follows, then, that:

80 I say here "coherent conceivability" to rule out the coextensiveness of what one can grammatically say with what one can conceive.

IDEALISM: Space is merely a subjective form of intuition.

Since actual space is the only possible space, and since it has the status of being a subjective form, it follows that it is *merely* a subjective form.

Thus, contrary to a long tradition of criticism according to which Kant's argument for transcendental idealism is invalid because it fails to rule out a kind of spatial harmony between appearances and things in themselves, a plausible argument for the mere subjectivity of space can be found in the Aesthetic. In the following sections, I'll detail the claims upon which this argument relies.

2.3 SINGULARITY

Kant argues that spatial representation is fundamentally intuitive. The first thing to say about this argument is that Kant is certainly committed to SINGULARITY. He says that intuition is "immediately related to the object and is singular," while a concept "is mediate, by means of a mark, which can be common to several things." [A 320/B 377] And a central goal of the Transcendental Aesthetic is to show that our original representation of space *must* be an intuition precisely because the representation has a singular content:

> Space is not a discursive or, as is said, general concept of relations of things in general, but a pure intuition. For, first, one can only represent a single space, and if one speaks of many spaces, one understands by that only parts of one and the same unique space…. It is essentially single; the manifold in it, thus also the general concept of spaces in general, rests merely on limitations. [A 24-5/B 39]

Kant here infers the intuitivity of the representation of space from the singular content of the representation.[81] Any representation of distinct spaces merely involves imposing "limitations" upon the single space originally given. This argument clearly commits Kant to SINGULARITY: that which we represent in *a priori* intuition is absolutely singular.[82]

Nevertheless, the notion of singular reference at play in this argument remains obscure. Because Kant defines concepts as general representations and intuitions as singular representations, he appears committed to the idea that any representation of an individual must involve intuition. But he also appears to have the resources to say otherwise – and, indeed, he frequently appears otherwise committed. For Kant clearly thinks that we can coherently speculate about God – presumably by employing the singular concept God. Likewise, Kant speaks of the black man as a singular concept and Kant commits himself in numerous texts to singular concepts.[83] So Kant's relegation of singular reference to intuition is something of a mystery. However, it is worthwhile to uncover the precise sense in

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81 I will leave aside for the moment Kant's final argument in the "metaphysical exposition," since I am merely trying to establish at this point that Kant took intuition to refer to a single object. The final argument is primarily a negative argument: Kant says that we represent space as succumbing to an infinite number of possible divisions – i.e., as an object with an infinity of parts – and that such a part/whole relationship cannot be represented conceptually. See Anderson (2004), for a clear account of this argument.

82 Notice that Kant does not deny that we can represent space conceptually: "an *a priori* intuition [of space] which is not empirical grounds all concepts of it." [A 25/B 39]. Thus Kant's claim is not that we cannot conceptualize space - it is not that we cannot conceive of a multitude of spaces organized in virtue of their particular qualitative features (e.g., three-sided, closed figures) – but rather that such conceptualization is fundamentally grounded in an intuitive representation of space. We shall have occasion to return to this point shortly. See section 5, below.

83 See Parsons (1992) and (1969) for a discussion of Kant on the possibility that particular concepts have individual objects. Cf. Thompson (1972) and Warren (1998).

which Kant takes intuition to be singular since, as we shall see in the next section, this conception of singularity plays an important role in Kant's argument for SUBJECTIVITY. I shall follow Parsons in supposing that Kant's conception of singular *intuitive* reference involves a direct perceptual relation to the referent of the intuition.

Kant conceives of concepts as general in the sense that they refer to objects by placing them in a class of qualitatively similar objects in virtue of representing them as bearing certain qualitative characteristics. So, for example, the concept human refers in virtue of the "marks," or other concepts, that are "contained" within it: rational and animal. The employment of the concept human necessarily involves employing other, "mediate" representations in virtue of which human picks out a class of objects – namely, those objects that share the qualities of being both rational and animals. The problem, however, is that it would appear that a sufficiently large concatenation of purely general representations can represent a single object, as in a definite description. For example, the concept the current president of the United States appears to have exactly one object, and so is singular. So though Kant appears to restrict singular reference to intuitions, in light of the possibility of purely conceptual singular reference, Kant's distinction between intuitions and concepts appears ungrounded.

According to Jaako Hintikka, Kant intends intuitions essentially to function as singular terms.[84] If this is right, then the difference between intuitions and concepts is analogous to the difference between "Barack Obama" and the current president of

84 See Hintikka (1965), (1967) and (1969).

the United States. The former necessarily refers to a particular individual regardless of which characteristics the individual bears, while the latter picks out an individual only contingently – that is, only insofar as there happens to be an individual that bears the characteristics specified by the concept. In the moments between JFK's assassination and LBJ's swearing in, the current president of the United States did not refer; "Lyndon B. Johnson" referred to the same individual both before and after the swearing-in, even though that individual's characteristics changed. For Hintikka, intuitive singularity does "not necessarily have anything to do with appeal to imagination or to direct perceptual evidence."[85] Rather, on Hintikka's view, Kant's emphasis on the *immediacy* of intuition is to be minimized: intuition is defined as singular, and the immediacy of intuition is simply a logical corollary of its singularity. Kant's emphasis on immediacy is thus given a non-perceptual reading.

However, if immediacy is simply a logical corollary of singularity, then if it is indeed possible to have a singular and purely conceptual representation, one should be able to show that such singular concepts (like the current president of the United States and God) are immediate representations. This surely does violence to Kant's own claims. Indeed, Kant's emphasis on the immediacy of intuition should not minimized. Kant opens the Aesthetic by *defining* intuition as immediate representation, and draws no initial connection between singularity and intuition.[86] And in his second argument for the claim that the representation of space is an

85 Hintikka (1965), 130. He goes on to write: "In the form of a paradox, we may perhaps say that the 'intuitions' Kant contemplated were not necessarily very intuitive. For Kant, an intuition is simply anything which represents or stands for an individual object as distinguished from general concepts."

86 He writes: "In whatever way and through whatever means a cognition may relate to objects, that through which it relates immediately to them…is **intuition**." [A 19/B 33]

intuition, Kant begins with the claim that space is "given." [A 25/B 39] In light of the textual problems with Hintikka's proposal, Charles Parsons has argued that the immediacy criterion of intuition is logically independent of the singularity criterion:

> [I]t evidently means that the object of intuition is in some way directly present to the mind, as in perception, and that intuition is thus a source, ultimately the only source, of immediate knowledge of objects.[87]

Thus, on Parsons' view the distinction between intuitions and concepts is to be explained not in terms of *that to which* they refer, but rather in terms of *how* they refer. Concepts can refer to individual objects, but they cannot do so immediately. And this is because conceptual reference is always *via* other representations. If a concept refers to a single object, it does so only in virtue of the contingent fact that there is merely a single individual who bears all the characteristics contained in the concept. That is, such a concept refers to a single object only *mediately*. Intuitions, on the other hand, refer to individuals immediately in the sense that they require a direct perceptual (or experiential) relation between the mind and its object. Whether or not a concept picks out an individual is independent of any relationship the subject stands in to the object, and is independent of any phenomenological facts about the subject. If Parsons is right, this is not true of intuitions: they refer to single objects, but do so only in virtue of a direct experiential relation to the referent.

Kant accordingly holds not merely that intuitions pick out single objects. This alone does not distinguish them from concepts. Kant holds also that intuitions pick

87 Parsons (1969), 112.

out single objects in virtue of standing in a direct perceptual relation to them. No intuition can refer to an object that is not experientially "present."[88] SINGULARITY, then, says that intuition puts the mind in a direct perceptual relation to a single object. Let's turn now to Kant's argument for SUBJECTIVITY.

2.4 SUBJECTIVITY

Crucial to Kant's argument for SUBJECTIVITY are his arguments for the fundamental *apriority* of spatial representation in the Transcendental Aesthetic. In the "metaphysical exposition" Kant argues that an investigation of spatial representation reveals that sensible cognizers are in possession of an *a priori* representation of space:

> [I]n order for certain sensations to be related to something outside me …thus in order for me to represent them as outside <and next to> one another, thus not merely as different but as in different places, the representation of space must already be their ground. Thus the representation of space cannot be obtained from the relations of outer appearance through experience, but this outer experience is itself first possible only through this representation. [A 23/B 38]

> Space is a necessary representation, *a priori*, that is the ground of all outer intuitions. One can never represent that there is no space, though one can very well think that there are no objects to be encountered in it. It is therefore to be regarded as the condition of the possibility of appearances, not as a determination dependent on them, and is an *a priori* representation that necessarily grounds outer appearances. [A 24/B 39]

88 Another important, and related, difference between intuitions and concepts is that intuitions arise only upon affection, since they are the representations afforded us by sensibility, and sensibility is a wholly passive faculty of representation. Concepts arise "spontaneously." Accordingly, concepts can be used to think about possibilities independently of experience; intuition, presumably, cannot, since it represents only in virtue of affection. This, then, is the sense of "presence" alluded to above.

In the first argument, Kant claims that a condition on the possibility of representing objects as spatially related is that they be represented as *in* a space that contains the distinct places that the objects occupy and that are the relata. Since experience of objects is experience of them *as* in distinct spaces, the representation of space cannot be derived from the experience of objects, and is thus *a priori*.[89] In the second argument, Kant holds that though I can represent space as absent of any objects, I cannot represent the absence of space. Accordingly, the representation of space cannot be derived from the empirical representation of objects, and so must be *a priori*. A plausible way of understanding these claims is that they together reveal constraints on the possible representational content of any outer representations: insofar as outer representations are possible at all, they must include spatiality as the formal component of their representational content, and that this feature of their representational content partly determines any other features of any fully determinate outer representations.[90]

Thus, Kant holds that spatial representation is fundamentally both intuitive and *a priori*. Kant claims that intuitions belong to sensibility, which is a passive faculty of representation. This means that sensibility must be *affected* in order to generate a representation – unlike the understanding, which produces concepts even in the absence of affection. But this claim is in immediate tension with Kant's claim that spatial representation is *a priori*. For Kant defines *a priori* representation as "independent of all experience and even of all impressions of the senses." [B2]

89 I follow Warren (1998) in my reading of this argument.

90 By "fully determinate outer representation" I mean representation of an object. Kant's point appears to be that such representations are possible only if the objects appear *in* space.

Thus, a puzzle emerges: if intuition requires affection, but *a priori* representation occurs independently of experience, then how is *a priori* intuition possible at all? Kant's solution to this puzzle reveals his commitment to SUBJECTIVITY.

In the Preface to the B-edition of the *Critique*, Kant says that "we can cognize of things *a priori* only what we ourselves have put into them." [Bviii] This is pithy, but in the following passages, Kant expands upon this proposed solution to the puzzle:

> Even if we could bring this intuition of ours to the highest degree of distinctness we would not thereby come any closer to the constitution of objects in themselves. For in any case we would still completely cognize only our own way of intuiting, i.e., our sensibility, and this always only under the conditions originally depending on the subject, space and time. [A 43/B 60]
>
> [T]hat which, as representation, can precede any act of thinking something is intuition and, if it contains nothing but relations, it is the form of intuition, which, since it does not represent anything except insofar as something is posited in the mind, can be nothing other than the way in which the mind is affected by its own activity…. [A 49/B 67]

In these passages, Kant indicates something of his solution to the puzzle: that which is represented in *a priori* intuition is merely subject-dependent. Indeed, Kant is aware of the importance of this puzzle in the "transcendental exposition" when he asks, "[H]ow can an outer intuition inhabit the mind that precedes the objects themselves, and in which the concept of the latter can be determined *a priori*?" And recall his answer: "Obviously not otherwise that insofar as it has its seat merely in the subject, as its formal constitution for being affected by objects…, thus only as the form of outer **sense** in general." [A 25/B 41] Kant's initial answer, then, seems to be

that *a priori* intuition is possible only if the object of intuition is a feature of sensibility itself.

However, these passages do not provide much of an *argument* for the claim that *a priori* intuition cannot represent any features of any subject-independent objects. The Aesthetic itself suggests an argument. As we have already seen, Kant holds that intuition is immediate representation, which means that intuition involves a direct experiential relation between the bearer of an intuition and that which is intuited. Intuition thus requires that its object be given in experience. But the only way such a relation is possible independently of empirical affection – i.e., possible *a priori* – is if that to which sensibility stands in immediate relation is something that itself is not an empirically given component of experience.[91] But if the intuition's relatum is not an empirically given component of experience, then it must be a component of experience that is dependent upon the faculty of sensibility itself.[92] Thus, that to which intuition puts the subject in direct relation cannot be any

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91 The conception of singularity discussed in the previous section – intuitive singularity, according to which the subject is put in an immediate experiential relation to its object – thus plays a significant role in Kant's argument for SUBJECTIVITY. For the possibility of standing in a *mediate* relation to a single object independently of experience is considerably less problematic: by thinking of God, I appear to do just that (if God exists, of course). But Kant's point here is that the representation of space is an intuition, and so the possibility of this *a priori* relation to an object requires that the object in question be subject-dependent.

92 Some have understood Kant's claim in the transcendental exposition that space "has its seat merely in the subject, as its formal constitution for being affected by objects…, thus only as the form of outer **sense** in general" in a weak sense according to which Kant means to say only *a priori* spatial intuition reveals a necessary condition upon possible objects of perception. If this weak interpretation is correct, Kant is in trouble, since it surely seems possible that a mere necessary condition could be met both subjectively and objectively. However, Kant argues for this (neutral) claim in the metaphysical exposition: "[Space] is therefore to be regarded as the condition of the possibility of appearances, not as a determination dependent on them…." [A 24/B 39] In the transcendental exposition, he argues for a stronger claim: he shows that this condition is a *subjective* condition, a condition that sensibility itself supplies. If this weren't his strategy in the transcendental exposition, then his argument there would be redundant. So the argument is most plausibly read as

feature of any wholly subject-independent thing. To deny this, Kant apparently believes, would be to commit oneself to the irresolvability of the puzzle mentioned above: because *a priori* representation is representation independent of all experience, *a priori* intuition allows sensibility to stand in relation only to a representational content that is dependent upon sensibility itself. This is SUBJECTIVITY.

Finally, Kant makes this argument explicitly in the *Prolegomena*. He writes:

> If our intuition had to be of such a nature as to represent things as they are in themselves, there would not be any intuition *a priori*, but intuition would be always empirical. For I can only know what is contained in the object in itself if it is present and given to me. It is indeed even then inconceivable how the intuition of a present thing should make me know this thing as it is in itself, as its properties cannot migrate into my faculty of representation. But even if this possibility be granted, an intuition of that sort would not take place *a priori*, that is, before the object were presented to me; for without this latter fact no ground of a relation between my representation and the object can be conceived, unless it rested on inspiration. [Ak. 4:282; p. 24]

Here, Kant denies that it is *conceivable* that objects are intuitable as they are in themselves independently of affection – and even then, he doubts that empirical affection is sufficient for such representation. In arguing that *a priori* intuition refers only to the necessary formal features of any possible representational content, Kant commits himself to SUBJECTIVITY: it is not possible to intuit *a priori* any features of any wholly subject-independent objects.[93]

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asserting that spatial intuition reveals not merely a condition on perception, but a *subjectively supplied contribution* to perception.

93 That Kant holds that we cannot intuit *a priori* any features of things in themselves is uncontroversial, but commentators diverge about Kant's justification for the claim. The argument I've just attributed to Kant relies on a claim about the nature of *a priori* intuition: an immediate relation to something independently of empirical affection is possible only if

It is important to see exactly what Kant is claiming with SUBJECTIVITY. Kant is not claiming that we represent space *as* a subjectively supplied component of the representational content of outer representations: no qualitative feature of space as it is represented indicates that space is not an objective feature of subject-independent things. Indeed, it *appears* that I represent wholly subject-independent objects in perception. Kant's claim, as I interpret it, is about the possibility of such a qualitative content in the first place. The possibility of representing such content both *a priori* and intuitively ensures the mind-dependence of the content so represented: the possibility of the relation itself guarantees the mind-dependence of that to which I stand in such a relation.[94]

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the relatum is itself subject-dependent. Hogan's metaphysical interpretation of the non-spatiality of things in themselves also has Kant establishing that things in themselves are unintuitable *a priori*. But, by his lights, Kant establishes this principle on the basis of a claim about the metaphysical nature of things in themselves: because they are undetermined, and because *a priori* knowledge is knowledge of something via its determining grounds, they cannot be known *a priori* at all. To my mind, this does not do justice to Kant's emphasis on the immediacy of the *a priori* representation in question: intuition. See Hogan (2009a) and (2009b) for his exposition of this claim.

94 Consider an analogy to color. One might plausibly hold, on the basis of considerations about the variability of color experiences and the potential for *a priori* knowledge of color relations, that color experiences are possible only if the certain aspects of the representational content of such experiences is "brought to experience," or imposed, by the mind. This, of course, does not require that when I represent objects as colored, I represent objects as subjectively determined. Rather, I represent objects as colored in themselves. But this is consistent with holding that colors are not in fact properties of those objects at all (indeed, it is consistent with holding that colors couldn't possibly be properties of those objects). This is, of course, just an analogy: Kant warns against understanding space as a secondary quality (see a famous passage at B 45), and Kant's reasons for thinking that space is the subject's own contribution to the representational content of an outer experience is surely quite different from any reasons a color theorist might adduce for the analogous claim about color representations. I aim only to point out that one might take a representation to be subjective in the sense of being unreflective of the true nature of subject-independent objects while at the same time holding that the qualitative content of such a representation does not reveal this fact. By contrast, Allais (2007) holds that a proper understanding of Kant's conception of the secondary qualities reveals that it is fruitful to think of space as a kind of secondary quality.

Finally, before moving on, it is important to see what SINGULARITY and SUBJECTIVITY entail with respect to the possible spatiality of things in themselves. If things in themselves are spatial, then either:

A) The space in which things in themselves exist is numerically identical to the space in which appearances exist

or

B) The space in which things in themselves exist is numerically distinct from the space in which appearances exist

The conjunction of SINGULARITY and SUBJECTIVITY together rule out (A). Since the space in which objects appear is intuitable *a priori*, the possibility that things in themselves populate parts of this space thus requires that at least some of their features be intuitable *a priori*. But SUBJECTIVITY denies that this is possible. (A) is therefore incompatible with SUBJECTIVITY, and it is ruled out.[95]

95 It is worth noting that SUBJECTIVITY does seem to imply the non-identity of appearances and things in themselves. That's because SUBJECTIVITY implies that things in themselves, however they are, definitively do not exist in the space of appearances (on pain of supposing we can intuit *a priori* features of things in themselves). Since SUBJECTIVITY is not a methodological claim about constraints on possible considerations of objects – indeed it does not alone deny that we can *consider* things as spatial in themselves – it is incompatible with Allison's one-world reading of transcendental idealism. (See above, pp. 55 – 56) However, SUBJECTIVITY does not rule out a different variety of one-world interpretations, according to which space is a relational or extrinsic (and hence subject-dependent) property of things in themselves. On this view, things are not metaphysically spatial in themselves, but *are* metaphysically spatial insofar as they stand in relation to perceivers. This is the sort of view argued for by Langton (1998) and Allais (2004). I think this sort of metaphysical one-world interpretation of transcendental idealism is problematic because I doubt Kant can justify attributing any numerical properties to things in themselves, something that is required for the numerical identity of appearances and things in themselves. Nevertheless, nothing I have said here entails that this view is false. For discussion of the view that the objects of experience are the intentional objects of intuitions, see Pereboom (1988), Aquila (1981) and (1983) and Baldner (1988). See Adams (1997) for an argument for agnosticism about the numerical identity of appearances and things in themselves.

SINGULARITY and SUBJECTIVITY do not, however, rule out (B) because they imply claims only about the nature of objects of intuition, and say nothing about objects that cannot be intuited. But (B) is just the possibility that things in themselves exist in an unintuitable space qualitatively similar to the space of appearances. So, what SINGULARITY and SUBJECTIVITY do not alone rule out is the possibility that things in themselves exist in a single space (or, for that matter, a plurality of spaces) qualitatively similar to, but numerically distinct from, the space of appearances. To establish transcendental idealism, Kant must rule out this "neglected alternative." I aim to show in the next section that Kant does this by arguing that spatial possibilities are exhausted by the possibilities revealed in *a priori* intuition.

2.5 CONTENT

CONTENT is the claim that the representational content of spatial concepts is determined by the representational content of *a priori* spatial intuition. It amounts to the claim that the limits of the spatial possibilities one can *conceive* are exhausted by the content of spatial intuition. Most importantly, since space must be *intuited* as a single whole, so must spaces represented conceptually be understood as mere parts of a single whole. In this section, I aim to do two things. First, I intend to show that CONTENT is at work in Kant's argument for the ideality of space in the Transcendental Aesthetic. The role of CONTENT in this argument has generally been overlooked. Second, because CONTENT is likely to appear unwarranted in this context, I aim to elucidate it by examining Kant's most prominent discussion of

spatial concepts: his theory of geometric concept construction. CONTENT is a crucial component of Kant's argument for idealism, and to recognize it as such is to see that Kant's argument for idealism depends vitally on the phenomenological singularity of spatial representations.

CONTENT is a claim about the nature of spatial concepts. Accordingly, it presupposes that there *are* spatial concepts. Kant's emphasis on the intuitivity of spatial representation may arouse suspicion about the very intelligibility of the notion of a spatial concept in the Kantian system. Indeed, Kant holds that spatial representation is fundamentally – or "originally" – intuitive. But he quite clearly also holds that we can represent space conceptually. For, recall his claim in the "metaphysical exposition" in an argument designed to show that space is fundamentally intuitive:

> [Space] is essentially single; the manifold in it, thus also the general concept of spaces in general, rests merely on limitations. From this it follows that in respect to it an *a priori* intuition (which is not empirical) grounds all concepts of it. [op. cit]

Kant does not deny in the "metaphysical exposition" that there are spatial concepts. Rather, he denies that all spatial representation is fundamentally conceptual: *a priori* intuition "grounds" all spatial concepts.[96] Furthermore, Kant's philosophy of geometry requires the use of geometric concepts, which are a species of spatial concepts.[97]

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96 What it means for an intuition to "ground" a concept is precisely what I aim to explicate here; CONTENT is, by my lights, an elucidation of this grounding claim.

97 Kant writes:

By Kant's lights, a spatial concept is a representation of class of possible spatial regions grouped by their definitive characteristics. The geometer constructs the concept triangle, which represents a class of possible spatial regions in virtue of combining several qualitative marks: three-sided, closed, planar, and figure. Likewise, geometric proofs require the conceptual relation outside of, by which the geometer generically represents a relation that can hold between a multitude of possible spatial regions – regions that jointly satisfy this concept insofar as they are non-coincident and non-overlapping. And Kant indicates that one might represent any bounded region of space simply by employing the concept space.[98]

In his argument for the intuitivity of spatial representation – of which we have seen parts already – Kant commits himself to CONTENT. He writes:

> Space is not a discursive, or, as is said, general concept of relations of things in general, but a pure intuition. For, first, one can only represent a single space, and if one speaks of many spaces, one understands by that only parts of one and the same unique space. And these parts cannot as it were precede the single all-encompassing space as its components (from which its composition would be possible), but rather are only thought **in it**. It is essentially single; the manifold in it, thus also the general concept of spaces in general, rests merely on limitations. From this it follows that in respect to it an *a priori* intuition (which is not empirical) grounds all concepts of it.

> **Philosophical** cognition is **rational cognition** from **concepts**, mathematical cognition that from the **construction** of concepts. But to **construct** a concept means to exhibit *a priori* the intuition corresponding to it. For the construction of a concept, therefore, a **non-empirical** intuition is required, which consequently, as intuition, is an **individual** object, but that must nevertheless, as the construction of a concept (of a general representation), express in the representation universal validity for all possible intuitions that belong under the same concept. [A 713/B 741]

Kant quite clearly affirms here that it is possible to have a "general representation" of space. See Shabel (2006) for a clear account of Kantian construction.

98 When, in the "metaphysical exposition," Kant refers to the "general concept of spaces in general," I take him to be talking about what I have here termed space. It is important to see that this most general spatial concept must refer only to bounded spatial regions: as Kant is at pains to argue in the fourth argument of the "metaphysical exposition," no concept can represent an infinity – which is precisely what Kant takes unbounded space to be.

> Thus also all geometrical principles, e.g., that in a triangle two sides together are always greater than the third, are never derived from general concepts of line and triangle, but rather are derived from intuition and indeed derived *a priori* with apodictic certainty. [A 25/B 39]

Kant makes at least two important claims in this passage. First, he claims that in order to "speak of many spaces" - a capacity that is surely conceptual rather than intuitive, since intuitions represent their objects singularly – one must suppose that such spaces are merely parts of a single, "unique" space. Kant indicates here that spatial concepts cannot include in their extensions *wholly* discrete spatial regions; rather, the capacity to conceive of distinct spatial regions presupposes the capacity to represent such regions as mere parts of a spatial whole.

Second, Kant claims that such a spatial whole cannot be generated from the prior representation of the parts: it is not possible first to represent discrete spatial regions from which one then composes a spatial whole, of which such regions are component parts. Rather, Kant holds that a condition upon representing individual component parts is that they be conceived as "limitations" of a unique spatial whole.

For these reasons, Kant indicates that "an *a priori* intuition...grounds all concepts of" space. From the preceding discussion, it is clear what the nature of this grounding relation is: the possibility of representing individual spatial regions – or grouping them according to their qualitative characteristics – presupposes the representation of a spatial whole of which the individual regions are component parts. Spatial concepts, then, presuppose the representational singularity of spatial intuition. If it is not possible to represent wholly subject-independent things in spatial intuition, and the capacity to conceptualize space presupposes intuitive

spatial content, then one would expect spatial concepts to be no more applicable to possible subject-independent objects than is spatial intuition. By Kant's lights, we haven't the representations with which to think the supposed possibility that things in themselves are spatial – the very "alternative" possibility Kant is meant to have neglected in his argument for idealism.

That Kant's strategy in arguing for the ideality of space includes committing himself to a substantive thesis regarding the representational limitations of spatial concepts is confirmed by a collection of passages in which Kant discusses his argument for the ideality of space:

> With the **pure concepts of the understanding**, however, there first arises the unavoidable need to search for the transcendental deduction not only of them but also of space, for since they speak of objects not through predicates of intuition and sensibility but through those of pure *a priori* thinking, they relate to objects generally without any conditions of sensibility; and since they are not grounded in experience and cannot exhibit any object in *a priori* intuition on which to ground their synthesis prior to any experience, they not only arouse suspicion about the objective validity and limits of their use but also make the **concept of space** ambiguous by inclining us to use it beyond the conditions of sensible intuition, on which account a transcendental deduction of it was also needed above. [A 88/B 120-1]

> Space and time are valid, as the condition of the possibility of how objects can be given to us, no further than for objects of the senses, hence only for experience. Beyond these boundaries they do not represent anything at all, for they are only in the senses and outside of them have no reality. The pure concepts of the understanding are free from this limitation and extend to objects of intuition in general, whether the latter be similar to our own or not…. [B 148]

> As far as their origin is concerned, the categories are not grounded on sensibility, as are the forms of intuition, space and time; they therefore seem to allow an application extended beyond all objects of the senses. [B 305]

In each of these passages, Kant is concerned to draw attention to an asymmetry between the pure concepts of the understanding and spatial representations in terms of their possible referents. The pure concepts of the understanding, he says, apply to "objects…in general," whereas spatial representations apply merely to "objects of the senses." Kant explains this asymmetry by noting that the distinct types of representation have distinct "origins." Kant says that the pure concepts of the understanding "relate to objects generally" *because* they are not "grounded on sensibility," whereas spatial representations *are* so grounded, and hence represent only objects of the senses. Beyond these boundaries "they do not represent anything at all."[99]

So, there is significant textual evidence that Kant commits himself to CONTENT in the course of arguing for the subject-dependence of space. The attribution of CONTENT to Kant carries significant interpretive benefit, too. Recall that Kant's idealism consists of two components: the claims that 1) space is a subjective form of appearances; and that 2) space is *merely* a subjective form of appearances. Upon arguing that space is a subjective form, Kant draws two conclusions: first, that "space represents no property at all of any things in themselves" (op. cit.) and, second, that "space is nothing other than merely the form of all appearances of outer sense, i.e., the subjective condition of sensibility, under which alone outer intuition is possible for us." (op. cit.) The first of these conclusions appears to be an

99 Many commentators have thought that Kant is inconsistent when he claims that the categories can be applied to non-sensible objects. This is the subject of Chapter 4; I shall accordingly postpone further discussion of this topic until then. Cf. Adams (1997) and Hogan (2009c).

intermediate conclusion, required to establish the second claim, which is Kant's statement of the ideality of space. But Kant's claim that "space represents no property at all of things in themselves" is clearly a claim about the possible referents of spatial representations. This alone indicates that Kant takes his idealism to require a commitment to the possible referents of spatial representations. If such a commitment has appeared ungrounded to Kant's commentators, it is because they have failed to notice that Kant demonstrates his commitment to CONTENT prior to drawing his "conclusions" - an claim that carries with it a commitment to the possible referents of spatial representation *tout court*. In light of the attribution of CONTENT to Kant, the structure of his "conclusions" becomes intelligible.[100]

Finally, Kant confirms his commitment to CONTENT in a passage dated after the publication of the second edition of the *Critique*:

> For the representation of space (together with that of time) has a *peculiarity* found in no other concept; viz., that all spaces are only possible and *thinkable* as parts of one single space, so that the representation of parts already presupposes that of the whole. (Ak. 20:419-21; emphasis mine.)

Of particular importance in this passage is Kant's claim that it is not possible even to *think* of spatial regions that are not themselves parts of a single, subjectively given space. This is, of course, the very upshot of CONTENT.[101]

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100 See below, pp. 84 – 87, for my discussion of precisely how I understand the structure of Kant's inferences from SINGULARITY, SUBJECTIVITY, and CONTENT to his idealism (and which I briefly sketched above, pp. 8 – 9). I mean to point out here only that one reason for supposing Kant is committed to CONTENT is that his stated "conclusions" appeal to a claim that appears to depend upon CONTENT.

101 Emily Carson (1997) cites this passage in a different connection. Carson has pointed out to me that there is an available reading of this passage according to which Kant might merely

To this point, I aim to have demonstrated that Kant takes his argument for the ideality of space to depend upon CONTENT. This is significant in its own right, since it is a claim that has been overlooked. If CONTENT is correct, then spatial concepts cannot be used to conceive of non-intuitive spatial possibilities, since spatial concepts merely individuate possible components of singular spatial intuition. However, though it is clear enough that Kant endorses CONTENT, none of these passages offer an explicit argument for it: why does Kant suppose that the capacity to represent individual spatial regions and relations presupposes the capacity intuitively to represent space as a unique spatial whole? Attention to Kant's philosophy of geometry – his exposition of which contains his most prominent discussion of spatial concepts – reveals something of an argument on his behalf.

Kant holds that geometric truths cannot be determined on the basis of conceptual analysis: from the mere definition of a geometric concept (e.g., triangle), one cannot deduce the properties of the objects in the extension (e.g., that the interior angles of a triangle sum to 180 degrees) merely by analyzing the components of the definition (e.g., three-sided, planar, figure).[102] Accordingly, Kant holds that the geometer must "construct" geometric concepts "in" *a priori* intuition: in order to determine the features of geometric objects, the geometer must represent to herself particular spatial regions in *a priori* spatial intuition. The

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be meaning to say that *intuitively given* space must be represented as a single whole, and that this does not preclude a weak sense in which wholly discrete spaces are conceivable. But this requires supposing that Kant is using "thinkable" in a loose, non-technical sense in this passage. Typically, Kant uses "thinkable" to refer to a specific conceptual capacity. If he is so using it here – as I believe he is – then this passage is strong evidence of Kant's commitment to CONTENT.

102 Thus, "the interior angles of a triangle sum to 180 degrees" is, by Kant's lights, a necessary, but non-analytic, truth.

geometer proceeds to reason about geometric concepts by performing constructive operations on the intuitively represented figures: the geometer demonstrates her conclusions in virtue of her capacity to manipulate and add further features to the constructed figure.[103] Crucially, this capacity requires a nonconceptual representation of space: it requires the ability to represent the constructed figure as a mere part of a larger space within which the constructed figure may be manipulated.[104]

Moreover, Kant argues that the mere consistency of a geometric definition is insufficient to know that the supposed concept has any content at all. Rather, we must appeal to nonconceptual forms of representation in order to know this. He affirms this in his discussion of the concept biangle:

> [I]n the concept of a figure that is enclosed between two straight lines there is no contradiction, for the concepts of two straight lines and their intersection contain no negation of a figure; rather the impossibility rests not on the concept in itself, but on its construction in space, i.e., on the conditions of space and its determinations…. [A 220-1/B 268]

Here, Kant says that the accumulation of non-contradictory marks is not sufficient for grasping any content at all. And that's because the mere collection of two-sided, closed, and figure, though not contradictory, is insufficient for the representation of

103 For example, the proof that the interior angles of a triangle sum to 180 degrees requires that the geometer be able to extend the base of a triangle and construct a line parallel to one of the sides.

104 It is important to see that, for Kant, a *concept* cannot represent something as a *part* of something else; rather, concepts represent their objects as members of a species, which falls under a particular genus.

any objective content: the lack of a possible construction in space renders the supposed concept empty of content.[105]

Thus, on Kant's view, spatial concepts require appeal to *a priori* intuition for their meaningfulness and they codify and elucidate relationships among parts of space represented in *a priori* intuition. Accordingly, Kant must deny that such concepts can be used meaningfully to think possibilities about things in themselves. For to employ a spatial concept is to represent the possibility of a spatial region that conforms to *a priori* spatial intuition, i.e., a region which is merely a part of a larger, single spatial whole. This is tantamount to supposing that the spaces one can *conceive* are mere parts of the space one can *intuit*.

On this view, spatial concepts cannot be predicated of anything that cannot be represented intuitively because the intuitability of the regions in the extensions of the spatial concepts is a presupposition of the meaningfulness of the concepts themselves. To be sure, spatial concepts do not *contain* other, subjective predicates: the necessarily subjective reference of spatial thoughts is not an analytic necessity. On the view I am imputing to Kant, the necessity is not underwritten by the meanings of the elements that compose the concepts, but rather by the conditions of the possibility of the concepts in the first place.[106]

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105 See Chapter 5, pp. 174 – 183, for further discussion of the status of biangle.

106 One interesting route of inquiry, which I will not pursue here, is an interpretation of Kant's claim that a real geometric concept "contains a pure intuition within itself." [A 719/B 747] In light of the present discussion, this claim is interesting because Kant employs a notion of "containment" in his discussion of pure intuition, a notion he usually reserves for discussion of concepts. Kant holds that concepts are representationally and referentially limited only in virtue of the other concepts that are "contained" within them. If the argument I am giving is right, then Kant argues that there is an additional representational constraint on spatial concepts: they are limited not only by the other concepts contained within them, but also by

According to some commentators, Kant's standard for the meaningfulness of a thought is simply non-contradictoriness.[107] If Kant indeed holds this view for all representations, then the non-contradictoriness of predicating spatial properties of things in themselves would show that, by Kant's lights, such representations indicate at least mere logical possibilities. This would be tantamount to affirming that Kant has indeed left open a neglected alternative. On the view defended here, however, non-contradictoriness is a merely necessary, and not sufficient, condition for the meaningfulness of representations including spatial predicates. Indeed, Kant seems to commit himself to the mere necessity of non-contradictoriness in his discussion of the concept of a biangle (cited above, previous page).

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the representational content of pure intuition. One possible way to develop this claim further would be in terms of *intuitive* "containment" relations. This may seem metaphorical. But surely the notion of "containment" in Kant's theory of concepts cannot be taken literally. (Indeed, one would think the *more* literal interpretation would apply to the case of intuition, since the notion of *spatial* containment doesn't seem obscure in the way that the notion of *conceptual* containment does.) Cf. Anderson (2004).

107 Kant appears to indicate as much in this famous passage from the Preface to the second edition of the *Critique*:

> To **cognize** an object, it is required that I be able to prove its possibility (whether by the testimony of experience from its actuality or *a priori* through reason). But 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, even if I cannot give any assurance whether or not there is a corresponding object somewhere within the sum total of all possibilities. But in order to ascribe objective validity to such a concept (real possibility, for the first sort of possibility was merely logical) something more is required. [B xxxvi]

Here Kant says that thoughts are coherent insofar as they fail to contain contradictions. I shall discuss this passage again shortly (pp. 86), arguing there that Kant ultimately holds that non-contradictoriness is a merely *necessary*, but not *sufficient*, condition upon intelligibility.

2.6 Kant's NONSPATIALITY Claims and the Ideality of Space

In light of the results of the previous two sections of the chapter, consider again the supposition that things in themselves exist in space. At the top of the previous section, I argued that SUBJECTIVITY and SINGULARITY alone were not sufficient to rule out this possibility. However, if I am right to suppose that Kant affirms CONTENT, then we are now in a position to see that Kant must deny such a supposition.

Recall the two ways in which it is possible to affirm that things in themselves are spatial. Kant must affirm either

A) The space in which things in themselves exist is numerically identical to the space in which appearances exist.

or

B) The space in which things in themselves exist is numerically distinct from the space in which appearances exist.

I have argued that Kant cannot affirm (A) because (A) requires allowing that it is possible to intuit *a priori* determinations of things in themselves – something that SUBJECTIVITY and SINGULARITY rule out. Accordingly, if it is coherent to suppose that things in themselves are spatial, then Kant must affirm (B). But if Kant affirms CONTENT, then (B) is ruled out because it requires that one be able to conceive of a space distinct from the space one represents in *a priori* intuition. But CONTENT, in conjunction with the claim that we can intuit only a single, subjective space, says that we haven't the concepts with which to do any such conceiving: any representation with which one can even merely *think* of a possible space requires *a*

priori intuitive representational content, which itself guarantees that the conceptual content in question is limited by the representational content of *a priori* intuition. Accordingly, SINGULARITY, SUBJECTIVITY and CONTENT together entail:

> NONSPATIALITY 1: It is not possible to represent in any way any space other than the single, metaphysically subjective space given originally in *a priori* intuition.

A passage dated after the publication of the *Critique* reveals that Kant is indeed committed to this claim, too. He writes:

> For the representation of space (together with that of time) has a *peculiarity* found in no other concept; viz., that all spaces are only possible and *thinkable* as parts of one single space, so that the representation of parts already presupposes that of the whole. (Ak.20:419-21; emphasis mine.)[108]

Our spatial representation, he says, is constrained even in *thought* to represent a single space. If we cannot conceive of the possibility of a space discrete from the single space given in pure intuition, and things in themselves cannot exist in the space we intuit – on pain of supposing we can intuit things in themselves – what is the status of the claim that it is possible that things in themselves are spatial? Is it meaningful to affirm a possibility of which we can have no coherent conception? In a famous passage from the Preface to the second edition of the *Critique* Kant appears to deny this. He writes:

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108 I referenced this passage above in elucidating Kant's commitment to CONTENT, from which NONSPATIALITY-1 is meant in part to follow. I shall discuss this passage again later, Chapter 5, p. 183, in my discussion of Kant's argument for the necessity of Euclidean geometry.

> To **cognize** an object, it is required that I be able to prove its possibility (whether by the testimony of experience from its actuality or *a priori* through reason). But 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, even if I cannot give any assurance whether or not there is a corresponding object somewhere within the sum total of all possibilities. But in order to ascribe objective validity to such a concept (real possibility, for the first sort of possibility was merely logical) something more is required. [B xxvi]

I take Kant to be indicating here that possibility comes in (at least) two distinct varieties – "real possibility" and "logical possibility" – and that mere logical possibility follows from conceivability (i.e., the possibility of thought). Kant also appears to say that conceivability is governed by the principle of contradiction. Kant's paradigmatic examples of merely apparent thoughts – sentences that have an appropriate logical form, but that fail to express any objective content – are contradictions. Contradictions, Kant says, are "in themselves…nothing." [A 150/B 190] He goes on to say that the presence of a contradiction in apparent judgments "entirely annihilates and cancels them." [A 152/B 191] Kant's point is that a sentence that contains a contradiction is not a representation with a genuine objective content: such sentences cannot be coherently "thought."[109]

As we have seen, however, spatial judgments are limited not only by the principle of contradiction – not only by what is contained within spatial concepts – but also by their dependence on *a priori* spatial intuition. Accordingly, spatial judgments are coherent judgments only insofar as neither constraint is violated.

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109 To be sure, we can *say* "gold is not a metal," and "all solids are liquid." But Kant thinks there are limitations on thought – taken in a cognitive sense – stricter than the limitations of grammar. As the above passages show, thoughts *qua* cognitively significant representations are limited by the principle of contradiction.

This makes them unlike non-spatial judgments insofar as non-spatial judgments are constrained only by the principle of contradiction. If inconceivability is sufficient for impossibility, then NONSPATIALITY 1 entails:

> NONSPATIALITY 2: All possible spaces are parts of the actual, metaphysically subjective space given originally in *a priori* intuition.

I take the two NONSPATIALITY claims to exhaust the content of Kant's first claim in the "conclusions from the above concepts" section of the Transcendental Aesthetic: "space represents no property at all of any things in themselves." (op. cit.) Kant is claiming that the preceding analysis of the nature of spatial representation reveals that we cannot conceive of the possibility of things in themselves as spatial precisely because we cannot conceive of the possibility of a space in which they could exist: the only conceivable, and so only possible, space is the actual space of intuition. It follows immediately from this that "space is nothing other than merely the form of all appearances of outer sense, i.e., the subjective condition of sensibility, under which alone outer intuition is possible for us." [A 26/B 42] This is what I above titled IDEALISM: space is merely a subjective form of intuition, that is, space is transcendentally ideal.

2.7 An Objection

One way to try to defend the coherence of the neglected alternative charge against the interpretation of the Aesthetic offered herein is by arguing that *even if* our spatial concepts are constrained by the representational content of *a priori*

spatial intuition, this alone does not prevent supposing that things in themselves exist in space*, where space* is both numerically *and* qualitatively distinct from the space given in *a priori* intuition. On this conception of the neglected alternative, it is granted that things in themselves are not *spatial* in the sense of existing either in the space intuited *a priori* or in any qualitatively similar space. That is, it is granted that our determinate spatial concepts cannot be employed to think about any features of things in themselves. But it is not granted that there is as such *no way* to conceive of things as spatial in themselves: one needs only to conceive of the possibility that they are spatial* in order to affirm the neglected alternative.

The first thing to be said about this response is that Kant rejects it. In the *Inaugural Dissertation* – a piece in which Kant first formulates a strict distinction between two faculties of mind and argues for the ideality of space – he writes:

> Assuredly, had not the concept of space been given originarily [sic] by the nature of the mind (and so given that anyone trying to imagine any relations other than those prescribed by this concept would be striving in vain, for such a person would have been forced to employ this self-same concept to support his own fiction), then the use of geometry in natural philosophy would be far from safe. [Ak. 2:404-5]

What's striking about this claim is the parenthetical: Kant denies that we can conceive of any relations holding among objects other than the spatial relations "given originarily by the nature of the mind."[110] Any attempt at such a conception of

110 Kant refers here to "the concept of space" as being "given originarily." From the point of view of the *Critique*, this is bound to sound strange. Kant did not, in the *Inaugural Dissertation*, make a strict concept/intuition distinction. Accordingly, what he calls "intuitions" in the critical philosophy he terms "singular concepts" in the ID. Though this carries with it interesting implications about the project as a whole, it does not affect the point here. I discuss this further below, pp. 120.

a set of outer relations distinct from the relations we intuit *a priori*, Kant says, is a "striving in vain," for one would be required to employ representations of these very relations in order to attempt such a conception at all. Accordingly, the notion that we can conceive of any outer relations other than those given in intuition is a "fiction."

In response, the defender of the notion that things are possibly spatial* might claim that such a possibility does not require conceiving of things in themselves as *related* in any such way. But if the neglected alternative charge does not include the supposition that things in themselves might be related in a way *at least* analogous to the way in which appearances are related, then it remains unclear what force the defender of Kant should attach to the criticism.

Kant, of course, denies that we can know anything of things in themselves:

> What may be the case with objects in themselves and abstracted from all this receptivity of our sensibility remains entirely unknown to us. We are acquainted with nothing except our way of perceiving them…. [A 42/B 59]

Kant surely should affirm that it is *possible* that things in themselves have all sorts of determinate characteristics. If the defender of the neglected alternative charge means only to point out that Kant hasn't ruled out the possibility that things in themselves have certain objective features independently of our intuition, then Kant should gladly affirm the neglected alternative. But this is not the neglected alternative. The neglected alternative is the possibility that things in themselves are *spatial*. Insofar as the meaning of "spatial" is inextricably tied to the possibility of the

qualitative content represented in *a priori* intuition, then such an attempt to reinvigorate the neglected alternative charge in light of the argument presented herein fails.

2.8 Concluding Remarks

I aim to have shown in this paper that Kant offers a plausible argument for his idealism, an argument that includes the explicit rejection of the possibility that things in themselves are spatial. This interpretation depends crucially on Kant's commitment to the notion that spatial possibilities are exhausted by the possibilities given in *a priori* spatial intuition. Though Kant is clearly so committed, one remaining question about this interpretation concerns the extent to which the view is plausible in a contemporary context. Michael Friedman,[111] following Jaako Hintikka[112], has argued that Kant's theory of the pure intuition of space is intended to neutralize the inadequacies of the logic available to Kant. On Friedman's view, Kant recognized that the logical resources available to him were unable to express various essential geometric propositions, like the infinite divisibility of line segments and the existence of points appealed to in the course of proving geometric theorems; only a polyadic logic that included quantifiers could do so. Accordingly, Friedman contends, Kant appeals to a nonconceptual means of representation – intuition – to avail himself of the required representations. According to this interpretation, pure intuition is merely an extra-logical stopgap: developments in

111 Friedman (1992), especially chs. 2 & 3.
112 Hintikka (1965), (1967), (1969).

logic in the 19th century obviate the need for an appeal to intuition, and thus render the very notion of pure intuition philosophically inert.[113]

If Friedman is correct, then one might suppose that developments in logic in the 19th century also render Kant's argument for idealism – at least as I interpret it – hopeless from a contemporary point of view. For, if pure intuition is required simply to account for representations that are now expressed via purely conceptual means, then one might suppose that Kant wrongly supposes that pure intuition limits what can be spatially conceived – a notion that is crucial to the argument as I interpret it. If this is so, then perhaps Kant should allow that it is possible to conceive of the possibility of a non-intuitive, infinite and singular spatial whole – a possibility that would, by my lights, reinvigorate the neglected alternative.

However, several commentators have resisted Friedman's interpretation.[114] On their view, Kant's appeal to intuition is independent of any consideration of the expressive power of the essentially Aristotelian logic available to him. They argue that Kant develops his theory of pure intuition independently of his philosophy of geometry and that the phenomenologically evident features of pure spatial intuition serve to *ground* geometry – to generate and give meaning to the axioms and

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113 Friedman's conception of the role of pure intuition in Kant's philosophy of mathematics, and the criticisms that have been raised against it, are the topic of a significant portion of Chapter 5. See below, pp. 170 – 173.

114 See especially Parsons (1969) and (1992) and Carson (1997). See also Shabel (2004) for a partial account of Kant's argument for transcendental idealism that takes seriously the notion that Kant's appeal to pure intuition is not motivated by the perceived inadequacy of logic to account for geometric proof.

postulates of geometry.[115] Pure intuition, on this view, if it grounds knowledge at all, does so independently of any considerations of the expressive power of logic.[116]

According to this interpretation, advancements in logic simply have no bearing on whether Kant's theory of pure intuition is plausible in a contemporary setting. Whether or not Kant is justified in taking the pure intuition of space to be a source of knowledge of necessary truths, on this view, depends upon the plausibility of the very notion of synthetic *a priori* truth and Kant's arguments for the possibility of a strictly nonconceptual faculty of knowledge.

These positions on the role of intuition in Kant's philosophy of mathematics will emerge more fully in Chapter 5. For now, I shall note simply that the interpretation of Kant's argument for idealism presented herein resonates with this second view of the role of pure intuition in Kant's critical philosophy. Crucial to my account of Kant's argument for idealism is the singularity of the representational content of intuition, a consideration adduced by appeal to the phenomenological immediacy of spatial representation, and not – as I understand it – by considering the limits of purely conceptual representation. Accordingly, the argument as I

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115 Shabel (2004) interprets Kant as embarking on precisely this project in the "transcendental exposition" of space. On her view, Kant's interpreters have misunderstood his appeal to geometry in the course of arguing for idealism. Contrary to a long interpretive tradition, Kant does not infer the ideality of space on the basis of the *apriority* of geometry, she claims. Rather, he aims to show that the phenomenologically evident features of pure intuition – adduced independently of any appeal to geometry – serve to epistemologically ground and codify the "axioms" of geometry. Though Shabel stops short of giving an account of Kant's full argument for idealism, her view that Kant's theory of pure intuition is developed independently of appeal to geometry is clearly resonant with the interpretation offered herein.

116 My discussion of this dispute between Friedman and those who oppose him is, at this point, meant to be only tentative. I deal with this topic in considerably more detail in Chapter 5, where the possibility of conceiving of non-intuitive spatial possibilities becomes relevant in my discussion of Kant's rejection of the possibility of non-Euclidean geometries.

interpret it cannot be dismissed merely by noting that logic is more expressively powerful now than it was in the 18th century. I don't take myself to have shown that Kant is entirely justified in supposing that pure intuition is a source of knowledge of necessary truths; that matter forms the heart of Kant studies in general and is too large a topic for a single chapter. I do take myself to have offered a novel interpretation of Kant's most important argument – an argument that by my lights has frequently been misinterpreted. And in so doing, I take myself to have shown the precise metaphysical implications Kant takes the faculty of pure intuition to carry.

Chapter 3: Inapplicability in the *Inaugural Dissertation*: Kant's Master Argument for Idealism

As we have seen, a well-known dispute over the argument for the ideality of space in the Transcendental Aesthetic concerns the role of Kant's statements about the applicability of spatial predicates to noumenal reality. In a well-known passage, Kant writes:

> We can accordingly speak of space, extended beings, and so on, only from the human standpoint. If we depart from the subjective condition under which alone we can acquire outer intuition, namely that through which we may be affected by objects, then the representation of space signifies nothing at all. This predicate is attributed to things only insofar as they appear to us, i.e., are objects of sensibility. [A 26-7/B 42-3]

Kant here claims that spatial predicates can legitimately be attributed "to things only insofar as they appear to us," that is, that spatial predicates cannot be rightfully predicated of things in themselves. I have defended a reading of the Transcendental Aesthetic according to which this claim about the representational and referential capacity of spatial predicates constitutes a crucial *premise* from which (in part) Kant infers the mere ideality of the objects of experience.[117] In this chapter, I aim to defend this reading of Kant's central argument in a somewhat roundabout way: I wish to show that Kant employs a version of this very argument in the *Inaugural*

117 The premise that it is not possible to represent in any way any space but that given in pure intuition I have above termed NONSPATIALITY 1. See above, pp. 60.

Dissertation (ID). The ID is his first **mature** work, and the first work in which he argues for the ideality of spatially extended objects. If I am right that the conclusions of the ID rely in large part on a version of the argument of the Transcendental Aesthetic, then I think my interpretation of the Aesthetic is strengthened: such a result would show that Kant's earliest attempt at a thoroughgoing idealism rests on precisely the considerations I claim play a role in his mature argument for idealism.

In the first section, I shall briefly recap the interpretation of the Transcendental Aesthetic presented in the previous chapter. In the second section, I shall provide an interpretation of the argument for idealism in the ID. In the final section, I discuss the differences between the two arguments for idealism and say what lessons these differences offer about how to interpret Kant's mature philosophy.

3.1 Idealism in the Transcendental Aesthetic

In the foregoing, I presented an interpretation of the argument of the Transcendental Aesthetic according to which Kant infers the ideality of space – and therefore of spatially extended objects – on the basis of the subjectivity of the space given in *a priori* intuition and the impossibility of representing any space *but* the subjective space given in *a priori* intuition.

On my view, Kant's argument proceeds from three crucial premises:

> SINGULARITY: That which is represented in *a priori* intuition is absolutely singular.

SUBJECTIVITY: It is not possible to intuit *a priori* any feature of any wholly subject-independent thing.

CONTENT: The content of spatial *concepts* is determined by the representational content of *a priori* spatial intuition.

Kant explicitly commits himself to SINGULARITY in the metaphysical exposition, and I have argued that SUBJECTIVITY follows directly from Kant's conception of the representation of space as an *a priori* intuition: the very possibility of bearing an immediate relation to a necessary feature of the objects of experience independently of experience requires that those things be subject-dependent. CONTENT is a claim that commentators have heretofore largely neglected, but I have argued that it is operative in the Aesthetic: Kant explicitly commits himself to it in arguing that the representation of space is fundamentally an intuition: Kant argues that all spatial *concepts* – the representations one must employ to think discrete spatial regions – are grounded in intuition in the sense that they are formed from and thus can be used to represent only contained parts (or "limitations") of the absolutely singular space given in *a priori* intuition. And, indeed, Kant confirms his commitment to this view of spatial concepts in a number of other passages.[118] If I am right that Kant endorses these three claims – and I take only CONTENT to be controversial – then it immediately follows that it is not possible represent two entirely discrete spatial wholes.[119] Moreover, I understand Kant as committing himself to the (at the time uncontroversial) premise that possibility entails conceivability. It thus follows that

118 See Chapter 2, pp. 78.

119 It does not follow from this, however, that one cannot represent discrete *parts* of a larger spatial whole. This, I take it, is precisely what Kant believes spatial concepts do.

no non-perceptual space is possible and therefore that the only possible space is the subject-dependent space represented in *a priori* intuition.

I have contrasted this interpretation with both a prominent *methodological* interpretation of Kant's argument and a recent *metaphysical* view. According to the methodological interpretation, Kant's distinction between appearances and things in themselves is not a metaphysical distinction between distinct types of *objects* or *properties*, but rather a distinction between *ways of considering* the objects of experience: they can be considered *as* objects of experience (i.e., as appearances), or they can be considered as they might be independently of our experience of them (i.e., as things in themselves).[120] By contrast, the metaphysical interpretation takes Kant's distinction to be fully metaphysical: in arguing that the objects of experience are mere appearances, Kant is making the claim that the objects of experience are mere subject-dependent *things* and that they are not numerically identical to metaphysically real (i.e., subject-*independent*) things in themselves.[121]

The interpretation of Kant's argument for idealism presented herein is a fully metaphysical interpretation of Kant's idealism: I take Kant to be doing more than merely distinguishing between conceptual perspectives human subjects can take on

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120 The methodological interpretation became famous in the English-speaking world because of Allison (1984). See also Allison (1976) for an application of the methodological view to the problem of the nonspatiality of things in themselves. Allison's work is inspired by Prauss (1974). Similar positions are held by Bird (1962) and Robinson (1994).

121 I discussed above the view presented in Hogan (2009a) and (2009b). While Hogan's particular interpretation of the Aesthetic is original, the metaphysical view itself is nearly as old as the *Critique*. See, e.g., Pistorius in Sassen (2000). Recent commentators who endorse the metaphysical view include Allais (2004) and (2007), Ameriks (2003), Guyer (1987), Langton (1998) and Watkins (2005). While I won't have room to discuss the differences among these views in significant detail here, I shall briefly focus below on Guyer's discussion of Allison's interpretation of Kant's idealism. See Chapter 1. Pp. 42 – 44, for discussion of the distinct ways one might endorse the metaphysical interpretation of transcendental idealism.

the objects of experience. But my position resonates with the methodological position insofar as it understands Kant's argument to be motivated by, and premised upon, considerations about the representational content and limits of spatial representation. Whereas the methodological interpretation denies that Kant intends such considerations to have any metaphysical import, I claim that they do. As we have seen, Allison has portrayed Kant's argument for idealism as relying first upon an analytic necessity and then – upon abandoning that view – as relying upon considerations about epistemic warrant.[122] I have argued that neither is successful, and that Kant's argument in fact relies upon synthetic necessities that hold in virtue of particular facts about the representational origin of our spatial concepts.

My aim here is not to discuss again the methodological account. But I do aim here to point out a prominent criticism of it – a criticism that applies as well to my account of Kant's idealism. What my account shares with the methodological account is a commitment to the structure of Kant's argument in the Transcendental Aesthetic. According to both, it proceeds roughly as follows:

1) Spatial predicates cannot be predicated of things as they are in themselves.

2) Therefore, "space represents no property at all of any things as they are in themselves," (i.e., we cannot represent to ourselves the possibility that things in themselves are spatial.)

3) Therefore, space is *merely* a subjective form of intuition.

122 See above, pp. 54 – 57.

The account I have defended herein differs from the methodological account both on how Kant aims to establish (1) and also on the meaning of (3). Whereas Allison holds that Kant establishes (1) in virtue of considerations of either analyticity or epistemic warrant and that (3) is a claim about perspectives, I argue that (1) is established on the basis of non-analytic considerations and that (3) is intended to be a metaphysical claim. Thus, though my interpretation of the argument of the Aesthetic imputes to Kant an argument that bears an important structural similarity to that of Allison's methodological interpretation, the two views differ by virtue of attributing significantly different meanings and motives to the claims contained therein.

Paul Guyer has argued, however, that the argument attributed to Kant above in fact gets Kant's actual argument almost exactly backwards. Because this is a criticism aimed primarily at the *structure* of Kant's argument – in abstraction from the particular meaning of (3) or Kant's motivations for (1) – the criticism applies equally well to my interpretation as it does to Allison's view, which was its original target. Guyer correctly notes that the argument as I have represented it requires an inference from unrepresentability to ideality. But Guyer denies that this accurately reflects the structure of Kant's argument:

> Invoking such a principle does nothing but obscure the fact that the claim that space and time *merely* reflect the structure of the mind rather than that of real objects of knowledge is not the *premise* of Kant's chief arguments for transcendental idealism…but is, rather, the *conclusion* of these arguments.[123]

[123] Guyer (1987), 340.

On Guyer's view, then, Kant aims *first* to show that space is not a feature of things in themselves from which he *then* infers that spatial predicates are inapplicable to things in themselves. In terms of the argument as I have set it out above, Guyer holds that Kant first argues for (3), from which (2) follows. (1) then follows from the conjunction of (2) and (3).

The interpretation presented in Chapter 2 squarely denies Guyer's understanding of the structure of the argument. Nevertheless, there is a significant lack of consensus on this issue, even in light of the prominence of Allison's representation of the structure of the argument as I have presented it above. Accordingly, my aim in this chapter is to bolster the interpretation of the argument given in Chapter 1 by showing that Kant employs a version of the argument in the ID: there, Kant employs an inference *from* unrepresentability *to* ideality – and *not* vice versa – much as I claim he does in his mature argument for transcendental idealism in the Transcendental Aesthetic.

3.2 Unrepresentability in the *Inaugural Dissertation*

In this section, I aim to show that Kant's argument for the absolute separation of the spatiotemporal sensible world and the non-spatiotemporal intelligible world in the ID bears a strong structural similarity to his argument in the Transcendental Aesthetic for the non-spatiality of things in themselves. I intend to show, then, that considerations about the representational and referential

limitations of sensible predicates forms a sort of Kantian master argument, one which first fully appears in the ID.

The ID is not a piece of transcendental philosophy *per se*: though Kant wishes to argue that the study of metaphysics is limited in ways his rationalist predecessors had not endorsed, he does not yet hold that the limits of legitimate metaphysical inquiry are determined by the structure of sensibility, as he does in the *Critique*. That is to say, Kant makes no "Copernican turn": metaphysics is possible, according to the doctrine of the ID, even without the supposition that the objects of metaphysics must themselves conform to the principles of human cognition. Thus, the ID hasn't quite the lofty aims of the *Critique*: it is more corrective than visionary. For that reason, one must take care in drawing parallels between the two texts. However, even presupposing a suitable amount of caution, it is clear that the two works bear obvious structural similarities and share certain goals. The ID is a clear predecessor to the *Critique* insofar as Kant introduces there a number of the fundamental notions and distinctions he employs in his argument for transcendental idealism. Moreover, the general structure of the argument is similar insofar as Kant wishes first to elucidate the principles of cognition proper to the two faculties of cognition (what he calls in the ID the "sensitive faculty" and "the faculty of the understanding") and then show how these principles impose certain limitations upon human knowledge. In what follows, I'll first elucidate in some detail the basic structure of the argument of the ID and some of the similarities it bears to that of the *Critique*.

Kant begins the ID by distinguishing "the *sensitive* faculty" from "the faculty of the understanding." (Ak. 2:389) He conceives the sensitive faculty – or "sensibility" – as "the *receptivity* of a subject in virtue of which it is possible for the subject's own representative state to be affected in a definite way by the presence of some object." (Ak. 2:392) And he conceives the faculty of the understanding – or "intelligence" – as "the *faculty* of a subject in virtue of which it has the power to represent things which cannot by their own quality come before the senses of that subject." (Ak. 2:392) Kant claims that the "object of sensibility" is "a *phenomenon*" and the object of intelligence is "a *noumenon*." (Ak. 2:392) He goes on to say that "it is thus clear that things which are thought sensitively are representations of things *as they appear*, while things which are intellectual are representations of things *as they are*." (Ak. 2:393)

In setting out his basic commitment to distinct faculties of representation, Kant marks his departure from the Leibnizian tradition in German rationalism. Kant distinguishes between *types* of representation – something Leibniz does not do. Leibniz holds that all representations have as part of their content real, subject-independent things. Representations differ only in their degree of *clarity*. Leibniz deems spatiotemporal representation – sensory representation – to be confused, and thus to fail to represent things as they really are (i.e., non-spatiotemporal). Spatiotemporal representation thus is not a means to knowledge of reality insofar as reality is not ultimately spatiotemporal. By contrast, Leibniz holds that the principle of contradiction and the principles of sufficient reason are "distinct" representations and free of any sensible content. They are thus a means to knowledge of reality.

Here, Kant affirms a distinction in kind between sensory and intellectual representation, holding that sensory representation requires a causal relation to its object, while intellectual representation represents those aspects of reality to which the subject cannot relate causally. Kant employs this distinction to deny that sensible representations are mere "indistinct" representations of real things; rather, he will hold that the understanding affords the subject a means to knowledge of reality, while sensibility affords the subject a representation only of "phenomena," which are conceived as subject-dependent.

Kant holds that the understanding has both a "logical use" and a "real use." (Ak. 2:393-4) In its logical use, the understanding sorts and categorizes representations; in its real use, the understanding provides cognition, *via* concepts that belong entirely to the understanding, of the intelligible world. Thus, the logical use of the understanding governs all cognition – both "sensitive" and "intellectual" – while the real use of the understanding is a means to non-sensitive cognition. He writes:

> In all of the sciences of which the principles are given intuitively...the *use* of the *understanding*...is only the *logical* use of the understanding. That is to say, it is the use by which we simply subordinate cognitions to one another, according to their universality and in conformity with the principle of contradiction...." (Ak. 2:410-11)

This is akin to Kant's claim in the *Critique* that all cognition whatsoever is subject to the laws of general logic: cognition of the appearances is not free from governance by the principle of contradiction, for example. However, whereas in the *Critique* Kant holds that sensibility and understanding must combine for cognition, or

objective representation, in the ID Kant holds that the two faculties issue in distinct types of cognition – sensitive and intellectual – of apparently distinct types of object: phenomena and noumena. So, according to the doctrine of the ID, the understanding alone is used to cognize objective reality (the intelligible or noumenal world), while the sensitive faculty is used in conjunction with the understanding (in its merely *logical use*) to represent the appearances (the sensible or phenomenal world). Kant thus holds that the distinction between types of representation corresponds to a distinction between the types of objects of which they provide knowledge: sensory representation provides knowledge only of appearance, while intellectual representation provides knowledge of reality.

Kant goes on to deduce the fundamental principles of sensitive and intellectual cognition.[124] Kant holds that space and time are the principles of sensitive cognition: the sensitive faculty presents the world as consisting of objects united in a spatiotemporal whole. Kant argues that the representations of space and time are conceived as "singular intuitions" (Ak. 2:405) and that this reveals that space and time are "not something objective and real," but rather something "subjective and ideal." [Ak. 2:403] Kant then argues that the intelligible world of noumena is united not in virtue of spatiotemporal relations – such relations are merely ideal – but rather in virtue of their dependence upon God. [Ak. 2:409] Thus, the phenomenal world constitutes a unity in virtue of its (merely ideal)

124 The sections of the ID in which Kant deduces the principles of the sensible and intelligible worlds – sections 3 & 4 – correspond to the Transcendental Aesthetic and the Transcendental Analytic in the *Critique*.

spatiotemporal form, while the noumenal world constitutes a unity in virtue of its dependence upon God.[125]

Thus, the view that emerges contends that the sensible world is infused with causal interactions among finite substances, but that it is merely ideal, its nature owed partially to the spatiotemporal intuitions with which God endows each subject. The real world – the intelligible world – is non-spatiotemporal and can be known only *via* the understanding and its employment of *a priori* concepts. The overarching argument of the ID bears a strong similarity to that of the *Critique*. In both pieces, Kant wishes to distinguish two faculties of representation and elucidate the fundamental principles, or conditions, of representation appropriate to each. Moreover, he wishes to prove the strong conclusion that the necessary features of sensible objects (or phenomena) are not features of reality.

So far, I have simply set out Kant's position; I have not addressed his argument for it. One useful way of thinking about whether Kant succeeds in

125 I follow Watkins (2005) here. The doctrine that the noumenal world is unified in virtue of its dependence upon God is an interesting one, for Kant. An important question for Leibniz is the nature of creaturely dependence upon God. In his critical work, Kant denies that this is a proper topic for theoretical inquiry. In the ID, however, Kant clearly believes that it is, but he does not give a clear answer to the question of the specific *nature* of the dependence of creatures upon God. In this same passage, Kant rejects both occasionalism and pre-established harmony as plausible accounts of God's relation to created substances – and this is in keeping with his even earlier rejection of both doctrines. But Kant offers no replacement account, and I take this to signal an important tension in the ID. One of Kant's central objections to the Leibnizian pre-established harmony is that substances that do not causally interact cannot together constitute a *world*, because such substances cannot be conceived as united by any common principle. This is one of the forces that motivates Kant's critical rejection of the possibility of knowledge of noumena: there is no principle by which they could be cognized. In the ID, however, Kant wants to appear to have it both ways: he fails to give a positive account of the principle by virtue of which noumena constitute a proper object of knowledge – denying along the way that previous suggestions are fruitful – but nevertheless holds that the understanding affords the subject knowledge of reality. See Hogan (2009c) for an account of Kant's rejection of pre-established harmony, and see Lee (2004) for an account of the specific sense in which Leibniz holds that created substances are dependent upon God.

establishing the position set out here is to consider whether an objection analogous to the "neglected alternative" objection to the argument of the Transcendental Aesthetic might be raised against Kant's position in the ID. Kant's primary argument for the subjectivity of space in the ID depends upon the necessity of geometry:

> [I]f all the properties of space are merely borrowed by experience from outer relations, then there would only be a comparative universality to be found in the axioms of geometry, a universality such as is obtained by induction, that is to say, such as extends no further than observation. [Ak. 2:404]

Kant here targets the Leibnizian view that space is merely a relation among metaphysically independent and prior existing real things. On the Leibnizian view of space, space arises merely as a confused perception of the relations among metaphysically real beings.[126] Kant argues here that on this relational view of space, the representation could not be *a priori* because it could arise only from "experience" of "outer relations." And Kant argues that if the representation of space is indeed empirical – as he believes the Leibnizian must hold – then geometry could not be *a priori*, since geometry requires the representation of space. Thus, Kant argues that the representation of space must be *a priori* – and thus not subject-independent – if it is to account for the *apriority* of geometry.

An immediate concern, however, is the possibility that space has *both* a subjective status *and* an objective status. That is to say, Kant might well account for the *apriority* of geometry by supposing space as it is given to sensibility to have an *a*

126 Leibniz held that real substances – monads – bear no real relations among one another: they have no extrinsic properties. Accordingly, spatial relations are, for Leibniz, merely ideal relations among independently existing real things.

priori and thus subjective status without thereby ruling out the possibility of a harmony or conformity between the *a priori* representation of space employed by sensibility and real things. Kant's appeal to the *apriority* of geometry, then, seems only to imply the ideality of sensible objects; it does not seem to imply the non-spatiality of noumena.

This objection, of course, is the counterpart to the neglected alternative objection that is the focus of Chapter 2. There, I claim that Kant in fact rules this objection out, and does so on the basis of considerations about the unrepresentability of things in themselves as spatial. It is my contention that Kant employs a version of that very argument in the ID as a means to establishing the non-spatiality of reality. In closing this section, I shall address the evidence in favor of thinking so.

Kant indeed claims that phenomena and noumena share no features:

> *Sensibility* is the *receptivity* of a subject in virtue of which it is possible for the subject's own representative state to be affected in a definite way by the presence of some object. *Intelligence* (rationality) is the *faculty* of a subject in virtue of which it has the power to represent things which cannot by their own quality come before the senses of the subject. The object of sensibility is the sensible; that which contains nothing but what is to be cognized through the intelligence is intelligible. In the schools of the ancients, the former was called a *phenomenon* and the latter a *noumenon*. (Ak. 2:392)

Kant here denies that the noumenon contains anything other than what is to be cognized through the understanding. Since an object's spatiotemporal features are cognized through sensibility, the implication is that noumena are non-spatiotemporal. However, as we have seen, Kant's argument for the ideality of space

seems not to rule out the possibility that it is also a feature of noumenon – even in spite of his assertion to the contrary, here.

It is in the final section of the ID – "On the method in metaphysics concerning what is sensitive and what belongs to the understanding" – that Kant offers an explanation of precisely why we cannot take the form and principles of phenomena to also be principles of noumena. Kant argues that to suppose that sensitive cognition *does* reveal possibilities about the intelligible world is to make a mistake one falls into by failing to attend to the proper method of metaphysics. He writes:

> Every method employed by metaphysics, in dealing with what is sensitive and what belongs to the understanding, amounts, in particular, to this prescription: great care must be taken lest the principles which are native to sensitive cognition transgress their limits, and affect what belongs to the understanding. [Ak. 2:411]

Thus, Kant is prepared to provide an argument for the conclusion that sensible cognition does not possibly reveal features of the intelligible world. For he says here that the proper method of metaphysics precludes the principles appropriate to sensitive cognition from revealing anything of intelligible objects. He continues:

> For the *predicate* in any judgment which is asserted by the understanding, *is the condition*, in the absence of which, it is maintained, the subject cannot be thought; the predicate is, thus, a principle of cognizing. If the predicate is a sensitive concept it will only be the condition of a possible sensitive cognition; and thus it will, in particular, harmonize with the subject of a judgment, the concept of which is likewise sensitive. But if the predicate were to be applied to a concept of the understanding, such a judgment would only be valid from the point of view of subjective laws. Hence, the predicate may not be predicated and stated objectively of a concept itself of the understanding; it may be predicated *only as the condition, in the absence of which the sensitive cognition of the given concept cannot occur*. [Ak. 2:411-12]

Kant here argues that predicates are "conditions" upon successfully *thinking* a subject: if the predicate does not "harmonize" with the subject, representation fails. Accordingly, sensitive predicates can be successfully thought only in judgments about sensible objects – phenomena. When we attempt, for example, to predicate sensitive concepts of an intellectual subject, e.g., spatiotemporality of noumena, "cognition of the given concept cannot occur," i.e., we cognize nothing at all.[127] Accordingly, spatiotemporal representation reveals nothing – not even mere possibilities – about the intelligible world because their predicates cannot be used in judgments alongside intellectual predicates.

Nevertheless, this alone is merely an indication of the argument strategy Kant wishes to employ in arguing for the absolute separation of the sensible and the intelligible. That is, nothing he says here reveals precisely why such attempts at predication fail. Indeed, Kant's position is quite strong. He doesn't merely hold that judgments combining sensitive predicates with intellectual subjects express falsehoods. Rather, he holds that any attempt at such a judgment *fails* to represent at all. So, Kant needs an account of the nature of sensitive representation that provides an explanation for the impossibility of predicating of noumena terms appropriate to the sensitive faculty.

In an earlier passage in which he anticipates the argument we have just been examining, Kant puts the argument thus:

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127 Kant uses "cognition" less strictly in the ID than he does in the *Critique*. Whereas in the *Critique*, failure of cognition does not entail failure of thinkability, Kant appears in the ID to hold precisely this principle. Thus, I take this last claim to mean that any attempt to combine sensitive and intellectual predicates in the same judgment results in the failure to think anything at all.

> ...[T]his formal principle of our intuition (space and time) is the condition under which something can be the object of our senses. Accordingly, this formal principle, as the condition of sensitive cognition, is not a means to intellectual intuition. Moreover, since it is only through the senses that all the matter of our cognition is given, the noumenon as such cannot be conceived by means of representations drawn from sensations. Thus, the concept of the intelligible as such is devoid of all that is *given* in human intuition. The *intuition*, namely, of our mind is always *passive*. It is, accordingly, only possible in so far as it is possible for something to affect our sense. [Ak. 2:396-7]

In the first two sentences, Kant merely reiterates the (weak) claim that intuition is our means of representing sensible objects: that we represent them spatiotemporally is a condition upon representing sensible objects at all. This alone is insufficient to show that we cannot *also* represent intelligible objects in accordance with the principles of space and time. But in the third and fourth sentences he makes a stronger claim: predicates of space and time cannot be used to represent noumena *at all*. Our spatiotemporal representations reveal nothing whatsoever about the intelligible world. Because the "concept of the intelligible" cannot include anything pertaining to the sensible, sensible predicates do not reveal even possibilities about the intelligible world: they cannot coherently be thought alongside intellectual predicates. In the midst of this, Kant hints at an explanation for why this should be so. He says that "the noumenon cannot be conceived by means of representations drawn from sensations." Kant's point appears to have to do with the origin, or genesis, or our spatiotemporal representations. It is because they are "drawn from sensations" that they have a limited field of reference. The implication appears to be that the origin of a representation (at least partially)

determines which types of objects to which it can refer. Indeed, in the final sentences, Kant indicates something of this strategy: (spatiotemporal) intuition, he says, is possible only insofar as it represents something that affects our senses and this is because the representation itself can arise only passively. Because these representations originate in intuition, they cannot represent anything beyond what can be given to the sensitive faculty passively *in* intuition.

It is clear, then, that Kant believes that the origin of sensitive representations restricts their possible referents and that this fact provides for the inapplicability of sensitive predicates to noumena: it is for this reason that Kant rejects the possibility that noumena are spatiotemporally located. But Kant indeed has an argument – or at least the prototype of an argument – for why the origin of a representation should matter. The argument is scattered throughout the ID, but it is possible to reconstruct it on Kant's behalf.

By Kant's lights, two features of sensitive representations are crucial to this argument: the means of the formation of sensitive representations and the original content of the resulting representations. Kant holds that spatial representations are "drawn from the very action of the mind" itself. [Ak. 2:401] For this reason, spatial representations are representations *of* a subjective "principle form...that is to say, a fixed law of the mind." [Ak. 2:401] Kant writes, of the representations of space and time:

> But each of these concepts has, without any doubt, *been acquired*, not, indeed, by abstraction from the sensing of objects (for sensation gives the matter and not the

> form of human cognition), but from the very action of the mind, which coordinates what is sensed by it, doing so in accordance with permanent laws. [Ak. 2:406]

Kant holds that spatial representation is abstracted from, and so represents, something subjective: the nature of the mind's own activity of representing. Specifically, Kant holds that in spatiotemporal experience, subjects represent both matter and form. Matter is given in sensation, but the formal properties of sensible objects are accessible to the mind independently of experience: we "coordinate" sensations "in accordance with permanent laws." Thus, our spatial representations, independent of the material component, are representations *of* the mind's own capacity to coordinate the matter given in sensation. Accordingly, our spatial representations are *subjective* representations: they are reflexive in the sense that they involve as a component of their content a subjective feature of the mind.

We might object to Kant at this point that some characteristics of the mind might possibly be characteristics of mind-independent objects, too. But Kant holds that the nature of space – which he conceives, as we have just seen, as a subjective capacity for the coordination of sensations – is such that we *cannot* conceive of it *both* as a subjective feature of the mind *and* as something that might pertain to noumena. For Kant writes:

> Assuredly, had not the concept of space been given originarily (sic.) by the nature of the mind (and so given that anyone trying to imagine any relations other than those prescribed by this concept would be striving in vain, for such a person would have been forced to employ this self-same concept to support his own fiction), then the use of geometry would be far from safe. For one might then doubt whether this very concept of space, which had been derived from experience, would agree sufficiently with nature, since the determinations from which it had been abstracted might

> perhaps be denied. And, indeed, a suspicion of this kind has even entered the minds of some. Accordingly, *space* is an absolutely first *formal principle of the sensible world*, not only because it is only in virtue of this concept that the objects of the universe can be phenomena but above all for this reason, that by its essence space is nothing if not unique, embracing absolutely all things which are externally sensible; it thus constitutes a principle of *entirety*, that is to say, a principle of a whole which cannot be a part of another whole. [Ak. 2:404-5]

In this passage, Kant argues that spatial representation has, by its nature, two important characteristics. First, it is a representation of a "unique" object, "of a whole which cannot be part of another whole." Second, it is impossible "to imagine any relations other than those prescribed by this concept."

Kant thus holds that 1) the spatial relations given in experience are ideal; 2) all spatial relations are relations *among* mere parts of a single spatial whole; and 3) that no relations other than spatial relations are conceivable. These three claims together entail the mere ideality of space: the supposition that space is *both* subjective *and* objective requires the possibility of distinct, non-overlapping spatial wholes, a possibility which in turn requires the denial of (2). Nor can reality be merely *analogous* to the phenomenal world; this requires denying (3). Finally, one might suppose that the space represented in *a priori* intuition *just is* real space. But this requires denying (1). In light of this passage, then, Kant appears to be in good position to rule out the possibility of an intelligible space.

Another way to put Kant's point is this: an investigation into the nature of spatial representation reveals that it is possible for humans to represent only a single, subjectively given space – the actual phenomenal space. Accordingly, we must hold that all possible spaces are actual, since all possible spaces must be

merely parts of the single, unique space we actually represent in intuition. Since the subject space given in intuition is not applicable to noumena, neither than is any possible space. To suppose as much is not merely to suppose something false; rather, it is not to make a coherent supposition in the first place. Kant calls such attempts to conceive of noumena as spatial "illusions of the understanding, produced by the covert misuse of a sensitive concept, which is employed as if it were a characteristic mark deriving from the understanding, [and] can be called...*a fallacy of subreption....*" [Ak. 2:412] To be clear, Kant is not *merely* denying that such subreptions fail to express truths. Rather, he is denying *that they are judgments at all*. They are "illusions" and to attempt to assert one is a "misuse" of one's concepts. If such attempts at representation fail to be judgments at all, then they fail to express the possibilities we mistakenly suppose they express: they fail to reveal even the possibility that sensible properties could also be properties of intelligible objects.

Thus, Kant's argument for the absolute separation of the sensible and intelligible worlds is premised upon a claim about the inapplicability of sensitive predicates to the intelligible world. Such inapplicability is owed to the unique sensible origin of the predicates themselves. Without such a principle, Kant would have little basis in the ID for denying that the sensible and the intelligible share any features. To be sure, Kant does not present such considerations as merely *following from* a previous argument for the absolute separation of sensible and intelligible; rather, this inapplicability claim *is* his argument.

3.3 The Argument of the ID and the Argument of the Aesthetic

Nevertheless, I take the argument of the *Critique* to succeed where the argument of the ID does not, and I take the failure of the argument of the ID ultimately to be attributable to Kant's failure to draw a strict concept/intuition distinction. In the ID, Kant does indeed hold that the representation of space is fundamentally an intuition. However, when Kant expands upon what he means by this, a doctrine very different from that of the *Critique* emerges. He says that "The concept of space is...a pure intuition, for it is a singular concept." [Ak. 2:402] Compare this with Kant's official definition of intuition in the Transcendental Aesthetic: "In whatever way and through whatever means a cognition may relate to objects, that through which it relates immediately to them, and at which all thought as a means is directed as an end, is **intuition**." [A 19/B 33] In the *Critique,* Kant defines intuition as immediate representation; this is a marked difference from its definition as singular in the ID. By contrast, Kant holds in both texts that concepts are *mediate* representations: they represent their objects by representing them as bearing qualitative marks.

The primary distinction between Kant's conception of an intuition in the ID from that of the *Critique*, then, has to do with *immediacy*. Whereas in the *Critique*, the distinction between concept and intuition is a distinction between *types of representations* – mediate and immediate – in the ID, it appears to be a distinction between *types of content* of a single representation: some concepts are singular and some are general. Despite his attempts to distance himself from the Leibnizian

program by introducing a notion of intuition, and thus denying the Leibnizian thesis that all representation is of a kind, Kant in this way remains broadly within the Leibnizian theory of representation: perception differs from conception in virtue of differences in their representational content and their origin, but Kant appears ultimately to hold the distinction to be as radical in the ID as he does in the *Critique*.

The problematic nature of this commitment of Kant's in the ID can be seen relatively easily. Kant aims to hold both a) that intuitions are the result of causal affection by the objects of experience and b) that intuitions are just singular concepts. I contend that these two commitments preclude Kant from consistently employing the resources he requires for establishing the subjectivity of phenomena. In order to establish the subjectivity of phenomena, Kant needs to be able to allow for the joint possibility of *perceiving* phenomena in experience and *conceiving* non-actual possibilities about them. The claim that phenomena are perceived in experience is required for Kant to establish the mere subjectivity of the objects of experience. And the requirement that one can conceive non-actual possibilities about those objects is required for Kant to establish the uniqueness of experiential space. In the *Critique*, Kant is able to allow for this joint possibility by distinguishing between the immediate perception of objects (intuitions) and our conception of these objects apart from actual experience of them (concepts). But in the ID, Kant lacks a strict distinction between concepts and intuitions, and it is accordingly unclear how he can hold *both* that a representation arises in virtue of affection by an object *and* that such a representation can be used to think non-actual possibilities about qualitatively similar possible objects. Insofar as representations arise from

causal affection by phenomena, it is difficult to see how they can be used to think non-actual possibilities at all. But insofar as a representation is a *concept* and thus is possible independently of affection from an object, it is difficult to see how it necessarily bears any relation to experience at all. Thus, Kant would appear to give an account of spatial representation in the ID that is either ill-equipped to say anything at all about non-actual spatial possibilities, or else to be ill-equipped to account for the nature of spatial *experience*.

The objection can be put in even starker terms. Insofar as Kant holds that intuitions are singular representations that arise from affection, they seem unable to be used to represent non-actual possibilities at all. But Kant needs to be able to show that all possible spaces – even as-yet unexperienced spaces – are mere parts of a singular whole. This requires the capacity to think about non-occurrent spatial possibilities. Conversely, insofar as spatial representation is fundamentally *conceptual*, Kant seems ill-equipped to rely on features of spatial representation in arguing for the subject-dependence of its object: Kant does *not* deny in the ID, as he does in the *Critique*, that conceptual representation is a means to knowledge of reality. Moreover, concepts are meant to be possible spontaneously, i.e., independent of any relation to experience. Insofar as spatial representation is conceptual, then it is hard to see how spatial representation requires any necessary link to experience at all. My point, then, is that Kant's theory of spatial

representation in the ID is not sophisticated enough to fully support the argument he makes there.[128]

The problems with this theory are remedied in the *Critique*. As I have argued, Kant's definition of intuition as *immediate* representation provides him with the resources to argue for the ideality of the objects of intuition: he denies that it is possible to bear an immediate *a priori* relation to a subject-independent thing. Because his conception of intuition in the ID does not involve the notion of immediacy, this argument is not available to him there, and he instead relies merely upon considerations of the *apriority* of spatial representation. But this alone seems insufficient to show the subject-dependence of the objects of thought, since Kant does not deny that *a priori* conceptual representation is a means of knowing reality. Moreover, in the *Critique*, Kant is able to rely on his concept/intuition distinction to discuss the possibility of conceiving a non-intuitive space. But in the ID he lacks such a distinction, and such discussion appears ungrounded. In the absence of a strict concept/intuition distinction in the ID, no specific theory of spatial *conceptualization* is open to Kant, as it is in the *Critique*. In Chapter 2, I argued that Kant's theory of spatial concepts is deeply important to his account of the impossibility of a non-perceivable, noumenal space. In the *Critique*, Kant holds that it is possible to entertain general spatial representations: spatial concepts can be employed to conceive non-actual possibilities that might hold among indefinitely

128 Kant is evidently struggling to employ a distinction between intuition and concept that is not fully realized until the *Critique*. My point is that this prototype of the argument of the *Critique* is weaker in the sense that Kant does not yet fully realize the implications of distinguishing between causally generated sensible representations (intuitions) and wholly *a priori* conceptual representation.

many spatial regions. It is this account that undergirds his philosophy of mathematics. But in the ID, though Kant aims at a similar account of the impossibility of a non-perceivable noumenal space, his theory of spatial representation is too impoverished for him to consistently allow for the possibility of genuine spatial *conception* at all.

If I am right, then this reveals the importance of Kant's distinction between concepts and intuitions in terms of their phenomenological *immediacy* in the *Critique*. This distinction grounds Kant's conceivability argument for idealism; Kant's prototypical argument for idealism in the ID is on shakier ground, precisely because he lacks this firm distinction.

3.4 Concluding Remarks

I have argued that Kant's strategy for arguing for the mere subjectivity of phenomena in the *Inaugural Dissertation* is a version of the strategy he employs for arguing for transcendental idealism in the *Critique of Pure Reason*. I take this result to be interesting not merely because it sheds light on the ID – a text that is frequently neglected in accounts of the development of Kant's idealism – but also because it bolsters the controversial interpretation of Kant's idealism that I set out in Chapter 2. On my account, Kant's argument for idealism, even in its earliest form, is premised upon considerations about the possibility of conceiving any space distinct from the space given in *a priori* intuition – a space, Kant argues, that is merely subject-dependent. In the *Critique*, Kant's claim about perceptual space is

based upon the *immediacy* of the subject's *a priori* relation to it, and his rejection of possible non-perceivable spaces is premised upon the intuition-dependence of spatial concepts. But in the ID, Kant does not invoke the immediacy of intuition in his account of spatial representation, and thus is not able consistently to maintain a strict distinction between perceived spaces and non-actual possibilities about it. The argument is accordingly on poor footing. This conclusion further reveals the importance of Kant's strict concept/intuition distinction in the *Critique*.

Chapter 4: Kant on the Intelligibility of Noumenal Causation

The central project of the *Critique of Pure Reason* is Kant's elucidation and defense of transcendental idealism, the doctrine that human experience is limited to the mere appearance of a supersensible reality of which human subjects can know nothing. One puzzling component of this doctrine is Kant's insistence that the appearances are the causal effects of this unknowable supersensible (noumenal) reality on the mind's capacity for representation. This claim has generated two distinct criticisms, the unifying theme of which is that the causal grounding of the appearances in supersensible reality is inconsistent with transcendental idealism.

I shall call the thesis that things in themselves are the causal-explanatory ground of the appearances CAUSAL GROUNDING. Kant argues for CAUSAL GROUNDING by elimination.[129] He maintains that alternative theories of the relationships between minds and other finite substances is open to serious objection, and hence must be rejected.[130] Accordingly, finite substances are related *via* causal interaction and minds represent that to which they are causally related only as those things appear.

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129 See Hogan (2009c) for a detailed accounting of this argument. This argument, which I shall not address is serious detail here, provides the "explanatory" component of CAUSAL GROUNDING: Kant takes his argument to show, in part, that the possibility of a world of appearances *requires* that the appearances arise *via* causal interaction between finite substances.

130 Kant rejects occasionalism on the grounds that it is incompatible with human freedom. Kant's rejection of pre-established harmony is more complex, but a central problem he finds with it is its incompatibility with his conception of a world as a unity of related substances. Kant denies that pre-established harmony, according to which substances have no extrinsic properties, can account for the possibility of a world in Kant's robust sense. (That is to say, Kant rejects Leibniz's "world apart" doctrine.) For a rich account of Kant's theory of causality, see Watkins (2005).

The conjunction of CAUSAL GROUNDING with Kant's assertion that things in themselves are both non-spatiotemporal and unknowable has generated two distinct criticisms, which I shall term the *Knowledge Objection* and the *Meaning Objection*. According to the *Knowledge Objection*, Kant's thesis of epistemic humility with respect to things in themselves entails that Kant cannot consistently uphold CAUSAL GROUNDING, since it is a claim to knowledge of noumenal causal powers. According to the *Meaning Objection*, CAUSAL GROUNDING is suspect because it presupposes the intelligibility of applying a concept beyond what can possibly be experienced, i.e., to noumena. Proponents of the *Meaning Objection* typically argue that the categories – including that of causality – are given meaning only in reference to the spatiotemporal form of intuition, and thus cannot be applied to non-spatiotemporal things in themselves, which is precisely what CAUSAL GROUNDING attempts to do.

A satisfactory response to the *Knowledge Objection* presupposes a satisfactory response to the *Meaning Objection*: an account of how one can *know* the supersensible causal ground of the appearances presupposes that propositions concerning such a supersensible ground are themselves meaningful. In what follows, I aim to address only the *Meaning Objection* and I will leave for another occasion a positive account of Kant's claim to knowledge of noumenal causation.[131]

Contrary to an interpretive position that began with Jacobi and gained influence through Strawson's work on Kant, recent commentary has shown that

131 An answer to the question of *knowledge* of noumenal causation requires an account of Kant's distinction between practical and theoretical knowledge. Both Hogan (2009b) and Langton (1998) offer accounts that are compatible with a fully metaphysical reading of transcendental idealism.

Kant indeed affirms the meaningfulness of claims about noumenal causation. Nevertheless, such commentary has not by itself adequately refuted the *Meaning Objection*. In order to do so, one must do more than merely point out *that* Kant affirms the meaningfulness of noumenal predication. In addition one must explain how Kant is *entitled* to affirm the meaningfulness of such predication. And in order to do this, one must address the evidence that proponents of the *Meaning Objection* adduce in favor of their position: Kant explicitly *denies* that *spatiotemporal* predicates are meaningful in application to noumena. Accordingly, a consistent interpretation of Kant according to which he *upholds* the meaningfulness of noumenal predication must address the apparent asymmetry between the forms of *intuition* and the forms of *judgment* that such an position introduces: in order to dismiss the *Meaning Objection*, one must either explain Kant's asymmetrical treatment of these two classes of predicates, or else assimilate them. I shall argue here that the assimilation strategy is textually implausible and that Kant gives a motivated and plausible account of the asymmetry of the forms of intuition and the forms of judgment, which underpins his commitment to the intelligibility of noumenal causation.

In the first section, I shall present the *Meaning Objection* and I shall discuss some textual evidence that supports it. In the second section, I shall discuss Kant's clear commitment to the intelligibility of noumenal causation. These two sections thus appear to show that Kant is inconsistent in his commitments. In the third section, I offer a preliminary resolution of this apparent inconsistency by invoking Kant's distinction between thought and cognition. However, in the fourth section, I

argue that the objection can be raised anew in a different way, on systematic grounds. In the fifth and final section, I argue that the objection is misguided insofar as it relies on a misunderstanding of the aims of the Transcendental Deduction.

4.1 The Principle of Significance

According to Strawson, Kant argues for what Strawson calls "the principle of significance":

> [It is] the principle that 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 that concept at all. In so using it, we shall not merely saying what we do not know; we shall not really know what we are saying.[132]

In light of Kant's apparent commitment to noumena, this passage is clearly reminiscent of F.H. Jacobi's famous criticism, in a review of the second edition of the *Critique*, that "without this presupposition [of the thing in itself], I could not find my way into the system, whereas with it I could not stay there."[133] Jacobi is widely read as imputing inconsistency to the *Critique* as a whole: Kant's claim that the objects of experience are mere appearances requires the notion of the thing in itself – if only to give meaning to the notion of "appearance" by specifying what appearances are *not* – but other of Kant's doctrines appear to rule out the intelligibility of such a notion within Kant's system. By Strawson's lights, no meaningful use of any concept –

132 Strawson (1966), 3.
133 Sassen (2000), 173.

including the categories – is possible except in reference to possible experiences.[134] Since Kant quite clearly holds that things in themselves cannot appear in intuition, and hence are not objects of possible experience, he appears to have violated this principle of significance in asserting of things in themselves that they are the causes of the appearances.[135]

> **The Principle of Significance (POS)**: There can be no meaningful use of a predicate except in application to objects of possible experience (the appearances).

If Kant indeed endorses the POS, then his critical philosophy suffers from an inconsistency that threatens to undermine the very appearance/thing-in-itself distinction for which Kant argues in the opening section of the *Critique* and that ostensibly constitutes a core, foundational commitment upon which much of the

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134 Kant's conception of possible experience is quite broad: he defines empirical reality as including not merely that which is perceived, but also anything the follows, consistently with empirical laws, from that which is perceived. He writes:

> However, one can also cognize the existence of the thing prior to the perception of it, and therefore cognize it comparatively *a priori*, if only it is connected with some perceptions in accordance with the principles of empirical cognition (the analogies).... Thus we cognize the existence of a magnetic matter penetrating all bodies from the perception of attracted iron filings, although immediate perception of this matter is impossible for us given the constitution of our organs. [A 225-6/B 273]

See also B 266 for Kant's definition of actuality. Accordingly, this conception of the possibility of experience deflects any potential objection that, e.g., the concept atom is meaningless, since we cannot perceive atoms. See Pereboom (1990) for a detailed accounting of this thesis. And see Parsons (1964) for discussion of a problem associated with Kant's conception of the possibility of experience.

135 Strawson's is the clearest formulation of the *Meaning Objection*. But it is not the only one. Allison, in proposing his own solution to the problem of noumenal affection, characterizes the problem by noting that it is difficult to see how the noumenon could be a cause "because of its uncognizability, which precludes the application to it of any of the categories...." Allison (2004), 65. And McDowell offers his own explanation of "why [Kant] is attracted by the idea of an unknowable supersensible reality, apparently in violation of his own standards for what makes sense." McDowell (1994), 96.

rest of the system stands. My view is that Kant does not endorse the POS, but because so many have found it plausible, it is worth considering what evidence Kant provides in favor of such an interpretation.

The following representative passages lend some credence to the view that Kant upholds the POS:

> We can accordingly speak of space, extended beings, and so on, only from the human standpoint. If we depart from the subjective condition under which alone we can acquire outer intuition, namely that through which we may be affected by objects, then the representation of space signifies nothing at all. This predicate is attributed to things only insofar as they appear to us, i.e., are objects of sensibility. [A 26-7/B 42-3]

> [B]ecause it is very enticing and seductive to make use of these pure cognitions of the understanding and principles by themselves, and even beyond all bounds of experience, which however itself alone can give us the matter (objects) to which those pure concepts of the understanding can be applied, the understanding falls into the danger of making a material use of the merely formal principles of pure understanding through empty sophistries, and of judging without distinction about objects that are not given to us, which perhaps indeed could not be given to us in any way. Since it should properly be only a canon for the assessment of empirical use, it is misused if one lets it synthetically judge, assert, and decide about objects in general with the pure understanding alone. [A 63/B 88]

> 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 is has no sense, and is entirely empty of content, even though it may still contain 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, and, even if a pure intuition is possible *a priori* prior to the object, then even this can acquire its object, thus its objective validity, only through empirical intuition, of which it is the mere form. Thus all concepts and with them all principles, however *a priori* they may be, are nevertheless related to empirical intuitions, i.e., to *data* for possible experience. [A 239/B 298]

> ...[W]e cannot even give a real definition of a single one of [the categories], i.e., make intelligible the possibility of their object, without immediately 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, and one cannot grasp through an example what sort of things is really intended by concepts of that sort. [A 240-1/B 300]

In the first of these passages, Kant explicitly denies that spatiotemporal predicates are meaningful apart from the (spatiotemporal) conditions of possible experience: he says that apart from these conditions, they "signify" nothing at all.[136] The other passages concern the categories – i.e., the pure concepts of the understanding – and in each of them Kant might plausibly read as denying that they bear intelligible representational content when employed beyond (or apart from) the conditions of possible experience. He says that such a use results in "empty sophistries," that it is "empty of content," and that it has "no sense" and is without "significance."

Moreover, there is a familiar story about Kant and his relation to his rationalist predecessors from which a commitment to the POS might naturally be taken to follow. According to this story, Kant aimed to synthesize the rationalist and empiricist traditions – to save and develop the important insights from both, but to discard the rationalists' dogmatic claims to knowledge of experience-transcendent reality and the empiricists' impoverished conception of experience. As the story goes, Kant's primary rationalist target was Leibniz, and Kant sought explicitly to reject Leibniz's commitment to the notion that mere *a priori* thought – legislated only by the principle of contradiction – is a source of knowledge of empirical reality. Kant took this "dogmatic procedure" – "the presumption of getting on solely with pure cognition from (philosophical) concepts" – to have led his predecessors into irresolvable conflicts, and he takes himself to be able to resolve these conflicts by

136 In Chapter 2, I argue that this claim about the spatiotemporal predicates is crucial to Kant's argument for his idealism. Toward the end of this chapter, we shall have occasion briefly to revisit this argument in light of Kant's claims about the referential capacity of the categories.

engaging reason in "an antecedent critique of its own capacity." [B xxxv] It has seemed natural to those who interpret Kant as endorsing the POS to suppose that Kant's reflective critique of reason itself resolves these disputes by *dissolving* them: insofar as these disputes concern objects beyond the limits of possible experience (e.g., God and the noumenal self), they are meaningless pseudo-disputes facilitated by the mistaken belief that one can intelligibly employ a concept independently of the conditions of possible experience. On this story, Kant argues for the unintelligibility of these rationalists' disputes by arguing for the POS.

In spite of the textual evidence in favor of understanding Kant as upholding the POS, and in spite of this familiar story about Kant's aims and fundamental commitments in the *Critique*, I think it is quite clear that Kant does not endorse the POS. In the next section, I'll present some considerable evidence that he does not.

4.2 Kant on Noumenal Causation

Recent commentary on the issue has made it clear that, *contra* the passages above, Kant indeed upholds the intelligibility of noumenal causation.[137] It is my contention that this recent commentary does not fully resolve the Jacobian charge of inconsistency for, as I shall presently argue, these accounts do not explain how claims about the noumenon can be intelligible for Kant – i.e., they do not provide a satisfactory response to the *Meaning Objection.* As a first step toward a resolution of

137 See Wood (1984) for a clear account of Kant on the *nature* of noumenal causation. (I shall rely on Wood's account further below.) See Hogan (2009c) for an impressive accounting of Kant's *argument* for the indispensability of noumenal causation against the backdrop of occasionalism and pre-established harmony. See also Watkins (2005) for a full contextual accounting of Kant's statements on causation, noumenal and phenomenal. And see Adams (1997) for an account of the role of the thing in itself in Kant's critical philosophy.

the *Meaning Objection*, it is worth seeing what evidence there is that Kant is committed to noumenal causation.

The best reason to suppose that Kant is committed to noumenal causation is that he repeatedly says that he is. For example:

> The sensible faculty of intuition is really only a receptivity for being affected in a certain way with representations, whose relation to one another is a pure intuition of space and time (pure forms of our sensibility), which, insofar as they are connected and determinable in these relations (in space and time) according to laws of the unity of experience, are called **objects**. The non-sensible cause of these representations is entirely unknown to us, and therefore we cannot intuit it as an object; for such an object would have to be represented neither in space nor in time (as mere conditions of our sensible representation), without which conditions we cannot think any intuition. Meanwhile we can call the merely intelligible cause of appearances in general the transcendental object, merely so that we may have something corresponding to sensibility as receptivity. [A 494/B 522][138]

In this passage, Kant expands upon the doctrine of "affection" first introduced in the Transcendental Aesthetic. There, Kant says that human cognition requires a contribution from sensibility, which is a passive faculty for representation. Sensible representations – intuitions – thus arise only as the result of "affection" from subject-independent things. Kant here identifies the subject-independent source of affection as a "non-sensible cause," and as the "merely intelligible...transcendental object." Kant thus seems clearly committed to the intelligibility of noumenal causation in this passage.

Indeed, Kant even offers a positive *account* of noumenal causation. Kant argues that the possibility of the moral law requires the possibility of *unconditioned freedom*, i.e., the possibility that a being determines its own ends and freely causes

138 Hogan (2009c) cites this passage in a similar connection.

itself to pursue them. Kant argues that freedom is not to be found in the natural world – the world that appears to subjects in intuition – for Kant understand the natural world to be wholly causally determined by its spatiotemporal form and the strictly mechanistic laws of nature. Kant argues that the spatiotemporally determined natural world is a world of *mere appearance* because human subjects contribute the spatiotemporal form of empirical objects. Kant accordingly argues that moral freedom has its source outside of the natural world. Since noumena are undetermined, and hence non-spatiotemporally structured, moral freedom must manifest itself *via* non-spatiotemporally determined causally efficacious acts. Kant writes:

> [I]f appearances are things in themselves, then freedom cannot be saved. Then nature is the completely determining cause, sufficient in itself, of every occurrence, and the condition for an occurrence is always contained only in the series of appearances that, along with their effect, are necessary under the law of nature. If, on the other hand, appearances do not count for any more than they are in fact, namely, not for things in themselves, but only for mere representations connected in accordance with empirical laws, then they themselves must have grounds that are not appearances. Such an intelligible cause, however, will not be determined in its causality by appearances, even though its effects appear and so can be determined through other appearances. Thus the intelligible cause, with its causality, is outside the series; its effects, on the contrary, are encountered in the series of empirical conditions. The effect can therefore be regarded as free in regard to its intelligible cause, and yet simultaneously, in regard to appearances, as their result according to the necessity of nature.... [A 536-7/B 564-5]

Here, Kant argues that noumenal causes – or "intelligible causes" – are outside the spatiotemporally determined causal series of the natural world, and are thus not themselves spatiotemporally determined. For this reason, they can be "regarded as free." These noumenal causes "ground" the spatiotemporal world of appearances

insofar as the appearances – which are mere representations – are the effects of undetermined, non-spatiotemporal noumena.

Thus, on Kant's ultimate account of fundamental reality, causality comes in two varieties: the spatiotemporally structured causation of the natural world, and the non-spatiotemporally determined real causes of the noumenal world. The natural world is wholly mechanistic, and events follow from antecedent conditions with necessity. There is thus no freedom in the natural world. Freedom is to be found, however, *outside* the wholly determined natural world in things in themselves. Freedom manifests itself through free acts, which themselves are non-spatiotemporally structured, and which determine the course of the natural world:

> The determination of the causality of beings in the sensible world can as such never be unconditioned, and yet for every series of conditions there must necessarily be something unconditioned and so too a causality that is altogether self-determining. Hence the idea of freedom as a faculty of absolute spontaneity was not a need but, *as far as its possibility is concerned*, an analytic principle of pure speculative reason. It is, however, absolutely impossible to give anywhere in experience an example of it, since among the causes of things as appearances no determination of causality that would be absolutely unconditioned can be found; hence we could *defend* the *thought* of a freely acting cause, when we apply this to a being in the sensible world, only insofar as this being is also regarded on the other side as a noumenon, by showing that it is not self-contradictory to regard all its actions as physically conditioned insofar as they are appearances and yet also to regard their causality as physically unconditioned insofar as the acting being is a being of the understanding.... [Ak. 5:48]

It is clear, then, that Kant is committed to the intelligibility of noumenal causation insofar as giving an *account* of it requires its intelligibility. To this point, then, we have seen considerable textual evidence in favor of imputing to Kant the following two positions: a) the possibility of noumenal causation is unintelligible;

and b) noumenal causation is a requirement for morality, and is thus intelligible. But (a) and (b) are not compatible; something is amiss. In the following section, I shall propose a preliminary resolution to this puzzle. This solution shall say how Kant's apparently divergent statements on the intelligibility of noumenal causation can be reconciled. But, as I shall argue in Section 4, this proposal is insufficient to allay all concerns over the consistency of Kant's commitments on this topic.

4.3 Kant on the Distinction Between Thought and Cognition

Crucial to Kant's upholding the intelligibility of noumenal causation is his distinction between *thought* and *cognition*. In a famous passage from the Preface to the second edition of the *Critique*, Kant writes:

> To **cognize** an object, it is required that I be able to prove its possibility (whether by the testimony of experience from its actuality or *a priori* through reason). But 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, even if I cannot give any assurance whether or not there is a corresponding object somewhere within the sum total of all possibilities. But in order to ascribe objective validity to such a concept (real possibility, for the first sort of possibility was merely logical) something more is required. [B xxvi]

Kant holds that cognition is objective in the sense that it requires a relation to possible sensible experiences. But Kant holds that *thought* is independent of possible experience. While the intelligibility of thought is governed simply by the principle of contradiction, cognition is governed not merely by the principle of contradiction, but also by the *a priori* principles of possible experience (e.g., the laws of nature and the axioms of mathematics and pure natural science). Part and parcel

of the thought/cognition distinction for Kant is a distinction between logical and real possibility. A proposition indicates a *logical* possibility insofar as it does not violate the principle of contradiction. Kant's notion of real possibility is trickier, but Kant appears committed to the notion that propositions that are consistent with the principles of possible experiences indicate *real possibilities*.[139] Accordingly, cognitions – because they require a relation to possible experiences – necessarily express real possibilities, while *mere thoughts*, which bear no relation to possible experiences, express mere logical possibilities.

In light of this brief overview of Kant's thought/cognition distinction, it would appear that those who attribute to Kant the POS, and thus raise the *Meaning Objection*, to his claims about noumenal causation have misunderstood the role that a relation to possible experience plays in Kant's claims about the meaningfulness of various propositions. To be sure, Kant *endorses* a necessary role for the principles of possible experience: he claims that cognition – and thus theoretical *knowledge* – requires a relation to them. But this does not itself imply that propositions that are not candidates to be *cognized* (or *known*) are themselves unintelligible or meaningless. For example, Kant holds that God can never appear in intuition, and so cannot be cognized. Accordingly, propositions about God's existence and nature are not candidates for *knowledge*. But Kant does not deny that they are intelligible propositions. Indeed, Kant took one of the great achievements of the *Critique* – an

139 It is important to note that Kant need not claim that *only* cognitions express real possibilities. If God exists, then God is really possible, even though God can never be cognized. I mean to be imputing to Kant here only the view that the cognizability of a proposition is *sufficient* for its being really possible, but cognizability is not *necessary* for its real possibility.

achievement owed largely to a clear distinction between mere thought and cognition – to be that it provided for the possibility of faith. Kant does not consider the propositions reserved for mere faith to be unintelligible; it is just that they are theoretically un*knowable*.

Indeed, a careful reading of the passages presented above (see pp. 125), in light of the distinction between thought and cognition, do not imply the unintelligibility of propositions concerning things in themselves, contrary to what defenders of the *Meaning Objection* must suppose. In those passages, Kant claims that the use of pure concepts independently of any relation to possible experience is "entirely empty of content," "has no sense," constitutes a "misuse," and results in "empty sophistries." I contend, however, that these claims should *not* be taken to imply that such propositions are meaningless or unintelligible. These passages can readily be understood as targeting a rationalist conception of knowledge according to which pure thought is capable of determining and justifying items of knowledge independently of any relation to empirical experience. Kant's claim, then, is not that such propositions are *meaningless*; it's that they are empty of any experiential content, and are thus are "misused" insofar as they are taken to be candidates for theoretical knowledge. Indeed, in one of the passages, Kant defines "significance" as "relation to the object." Kant's claim that such propositions lack "significance" or "sense" thus need not be given a strong reading according to which this means that such propositions lack meaning; a weaker reading, according to which such propositions are meaningful but not candidates for theoretical knowledge, is available.

On this view, Kant's claims about things in themselves in general – and about noumenal causation in particular – are not internally inconsistent: they do not directly violate Kant's own standards for the meaningful use of a predicate. Rather, the *Meaning Objection* misunderstands the role of possible experience in Kant's epistemology. Proponents of the *Meaning Objection* must suppose that relation to possible experience serves a *semantic* function; in fact, however, Kant is careful to show that possible experience serves an *epistemic* function. His claims about the emptiness of mere thought should accordingly be given *not* a semantic reading according to which such propositions are meaningless, but instead an epistemic reading according to which such propositions are precluded from being candidates for theoretical knowledge. If this is right, then Kant does not endorse the POS, and the *Meaning Objection* (which is rendered plausible only in virtue of a commitment to the POS) is accordingly refuted.

On this proposal, Kant's statements about noumenal causation are not inconsistent: when Kant appears to be claiming that noumenal causation is unintelligible, he is in fact claiming that it is not cognizable, and thus not theoretically *knowable*. However, a different sort of argument in favor of attributing the POS to Kant is available, which arises in virtue of Kant's apparently divergent semantic treatment of the forms of intuition and the forms of judgment. In the next and final section, I shall illustrate the puzzle and argue that Kant can readily deal with it.

4.4 Forms of Intuition and Forms of Judgment

As we have seen, Kant clearly commits himself to the intelligibility of predicating the categories – including that of causality – of supersensible reality. I have argued that Kant's distinction between thought and cognition is the piece of conceptual machinery that allows Kant consistently to uphold this doctrine. Proponents of the *Meaning Objection* misunderstand the distinction as *semantic*, and not as *epistemic*, and this mischaracterization of it underpins the attribution of the POS to Kant, which in turn underpins the *Meaning Objection*. Nevertheless, I think the *Meaning Objection* can be raised anew, even in light of the thought/cognition distinction, in virtue of Kant's claims about the legitimate use of *spatiotemporal* predicates.

Kant explicitly holds that the categories – and causal predicates in particular – can be applied to sensible objects: Kant takes the spatiotemporal appearances to be subject to a strict causal determinism. But Kant explicitly *denies* that spatiotemporal predicates can be applied to non-sensible reality. And this opens up two new problems. First, Kant appears to want to say that the categories can have *both* spatiotemporal meanings *and* non-spatiotemporal meanings. That is to say, in light of his doctrine of the non-spatiotemporality of things in themselves, Kant is evidently committed to non-sensible causal predications as involving a kind of causality distinct from that predicated of the appearances. This commitment is not immediately explained by invoking the distinction between thought and cognition and it is thus in need of further explanation. Second, Kant's commitment to this

asymmetry between categories and spatiotemporal predicates is in need of justification. For Kant holds that the categories can be applied to *both* sensible *and* non-sensible objects, while spatiotemporal predicates cannot be so applied.

Thus, even if one concedes *that* Kant is committed to noumenal causation, one might nevertheless hold that this doctrine remains problematic, and for systematic reasons: even in spite of the thought/cognition distinction that lays the groundwork for upholding the meaningfulness of propositions independent of any relation to experience, it would appear that the notion of non-spatiotemporal causation required by the doctrine is inconsistent with the spatiotemporal meaning Kant gives to the categories in the *Critique*. Moreover, insofar as a commitment to the doctrine of noumenal causation requires an explicit commitment to the possibility that a predicate can take both sensible and non-sensible meanings, one must wonder how Kant is able to justify *denying* that spatiotemporal predicates can be applied both sensibly and non-sensibly. Thus, one might make the case for the *Meaning Objection* by *granting* Kant's thought/cognition distinction while nevertheless holding that he *ought* to have committed himself to a restricted POS in the case of the categories (and in particular that of causality).

In the following section, I shall argue that Kant's approach to noumenal causation is in fact consistent. I shall argue that Kant conceives of supersensible causation as non-spatiotemporally structured, and I shall argue that the asymmetry between the forms of intuition and the forms of judgment is well-motivated.

4.5 Kant on Schemata and Sensible Reference

The intelligibility of Kant's theory of noumenal causation requires Kant to show a) that the category of causality can take a non-spatiotemporal meaning in *addition* to a spatiotemporal meaning, and b) that (a) is not itself inconsistent with his own absolute restriction of the forms of *intuition* to the appearances. I shall begin by considering what Kant says about the category of causality taking both a spatiotemporal and a non-spatiotemporal meaning. I shall argue that this alone does not explain why spatiotemporal predicates cannot be applied non-sensibly.

As a first step, consider what Kant says in defense of the intelligibility of noumenal causation in the *Critique of Practical Reason*:

> Even the concept of causality, which has application and so too significance strictly speaking only in reference to appearances, in order to connect them into experiences (as the *Critique of Pure Reason* proves) is not enlarged in such a way as to extend its use beyond the boundaries mentioned. For, if reason sought to do this it would have to try to show how the logical relation of ground and consequence could be used synthetically with a kind of intuition different from the sensible, that is, how a *causa noumenon* is possible; this it cannot do, but as practical reason it does not even concern itself with this inasmuch as it only puts the *determining ground* of the causality of the human being as a sensible being (which is given) *in pure reason* (which is therefore called practical), and accordingly uses the concept of cause itself – from whose application to objects for theoretical cognition it can here abstract altogether (since this concept is always found *a priori* in the understanding, even independently of any intuition) – not in order to cognize objects but to determine causality with respect to objects in general, and so for none other than a practical purpose; and thus it can transfer the determining ground of the will into the intelligible order of things inasmuch as it readily admits at the same time that it does not understand how the concept of cause might be determined for cognition of these things. It must, of course, cognize in a determinate way causality with respect to the actions of the will in the sensible world, since otherwise practical reason could not actually produce any deed. But as for the concept which it makes of its own causality as noumenon, it need not determine it theoretically with a view to cognition of its supersensible existence and so need not be able to give it significance in this way. For, the concept receives significance apart from this – though only for practical use – namely, through the moral law. Even regarded theoretically it always remains a pure concept of the understanding given *a priori*,

> which can be applied to objects whether they are given sensibly or not sensibly, although in the latter case it has not determinate theoretical significance or application but is merely the understanding's formal though still essential thought of an object in general. [Ak. 5:49]

Here, Kant says that the concept of causality – which he identifies with the "logical relation of ground and consequence" – cannot be given *theoretical* significance (or meaning) other than through an application to appearances, for in order to show such a thing, one would have to show that such a concept can meaningfully be applied to non-sensible intuitions. But Kant holds also that the concept can be given content through *pure practical reason.* Pure practical reason does not employ the concept with an eye toward possible *cognition* – only theoretical reason could do so, and only by ensuring its applicability to the relevant kind of intuition – but rather simply to *think* "the intelligible order of things." Thus, even though the concept of causality has no *theoretical* significance for non-sensible objects, it gains non-sensible content through pure practical reason, which employs it merely to think a required possibility.

Kant's identification in the passage above of the concept of causality with the "logical relation of ground and consequence" is significant: Kant holds that the concept, *prior* to any application to spatiotemporal appearances, does not already contain spatiotemporal content. Kant appeals here to the broadly Aristotelian conception of causation, according to which causal determination is conceived as determination of a state of affairs through a necessitating metaphysical ground. Notably, this can include, but is not limited to, spatiotemporally structured efficient causation.Thus, Kant holds that the concept of causality – thought independently of

any potential application to sensible intuitions – does not carry with it determinate spatiotemporal content. This, of course, does not preclude it from being *given* determinate spatiotemporal content *in* its application to sensible intuitions; but it does show that Kant conceives of the concept as needing to be *endowed* with spatiotemporal content. This shows, then, that Kant can consistently hold that the concept of causality can take non-spatiotemporal meaning *in addition to* the spatiotemporal meaning it takes when applied to the spatiotemporal objects of spatial intuition. I thus take Kant to be consistent in supposing that the categories can take both spatiotemporal and non-spatiotemporal meanings.

However, this story about the possibility of the categories taking both spatiotemporal and non-spatiotemporal meanings does not by itself resolve the second, related worry about the asymmetry between the forms of intuition and the forms of judgment. The issue there is obviously *not* whether spatiotemporal predicates can take non-spatiotemporal meanings. They cannot. The issue is rather whether spatiotemporal predicates can have non-*sensible* meanings. Kant's story about causal predicates taking both spatiotemporal and non-spatiotemporal meanings is underpinned by a commitment to the idea that causal predicates are not necessarily bound to refer *only* either sensibly or non-sensibly, but not both. But Kant holds that spatiotemporal predicates are meaningless when applied non-sensibly, and as such are bound to bear only sensible meanings. By virtue of what principle can Kant claim that the categories must be *endowed* with sensible content, and thus can refer non-sensibly prior to being so endowed, while at the same time

claiming that spatiotemporal predicates can never be used in abstraction from their sensible content?

In the account of Kant's argument for transcendental idealism I offered in Chapters 2 and 3, I claim that Kant employs considerations about the semantic limitations of spatial predicates to argue *for* the non-spatiality of things in themselves. But his commitment to the possibility of categorial non-sensible reference casts some suspicion on that argument: given that Kant holds that the forms of judgment can have both sensible and non-sensible referents, can an account according to which he holds that spatiotemporal predicates have only sensible referents be right? One might suppose that Kant can make this case by arguing that space and time are merely ideal, and thus that spatiotemporal predicates cannot have non-sensible referents. But on my account, Kant argues *for* the non-spatiotemporality of things in themselves *on the basis of* the necessary sensible reference of spatiotemporal predicates. So this strategy is not immediately available to me. Thus, what is needed is an *explanation* of how – independently of any supposition about the metaphysical status of things in themselves – Kant is able to uphold the account of the necessarily sensible reference of spatiotemporal predicates I have already attributed to him while at the same time holding that the categories are free to refer both sensibly and non-sensibly. Thus, my present aim is to elucidate the precise feature of the categories that permits their non-sensible application and to argue that Kant consistently holds that spatiotemporal concepts lack such a feature, and thus cannot refer non-sensibly.

First, consider the following passages in which Kant endorses the asymmetry in question:

> With the **pure concepts of the understanding**, however, there first arises the unavoidable need to search for the transcendental deduction not only of them but also of space, for since they speak of objects not through predicates of intuition and sensibility but through those of pure *a priori* thinking, they relate to objects generally without any conditions of sensibility; and since they are not grounded in experience and cannot exhibit any object in *a priori* intuition on which to ground their synthesis prior to any experience, they not only arouse suspicion about the objective validity and limits of their use but also make the **concept of space** ambiguous by inclining us to use it beyond the conditions of sensible intuition, on which account a transcendental deduction of it was also needed above. [A 88/B 120-1]

> Space and time are valid, as the condition of the possibility of how objects can be given to us, no further than for objects of the senses, hence only for experience. Beyond these boundaries they do not represent anything at all, for they are only in the senses and outside of them have no reality. The pure concepts of the understanding are free from this limitation and extend to objects of intuition in general, whether the latter be similar to our own or not…. [B 148]

> As far as their origin is concerned, the categories are not grounded on sensibility, as are the forms of intuition, space and time; they therefore seem to allow an application extended beyond all objects of the senses. [B 305]

In each of these passages, Kant endorses a referential asymmetry between spatiotemporal representation and the categories. Kant says that space and time are valid "no further than for objects of the senses" but that the categories "relate to objects generally without any conditions of sensibility" and "extend to objects in general." He says that the intelligibility of a non-sensible use of the categories "make[s] the concept of space ambiguous" insofar as we are likely to suppose that

spatiotemporal representation can be used to think "objects in general," too. However, Kant is careful to point out that this is not the case.

Kant also offers a preliminary explanation of this: spatiotemporal representation, Kant says, is "grounded in experience," is "only in the senses," and is "grounded on sensibility." By contrast, the categories are not so grounded. I take Kant here to be noting an asymmetry in the *origins* of the two types of representation as a means to explaining an asymmetry in their *referential capacities*. Crucial to understanding how Kant is able to uphold this asymmetry between the forms of intuition and the forms of judgment is Kant's account of how the categories become endowed with spatiotemporal meanings.

Kant conceives of the categories as *pure concepts*. He thus understands them to be representations (or rules for thought) that are possible independent of any sensory input. Kant thus takes himself to require an argument for their applicability to the deliverances of the senses: by what right can these pure rules for thought be contentfully applied to sensory experience? Kant's answer to this question comes in two parts. In the Transcendental Deduction, Kant argues that the categories do have a sensible application. Then, in the Schematism, Kant offers an *explanation* of how they can be so applied by invoking the notion of a "schemata." I now want briefly to consider this account; it is my contention that it will illuminate and explain the asymmetry in question. I shall focus primarily on what Kant says in the Schematism. But before doing so, I shall give a very brief overview of the Deduction.

Kant's basic aim in the Deduction is to show that the categories can meaningfully be applied to the appearances. His strategy for showing this is an

argument to the effect that the categories must be employed to unify the unstructured "manifold" of raw sensory input given in perception. Kant begins by claiming that the manifold of sensory data is given to the subject without objective structure. But Kant holds that all perceptual content must be unified into a single content and thinkable under a single consciousness.[140] Kant's claim is that the act of "synthesis," or unification, accounts for the possibility of thinking perceptual content under a single consciousness. He argues for this by claiming that the act of synthesis that provides unity to the sensory manifold is the act of judgment.[141] Insofar as it is the subject's (conceptual) act of judgment that synthesizes the data of perception, the resulting contents are thinkable under the single judging consciousness. Kant takes himself already to have established that the forms of judgment are the categories.[142] Thus, insofar as a unification of the manifold of perception is possible, the *a priori* forms of judgment – the categories – are necessarily applicable to intuition.[143]

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140 This is his opening premise of the Deduction. See section 16 [B 132]

141 I have left aside the important skeptical question whether perceptual data can be given to the subject bearing a unity, and thus thinkable under a single consciousness. Kant denies in the Aesthetic that sensory data is given in a structured way. (See A 20/B 34) It's spatiotemporal form must be contributed by the subject. Here, Kant is concerned to show that it has sufficient structure to be thought under a single consciousness. The implication appears to be that mere spatiotemporal form is insufficient for objective *thought*. His point, then, is that some *further* structure must be contributed by the subject. He claims that such structure is given by the forms of judgment themselves.

142 Kant aims to establish this result in section 20 [B 143], and it relies on the result of the so-called "metaphysical deduction" [B 102 – 116]

143 I have left out a great deal in this account of the Deduction, and surely many objections can be raised against this schematic presentation of its argument. I have only meant to sketch Kant's basic strategy in upholding the applicability of the categories to the appearances. See Henrich (1969), Allison (2004), Hatfield (2003), Longuenesse (1998) and Guyer (1987) for important accounts of Kant's overall aims in the Deduction, the specific structure of that argument, and detailed interpretation of Kant's success in executing that argument.

This argument is meant to justify the application of the understanding's *a priori* concepts to sensible intuition. But the argument – as Kant recognizes – does not alone *explain* how a representation that can be grasped completely independently of experience can be employed to *subsume* objects of experience. Thus, the Transcendental Deduction shows *that* the understanding's *a priori* principles are employed in unifying the manifold of perception, but it does not *explain how* such principles succeed in representing something of entirely distinct form. Thus, in the Schematism of the Pure Concepts of the Understanding, Kant says that "in all subsumptions of an object under a concept the representations of the form must be homogeneous with the latter" but he concedes that the "pure concepts of the understanding, however, in comparison with empirical (indeed in general sensible) intuitions, are complete unhomogeneous, and can never be encountered in any intuition." [A 137/B 176] He then asks:

> [H]ow is the subsumption of the latter under the form, thus the application of the category to appearances possible, since no one would say that the category, e.g., causality, could also be intuited through the senses and is contained in the appearance? (ibid.)

Kant thus recognizes that he requires an *explanation* of the applicability of the categories to the appearances despite taking himself already to have shown that the categories must be so applicable.

Kant thinks this explanation can be given by proving the existence of what he calls "schemata": a "mediating representation" that "must be pure (without anything empirical) and yet intellectual on the one hand and sensible on the other." [a 138/B

177] Kant's idea is that to explain how empirical objects can be subsumed under *a priori* concepts (and necessarily so), one must link the representation of the empirical object with the *a priori* concept *via* a representation that shares something from both. Thus, the representation must be *a priori*, but must also have sensible content.

Kant identifies schemata for each of the categories. He says that the schema for causality is "the real upon which, whenever it is posited, something else always follows. It therefore consists in the succession of the manifold insofar as it is subject to a rule." [A 144/B 183] Kant's point is that in order to explain how sensible objects can be subject to the *a priori* concept of causality, one must be able to represent *a priori* the possibility of the rule-governed *succession* of determinations in the perceptual manifold. Kant thus identifies schemata as "*a priori* time determinations in accordance with rules." [A 145/B/184] Such time determinations have sensible content insofar as time is a form of intuition (which Kant takes himself to have shown already in the Transcendental Aesthetic). Moreover, such time determinations Kant takes to be *a priori*, since he takes time to be an *a priori* form of intuition. Finally, because such time-determinations are rule-governed, they are homogenous with the categories, which are rules for *thought*, and thus themselves independent of any spatiotemporal content.

Thus, Kant takes the representation of time-determinations to be crucial to the explanation of how the categories can subsume empirical objects. Insofar as one can represent the possibility of temporal succession and simultaneity *a priori*, one can explain how it is possible for empirical objects – which are subject to the *a priori*

features of temporality in virtue of taking time as their necessary form – to fall under particular categories.

We are now in a position, I believe, to see how Kant is able to justifiably endorse the referential asymmetry between the categories and spatiotemporal predicates. The categories can be used intelligibly insofar as they are unschematized: because they contain no sensible content independently of being schematized by the temporal form of intuition, they can be used to think non-sensible (and thus non-spatiotemporal) possibilities, as in the case of causality. I contend that Kant denies that a parallel account of the referential limitations of spatiotemporal predicates is possible: Kant holds that spatiotemporal predicates are not possible independently of a schematization. That is to say, on the account I am about to set forth, Kant holds that a condition upon the possibility of a meaningful spatiotemporal predicate is that it already be schematized. Thus, the very condition that allows for the possibility of intelligible, non-sensible reference in the case of the categories is absent in the case of the spatiotemporal predicates. This accounts for the puzzling asymmetry between the forms of intuition and the forms of judgment.[144]

Kant holds that spatial representation is fundamentally intuitive, and not conceptual. Kant conceives of sensibility as a passive, or "receptive," faculty: intuitions are generated only in virtue of causal affection by an object. Kant also

144 The account of the limited referential capacity of spatiotemporal predicates is fully laid out in Chapter 2. As it is laid out there – in its full form – the argument is independent of the notion of a schematism. But because I take that notion to be crucial to Kant's argument for the meaningfulness of the *categories* in application to noumena, I here repeat (in broad outline) the argument from Chapter 2, this time with reference to schemata, so as better to relate it to the issue presently under discussion.

holds that intuitions are singular representations that bear an *immediate* relation to their objects. In virtue of their passivity and their singular and immediate relation to their objects, intuitions cannot by themselves be used to represent non-actual possibilities; one cannot *perceive* non-actual states of affairs. Spatiotemporal possibilities as such must be thought by employing spatiotemporal *concepts*. Accordingly, Kant's distinction between the intelligible use of the categories and spatiotemporal predicates is appropriately a distinction between the legitimate uses of the pure concepts of the understanding and *spatiotemporal concepts*.

Though commentators typically have not focused on what Kant has to say about spatiotemporal concepts, a close look at Kant's claims about them reveal that Kant holds that they, unlike the pure concepts of the understanding, are not possible independently from sensible intuition: spatiotemporal concepts are *formed from* sensible intuition, and thus are necessarily endowed with sensible content. The question whether the categories can be used to think non-sensible possibilities arises in part because of their independence from sensible intuition. To this point, I have argued that the unschematized categories *can* intelligibly be used to think non-sensible possibilities. By comparison, if I am right that spatiotemporal concepts *require schemata* for their very intelligibility, then there can be no question whether they can intelligibly be applied to non-sensible things in themselves: the condition required for *that* possibility is absent in their case.

Kant's most prominent examples of spatiotemporal concepts are mathematical concepts. Kant holds that geometric concepts must be “constructed”

in pure intuition.[145] Kant says that "to **construct** a concept means to exhibit *a priori* the intuition corresponding to it" [A 713/B 741] and that without construction "I am not to see what I actually think in my [spatial] concept" because prior to the construction of the concept it "is nothing further than its mere definition…." It is only *through* the act of construction that I am able "to go beyond it to properties that do not lie in this concept but still belong to it." [A 718/B 746] Kant holds that the construction of a mathematical concept requires the subject to present to itself a particular instance of the extension of the concept in *a priori* intuition. Thus, for example, in order meaningfully to reason with the concept triangle, a subject must be able to construct in *a priori* intuition a particular triangle upon which she can perform geometric operations and about which she can therefore draw inferences.[146]

Kant holds that the constructed figure, though a concrete individual, nevertheless remains fully general in virtue of its arbitrariness: the geometer, working with the definition of triangle, pays no attention to the particular features that distinguish among triangles of different varieties, and rather aims to construct merely a three-sided, closed plane figure. Since the geometer could have

145 My aim here is not to provide a full account of Kant's theory of concept construction, nor to defend Kant's epistemology of mathematics. Rather, I intend only to show that the passage in question stands as an initial, albeit rough, statement of this aspect of Kant's philosophy of geometry. For more on construction, see Shabel (2006), Friedman (1992) and Carson (1997).

146 Kant clearly denies that the geometer can draw inferences about, e.g., triangles in the absence of presenting herself with one in pure intuition: "Give a philosopher the concept of a triangle, and let him try to find out in his way how the sum of its angles might be related to a right angle. He has nothing but the concept of a figure enclosed by three straight lines, and in it the concept of equally many angles. Now he may reflect on this concept as long as he wants, yet he will never produce anything new." By contrast, the geometer "begins at once to construct a triangle" and accordingly "arrives at a fully illuminating and at the same time general solution of the question." [A 716-7/B 744-5]

constructed a triangle with any particular configuration of side lengths or angle measurements, the actual constructed triangle serves to represent generally all triangles. For this reason, Kant says that the constructed figures serve as the schemata for the mathematical concepts in question:

> Philosophical cognition...considers the particular only in the universal, but mathematical cognition considers the universal in the particular, indeed even in the individual, yet nonetheless *a priori* and by means of reason, so that just as this individual is determined under certain general conditions of construction, the object of the concept, to which this individual corresponds only as its schema, must likewise be thought as universally determined. [A 714/B 742]

Kant here contends that constructed particulars are schema for mathematical concepts. They have sensible content in virtue of being constructed in *a priori* intuition. Because they rely upon a conceptual *rule* for their construction – a rule that follows from the definition of the concept – they remain fully general. Kant says that construction of an individual itself endows the concept with content – that apart from construction, the concept does not represent. Kant thus holds that the mathematical concepts, unlike the categories, do *not* have intelligible unschematized uses.

Kant indicates that this thesis about mathematical concepts generalizes to all spatial concepts. In an important passage in the Transcendental Aesthetic about the fundamental intuitivity of spatial representation, Kant writes:

> Space is not a discursive, or, as is said, general concept of relations of things in general, but a pure intuition. For, first, one can only represent a single space, and if one speaks of many spaces, one understands by that only parts of one and the same

> unique space. And these parts cannot as it were precede the single all-encompassing space as its components (from which its composition would be possible), but rather are only thought **in it**. It is essentially single; the manifold in it, thus also the general concept of spaces in general, rests merely on limitations. From this it follows that in respect to it an *a priori* intuition (which is not empirical) grounds all concepts of it. Thus also all geometrical principles, e.g., that in a triangle two sides together are always greater than the third, are never derived from general concepts of line and triangle, but rather are derived from intuition and indeed derived *a priori* with apodictic certainty. [A 25/B 39]

Kant here holds that *a priori* intuition "grounds all concepts" of space. This is clearly reminiscent of his claim about the mathematical concepts that they depend for their content upon the exhibition in *a priori* intuition of a concrete individual to which it refers. At the end of the passage Kant reaffirms the view that geometric *reasoning* is possible only in virtue of a relation to *a priori* intuition.

Thus, on the view I have defended here, Kant is indeed justified in upholding a referential asymmetry between the forms of judgment and the forms of intuition. The categories are contentful independently of any relation to possible experience. Their application to experience Kant takes to require proof; *that* they can be so applied, however, does not preclude them from being used (unschematized) to represent non-sensible possibilities. It is this view that grounds Kant's theory of noumenal causation. Spatiotemporal predicates, on the other hand, derive their meanings from *a priori* spatiotemporal intuition. They are thus *already* schematized. Accordingly, Kant is justified in upholding their absolute restriction to the appearances.

4.6 Concluding Remarks: The Principle of Significance Again

In closing this chapter, I want briefly to return to the Principle of Significance. It states that a representation can be meaningful only in application to possible experiences. It is the POS that underpins the criticism that Kant's system is inconsistent because of his commitment to the intelligibility of noumenal causation. But we have just seen that Kant *can* consistently uphold the intelligibility of noumenal causation, even in light of his absolute restriction of spatiotemporal representation to the appearances: he does so by arguing for an asymmetry between the forms of judgment and the forms of intuition by virtue of which the unschematized categories can be used coherently to think (though not cognize) propositions that are wholly independent of experience. By contrast, spatiotemporal representation is necessarily schematized, and thus cannot be used to think non-sensible possibilities. We are also now in a position to diagnose Strawson's mistaken belief that Kant is committed to the POS: it requires a mistaken understanding of the role of possible experience in Kant's account of representation. Whereas Strawson evidently takes it to play a *semantic* role, by Kant's lights it plays an *epistemic* role. In light of this Kant needn't be committed to the POS, and he is not inconsistent in upholding the meaningfulness of claims about noumena.

Chapter 5: On the Very Idea of a Non-Euclidean Geometry (for Kant)

The development of non-Euclidean geometries in the 19th- and 20th-centuries has often been taken to devastate Kant's philosophy of geometry. This is because Kant believed that geometric cognition is synthetic *a priori*, and hence that geometric truths are necessary truths. The development of non-Euclidean geometries, then, is taken to undermine this picture: geometric cognition *cannot* be synthetic *a priori*, since to cognize something *a priori* is to know its status as necessarily true, which, given the availability of geometries inconsistent with it, Euclidean geometry evidently is not.

One way to repair this difficult in Kant's philosophy of geometry would be to argue that there is, on Kant's own terms, a way for him to admit the possibility of non-Euclidean geometries – perhaps by restricting the scope of the necessity of geometric truths to perceivable space, or (or perhaps also) by showing the possibility involved in asserting non-Euclidean geometric propositions to be less than strict. To do this would be to offer Kant a life preserver.[147] But I think this strategy won't work. Kant is quite clear in his commitment to the *absolute* necessity of Euclidean propositions, and in his commitment to the premises concerning *a priori* knowledge on which this necessity is grounded. Moreover, because the

147 I shall consider such a strategy below, pp. 174 – 183.

necessity of Euclidean geometry is commonly taken to play a significant role in Kant's argument for transcendental idealism, it is unclear how one might "save" Kant from the specter of non-Euclidean geometry while at the same time preserving what Kant himself took to be the chief accomplishment of his critical philosophy.[148]

I shall argue that Kant had available to him – even if he never explicitly relied upon it – a much more interesting argument for the necessity of Euclidean geometry than he is often taken to have had. It is crucial to see what Kant's baseline assumptions about the nature of space and spatial representation are, and what *his* conception of a non-Euclidean geometry would have been. I argue that Kant can eliminate the possibility of non-Euclidean geometries by endorsing the following two claims:

> (A) The space represented in pure intuition – perceptual space – is adequately and sufficiently described by Euclid's theorems and postulates

and

> (B) It is not possible for human subjects to grasp a *spatial* representation inconsistent with the features of space described in (A).

These principles are not unfamiliar: they describe claims that Kant makes in arguing for his idealism – claims I have set out in detail in Chapter 2. We shall have occasion to recap them briefly in the second section. For now, I shall remind the reader

148 In Chapter 2, I defended a version of Kant's argument for transcendental idealism that does not explicitly rely upon an assertion of the necessity of Euclidean geometry. Rather, on the view developed there, Kant relies upon facts about spatial *concepts*, and he indeed holds that the space given in pure intuition is Euclidean. But I take Kant's premises to be chiefly concerned with facts about the conditions upon possible experience, and I thus take his claims about geometry in the Aesthetic either to follow from more fundamental claims about spatial representation, or else to be merely incidental or elucidatory.

simply that Kant thinks that there is no *purely* formal *spatial* representation: even spatial *concepts* are necessarily endowed with intuitive representational content in virtue of Kant's theory of concept construction. Insofar as contemporary non-Euclidean geometries are characterized as purely formal representations of sets of axioms inconsistent with Euclid's own, then in light of (A) and (B), Kant is in a position to deny that such things are possible: insofar as the representations are purely formal, they are not *spatial* representations at all, and thus cannot jointly constitute a geometry; and insofar as they are *spatial* representations, they are not inconsistent with the Euclidean space given in intuition.

Kant need not deny that consistent sets of purely formal representations are possible. But he would deny that they have *spatial* meanings insofar as such conceptual representations bear no relation to intuition. By Kant's lights, then, a non-Euclidean geometry would have to involve a quasi-perceptual representation of some unperceivable space numerically distinct from the space given in pure intuition. But Kant denies that such a representation is possible, and he thus in a position to uphold the necessity of Euclidean geometry.

I am not the first to have noticed Kant's claim that non-Euclidean spaces are "unthinkable" and thus that non-Euclidean geometries are not possible. However, I shall deny that the leading proponent of this interpretation – Michael Friedman[149] – can consistently maintain that Kant was committed to it in light of his interpretation of the role of pure intuition in Kant's philosophy of geometry more generally. Fortunately, a model of pure intuition contrary to Friedman's own – and compatible

149 Friedman (1992).

with this unthinkability claim – is available. Puzzlingly, however, an influential proponent of *this* interpretation[150] has *denied* that Kant is committed to this unthinkability argument against the possibility of non-Euclidean geometries. Accordingly, the argument I propose on Kant's behalf (which I shall elucidate more fully below) cuts in rather jagged fashion across a prominent debate over the role of pure intuition in Kant's philosophy of mathematics – a debate we shall have occasion to reexamine in light this argument. I shall argue that Friedman is right insofar as he attributes the unthinkability argument to Kant, but that he cannot consistently accommodate it given his view of pure intuition. By contrast, I shall claim that his opponents should *embrace* the unthinkability argument, even in spite of a prominent denial of it.

In the first section, below, I shall briefly explain in more detail what I take Kant's response to the objection from non-Euclidean geometry to be. In the second section, I shall recap the argument of Chapter 2, which I take to play a significant role in Kant's rejection of the possibility of non-Euclidean geometries. In the third section, I shall discuss how these claims square with the two major extant proposals about the role of pure intuition in Kant's philosophy of geometry.

5.1 The Unthinkability Interpretation

In the midst of an argument designed to elucidate the role of pure intuition in Kant's philosophy of geometry, Michael Friedman claims that the impossibility of

150 Carson (1997).

non-Euclidean geometries is, for Kant, grounded in the impossibility of non-Euclidean spatial concepts:

> ...[T]here can be no question of non-Euclidean geometries for Kant. Non-Euclidean straight lines, if such were possible, would have to possess at least the order properties – denseness and continuity – common to all lines, straight or curved. And, on the present interpretation, the only way to represent (the order properties of) a line – straight or curved – is by drawing or generating it in the space (and time) of pure intuition. But this space, for Kant, is necessarily Euclidean.... It follows that there is no way to draw, and thus no way to represent, a non-Euclidean straight line, and the very idea of a non-Euclidean geometry is quite impossible.[151]

In a later work, Friedman reaffirms this point (though this time about geometric theorems instead of geometric objects):

> On [my]...interpretation, since there is no purely logical or conceptual [geometric] representation possible, the only way we can even think of or represent, say, the proposition that a circle is always constructible with a given center and radius, is by actually *possessing* the construction in question...; and, if we have the construction, the proposition is then automatically true. The proposition is thus *a priori* true, because its truth is a condition of its mere possibility.[152]

These passages say more or less the same thing: for Kant, the possession of a geometric representation is sufficient to guarantee the existence of a referent so described (in the case of non-propositional geometric representation, as in the representation of a line) or the necessary truth of the proposition in question (as in the case of geometric axioms and theorems). There is no gap, according to Friedman's Kant, between the possibility of a contentful geometric representation and the necessary truth of the proposition it expresses. The reason for this is that

151 Friedman (1992), 82.
152 Friedman (2000), 213 (fn. 12).

Kant holds that geometric representations must all be formed by a process of "construction": the presentation to oneself in intuition of a particular contained in the extension of the concept. Accordingly, the successful formulation of a geometric proposition – e.g., that the interior angles of a triangle sum to 180 degrees – guarantees that the proposition is true: the act of formulating the proposition requires an example of its truth.. Furthermore, since the possession of the representation guarantees *a priori* the truth or existence of that which is represented, the only genuine geometric representations we can have are of a space in which we can give ourselves their referents: the Euclidean space given in pure intuition.

As Friedman notes, Kant appears simply to assume that space, as it is given in pure intuition, is necessarily describable by Euclidean geometric concepts. One way to challenge Kant's apparent commitment to the necessity of Euclidean geometry, then, is to challenge his commitment to the notion that perceivable space is Euclidean. But this is not a promising strategy because it challenges Kant on a premise that few of Kant's contemporaries would have wanted to deny: that space as we perceive it conforms to Euclidean theorems and postulates. Such a strategy would reveal Kant's supposed mistake to be considerably less profound than it has sometimes been taken to be. A more promising strategy for attacking Kant is to grant to Kant that perceivable space is Euclidean, while at the same time holding that he should have allowed for the possibility of alternative coherent systems of geometric axioms. But in order to level this criticism at Kant, one must be clear about precisely what it would *be* for Kant to accept the possibility of non-Euclidean

geometries. Given that he holds that intuitive space is necessarily Euclidean, the possibility of non-Euclidean geometries must be – for Kant – the possibility that we can form an alternative system of geometric representations descriptive of a possible unperceivable space numerically distinct from intuitive space. That is to say, the possibility of non-Euclidean geometries for Kant – if it is *not* the possibility that perceivable space is adequately described by non-Euclidean formulations – must be the possibility of a non-intuitive space that does not conform to the Euclidean axioms that describe intuitive space. If this is right, then the question of non-Euclidean geometries collapses into the question of non-Euclidean *space*. To defend Kant, then, one must show that no such discrete spaces are possible.[153]

Friedman, in his remarks above, appears to be employing a Kantian strategy aimed at heading off precisely this possibility: on Friedman's view, the *criticism* isn't that Kant should give up the notion that perceivable space is Euclidean; it's that Kant failed to recognize the possibility of alternative sets of geometric axioms, and thus failed to recognize that geometric knowledge is *a posteriori*. And the Kantian strategy that Friedman employs here appears designed to rule out precisely the possibility of alternative axiom systems descriptive of possible discrete spaces: all geometric representation requires an appeal to pure intuition, and thus is necessarily descriptive of the Euclidean space represented therein.

Above, in Chapter 2, I have set out an interpretation of Kant's account of spatial concepts, among which Kant includes the geometric concepts. There, I

153 Or, to put this another way: one must show that all possible spaces are parts of the actual space given in pure intuition.

employed my interpretation of this topic as a means of elucidating Kant's argument for transcendental idealism, and specifically to elucidate Kant's rejection of the so-called “neglected alternative” objection, according to which he has failed to rule out the possibility that things in themselves subsist in an unperceivable, real space, numerically distinct from the merely ideal space given in pure intuition. In light of the above discussion, it is easy to see that the specter of a non-Euclidean geometry – conceived in Kant's terms as the possibility of a non-Euclidean *space* – dovetails with the neglected alternative objection: both raise in objection the possibility of some unperceivable, numerically distinct space – a possibility that Kant denies, both in arguing for his idealism and in affirming the necessity of Euclidean geometry. The objection from the possibility of non-Euclidean geometries is simply a more specific version of the neglected alternative objection: it specifies something about the character of the supposed alternative space, which the generic neglected alternative argument does not.

In the following section, I shall recap the argument Kant employs in rejecting the neglected alternative, but this time with specific emphasis on his claims about geometric representation.

5.2 The Unthinkability Argument

Kant denies that it is possible even to *conceive* a non-perceivable space. Or, to put this another way, Kant claims that all possible spaces are mere parts of the actual space presented in pure intuition. Kant upholds this unthinkability claim by

arguing for the dependence of spatial *concepts* on the representational content of pure intuition. Kant presents this argument in compressed form in the Transcendental Aesthetic, and it is a crucial component of his argument for transcendental idealism. There, he claims that:

> Space is not a discursive or, as is said, general concept of relations of things in general, but a pure intuition. For, first, one can only represent a single space, and if one speaks of many spaces, one understand by that only parts of one and the same unique space. And these parts cannot as it were precede the single all-encompassing space as its components (from which its composition would be possible), but rather are thought only **in it**. It is essentially single; the manifold in it, thus also the general concept of spaces in general, rests merely on limitations. From this it follows that in respect to it an *a priori* intuition (which is not empirical) grounds all concepts of it. Thus also all geometrical principles, e.g., that in a triangle two sides together are always greater than the third, are never derived from general concepts of line and triangle, but rather are derived from intuition and indeed derived *a priori* with apodictic certainty. [B 39]

Kant's major claim in this passage is that spatial representation is not fundamentally conceptual; it is intuitive. He claims that it follows from this that all spatial concepts – representations of qualitatively similar, finite spatial regions – depend upon the act of "limiting" the singular space given in pure intuition. Indeed, Kant even applies this doctrine to his paradigm case of spatial concepts: geometric concepts. He says that "all geometric principles...are derived from intuition." The upshot of this dependence of spatial concept on spatial intuition, I have argued, is that spatial concepts cannot be used to think possibilities about non-intuitive spaces; rather, spatial concepts represent their extensions as mere parts of the actual, singular spatial whole represented in intuition. Indeed, Kant affirms in a number of places

that spatial concepts cannot be used to think non-sensible possibilities.[154] What I am particularly interested in, in this context, is the way Kant develops this argument with reference to the geometric concepts.

This interpretation of Kant places a great deal of emphasis on Kant's theory of geometric concept construction. The central claim is that, for Kant, intelligible geometric representation is dependent upon the possibility of the construction in intuition of a particular instance of that to which the concept in question refers. Kant writes: "We cannot think of a line without **drawing** it in thought, we cannot think of a circle without **describing** it, we cannot represent the three dimensions of space at all without **placing** three lines perpendicular to each other at the same point…." [B 154] Kant explains that in geometric construction "I put together in a pure intuition…the manifold that belongs to the schema of a triangle in general and thus to its concept, through which general synthetic propositions must be constructed." [A 718/B 746] That is: a construction involves the "drawing," "describing," and "placing" of lines and curves in pure intuition. Constructability is a necessary feature of any contentful geometric representation, Kant explains, because without a construction "I am not to see what I actually think in my concept of a triangle (this is nothing further than its mere definition….)" [ibid.] Rather, Kant holds, *via* construction "I am to go beyond it ["the mere definition"] to properties that do not lie in this concept but still belong to it." [ibid.] Without a construction, Kant appears to be saying, I have nothing but a definition – I have no genuinely contentful, or

154 See above, p. 78 at which point I cite the relevant passages. They are located at A 88/B 120-1, B 148, and B 305. Several other passages are relevant, too, and I shall cite them as we go along.

cognitively significant, geometric representation at all. And this is because I am not, without a successful construction, even to know what I "actually" think with such a definition.

So: without a construction, I have no representation sufficient to determine a possible referent – no representation sufficient for *thinking* anything at all. Because I can possess cognitively significant geometric thoughts only upon a successful construction of the object purportedly represented, there can be no further question of whether what I'm thinking about exists as described, or the theorem I'm entertaining is necessarily true: in order to be thinking *about* a circle, there must *be* circles; in order to be thinking *that* the interior angles of a triangle sum to 180 degrees, I must already have *shown* it to be so. And the only way for me to present myself with circles or triangles is for me to give one to myself – i.e., to construct one – in pure intuition. Kant assumes that space as it is given in pure intuition is Euclidean, and thus that our intuitive constructions reveal the properties of Euclidean space. Thus, any geometric concept or thought is contentful only in reference to the Euclidean space in which its possibility (and hence its truth) has been demonstrated *via* construction. Accordingly, I can have no contentful representation of a non-Euclidean space. Because I cannot represent to myself a non-Euclidean space, the possibility of such a space cannot be admitted. As Friedman puts it, there can be "no question" of a non-Euclidean geometry.

Before moving on, I want briefly to consider a potential objection to this account, if only to flag it and return to it below. One might readily object that a "mere definition" is sufficient for delineating logical possibilities and thus that mere

non-Euclidean *definitions* are sufficient to prove the merely logical possibility of non-Euclidean spaces, which would thus provide for a rich notion of a non-Euclidean *geometry.* This objection exploits Kant's well-known distinction between mere thought and cognition. As we saw above, in Chapter 4,[155] Kant draws a consistent distinction between what can be represented independently of the possibility of experience – in mere thought – and what can be *cognized*, where cognition requires reference to possible experience. According to this objection, Kant employs a thought/cognition distinction even with reference to spatial concepts: he distinguishes between what can be coherently represented independently of the possibility of experience, and what can be represented in light of the constraints of possible experience. If this objection is right, then Kant cannot deny the possibility of non-Euclidean geometries – at least, not in a way remotely similar to the strategy I am attributing to him. Moreover, the view that underpins this objection – that one can think spatial thoughts that are inconsistent with the representational content of pure intuition – seems positively to *require* the possibility of non-Euclidean geometries. I shall return to this below, in a discussion of an influential view on the role of pure intuition in Kant's philosophy of geometry. For now, I simply want to flag the objection as one worth keeping in mind in the context of Kant's unthinkability argument

In the following section, I shall turn to a prominent debate over the role of pure intuition in Kant's philosophy of geometry with an eye toward fitting this unthinkability argument into the interpretive space in which the debate takes place.

155 See above, pp. 131 – 134.

As I shall argue, the conception of pure intuition that can most naturally accommodate the unthinkability argument is the one that has heretofore explicitly denied it.

5.3 Two Accounts of Pure Intuition in Kant's Philosophy of Mathematics

As the study of Kant has been reinvigorated in the past half-century or so, Kant's treatment of particular topics – like mathematics and the natural sciences – has accordingly received a great deal more attention than it previously had. At least since the publication of some seminal work by Hintikka in the 1960s,[156] commentators have been engaged in a lively debate over the role of Kant's theory of pure intuition in his philosophy of geometry. Interpreters are roughly divided into two groups. The first group – who advance the so-called "logical" interpretation of Kant's theory of pure intuition – hold that Kant's notion of the representation of space as a pure intuition as it is propounded in the Transcendental Aesthetic - – i.e., as a non-conceptual representation of an infinite spatial whole – is introduced primarily as a way to compensate for the inadequacy of Kant's essentially Aristotelian, monadic logic to account fully for the possibility of geometric knowledge. This was introduced by Hintikka, and richly developed by Friedman.[157] As Friedman points out:

156 Hintikka (1965), (1967) and (1969)
157 Friedman (1992).

> A central difference between monadic logic and fully polyadic logic is that the latter can generate an infinity of objects while the former cannot. More precisely, given any consistent set of monadic formulas involving *k* primitive predicates, we can find a model containing at most 2^k objects. In polyadic logic, on the other hand, we can easily construct formulas having only infinite models. Proof-theoretically, therefore, if we carry out deductions from a given theory using only monadic logic, we will be able t prove the existence of at most 2^k distinct objects: after a given finite point we will run out of "provably new" individual constants. Hence, monadic logic cannot serve as the basis for any serious mathematical theory, for any theory aiming to describe an infinity of objects (even "potentially").158

Friedman goes on to point out that Euclidean proof requires, for example, appeal to the infinite divisibility of line segments. And this, in turn, requires an "essentially polyadic theory of order."[159] But Kant's monadic logic is inadequate for such representation. According to the logical interpretation developed by Friedman, Kant appeals to pure intuition precisely as a way to account for the possibility of representing the infinite model geometry requires in light of the failure of logic to provide for such a representation.[160]

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158 Friedman (1992), 59.

159 Friedman (1992), 59. For example, in order to express the denseness of a line segment – a property line segments must possess if they are infinitely divisible – one would need quantifiers and relations: $\forall x \forall y \exists z[(x < y) \rightarrow (x < z < y)]$. This formula, which expresses the claim that for any two points there exists a point between them, is not expressible in a logic that contains no quantifiers or relations, such as a purely monadic logic.

160 Hintikka's original account is essentially similar, but it is couched in slightly different terms. Hintikka argues that pure intuition is introduced primarily as a way for Kant to account for the possibility of *singular reference*, something for which he cannot account on an understanding of geometric reasoning as purely conceptual, since Kant conceives of concepts as general representations. This is in contrast to Friedman's emphasis on the importance of an *infinite model*. But the accounts do dovetail: a central reason why Kant requires an infinite model for geometric proof-procedure is to guarantee the existence of individual points required for proofs, but whose is existence *cannot* be represented *via* the resources of monadic logic. An element common to both views is that Kant's conception of pure intuition is not intrinsically tied to sensibility, despite its presentation as such in the Transcendental Aesthetic. For on both accounts, Kant's notion of pure intuition is developed primarily to compensate for the expressive limitations of purely monadic logic. Pure intuition, then, is *not* developed as a means of representing the conditions of the possibility of experience – at least, not primarily. See Hintikka (1965) and (1967).

On the logical interpretation of the role of pure intuition in Kant's philosophy of mathematics, then, Kant's doctrine of pure intuition is not a standalone doctrine: it is motivated by his recognition of the inadequacy of his monadic logic to account for geometric proof and truth, and it thus depends in a roundabout way on facts about Kant's logic. Just how radical this position is with respect to other features of Kant's philosophy can be brought out by considering what effects the recognition of (an even possible) polyadic logic would have had on Kant's system. Kant's argument for transcendental idealism depends crucially upon the notion that the representation of space is intuitive. But if Kant's doctrine of pure intuition is plausible only as a means of compensating for the inadequacy of monadic logic, then the development of more sophisticated methods of logical representation should render transcendental idealism obsolete: the very premise upon which it depends is undercut by facts about logic.[161] Thus, this interpretation of Kant's account of mathematical justification has wide-ranging implications for Kant's entire philosophical program.

Against the logical interpretation, several commentators have advanced the view that the relationship between Kant's theory of pure intuition and his philosophy of mathematics is essentially the reverse of what the logical interpretation says it is. According to the so-called “phenomenological”

161 Indeed, one might speculate that Hintikka's emphasis on *singularity* as the defining mark of intuition – as opposed to its connection with sensibility – is motivated primarily by what he perceives as the implausibility of transcendental idealism. If what is important about spatial representation is simply the possibility of singular representation, and polyadic logic can account for singular representation, then polyadic logic can account for spatial representation without any appeal to sensibility, and transcendental idealism, because it is motivated by the *sensible* features of intuition, is rendered obsolete.

interpretation, Kant's doctrine of pure intuition as expounded in the Transcendental Aesthetic is motivated by non-logical concerns: it is developed as the result of an investigation into the conditions of possible experience, and given Kant's conception of experience requiring intuition, is thus necessarily tied to sensibility. Pure intuition is logically independent of the ability for monadic logic to account for mathematical justification. On this view, pure intuition "constitutes some kind of *justification* or *foundation* for geometry."[162] The phenomenological view was first developed by Charles Parsons[163] in response to Hintikka's conception of intuition as *singular* representation. Parsons argues that, for Kant, *immediacy* is the fundamental mark of intuition, and that singularity is secondary. On this view, then, pure intuition does bear a necessary connection to sensibility: it is sensibility that affords the subject immediate perceptual relations to objects, and intuition is conceived as concerning "what is immediately present to the mind."[164]

This view is developed further, and explicitly in light of Freidman's development of the logical interpretation, by Emily Carson.[165] Carson argues that Kant's conception of space as an infinite, singular whole non-conceptually represented by the subject as immediately present to the mind is motivated independently of considerations about geometric proof methods and the adequacy of monadic logic to account for them. Rather, on Carson's view, the relation is precisely the reverse: considerations about the nature of intuitive spatial

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162 Carson (1997), 497. I shall have a good deal more to say below about what this conception of "justification or foundation" amounts to.
163 Parsons (1969).
164 Parsons (1969), 112.
165 Carson (1997).

representation ground facts about the nature of geometric proof because she holds that Kant believes that "geometrical knowledge is...explained as knowledge of that form of intuition which is derived from the conditions of the possibility of experience."[166] Thus, on the phenomenological interpretation, features of the original representation of space – the pure intuition of space expounded in the Aesthetic – determine the nature of geometric proof *because* space as it is represented in pure intuition is conceived as the *object* of geometry. Kant's conception of pure intuition is thus motivated and developed independently of considerations about the expressive power of monadic logic. This is in contrast to the logical interpretation, according to which facts about geometric proof in light of monadic logic require the positing of pure intuition, the character of which is determined by the expressive power of logic. On the phenomenological interpretation, geometric proof is synthetic – i.e., not purely conceptual – precisely *because* the very *object* of geometry – the representation of space – is given non-conceptually to the subject. The syntheticity of mathematical inference, on this view, is owed to the non-conceptual nature of the original representation of space, and not to the recognition of the inadequacy of monadic logic to account for geometric proof. The infinite nature of space is thus logically independent of considerations about the expressive power of Kant's logic: it is a ground-level, irreducible feature of

166 Carson (1997), 511.

spatial representation, which itself is logically independent of any facts about logic.[167]

A useful way of contrasting these competing interpretations is in terms of what they understand a geometry to be. By Friedman's lights, the fundamental conception of a geometry is of a conceptually articulated body of axioms that support logically rigorous (i.e., analytic) inference. His point is that Kant's logic is insufficient for such a task and pure intuition is introduced as a way of representing particular facts required for the inferences of Euclidean geometry to go through. What is special about pure intuition on this view is that it is – in some suitable sense – expressively adequate for the purposes of geometric inference in a way that monadic logic is not. By contrast, Carson takes geometry to be nothing more than the science of space, conceived as that which is represented in pure intuition. And pure intuition is conceived as motivated by reflection upon the conditions of the possibility of experience, and not by considerations about the expressive power of logic. Thus, the two views incorporate significantly different conceptions of what a geometry *is*.

We shall have occasion to return to Carson's defense of the phenomenological view below. But before doing so, in light of the two available

167 I also include among the phenomenological camp Shabel (2004), who argues that the purpose of the "transcendental exposition" is to show precisely how a pure intuition of space grounds geometric knowledge in the sense that it provides the data to which geometric theorems are accountable. This is in contrast to standard readings of that passage, according to which Kant argues *from* the fact of knowledge of geometry *to* the existence of a pure intuition of space. Shabel conceives the relationship as roughly the reverse: Kant argues that geometric knowledge is *explained by* the fact of a pure intuition of space. Shabel's view is thus deeply resonant with the phenomenological position insofar as a) she conceives of Kant's theory of pure intuition as motivated by considerations independent of facts about geometric proof procedures, and b) she understands pure intuition as constituting a kind of explanatory *ground* for geometry.

positions on the role of pure intuition in Kant's philosophy of geometry, I want now to return to the question with which we began this chapter: that of the possibility of non-Euclidean geometries. I have developed an interpretation of Kant's *rejection* of that possibility above according to which Kant denies that any non-Euclidean spatial *representation* is possible, and thus that all representable (and hence possible) spaces are mere parts of the subjectively given space of pure intuition, which he takes to be uncontroversially describable by Euclidean postulates and axioms. We have also seen that Friedman essentially endorses this interpretation: he sees Kant as rejecting the possibility of non-Euclidean geometries by virtue of the unthinkability of non-Euclidean spaces. I'd like now to evaluate these two interpretations in light of the account of Kant's rejection of the possibility of non-Euclidean geometries as unthinkable given above.

5.4 The Unthinkability Argument and the Logical Interpretation

Recall that Friedman interprets Kant as denying the possibility of non-Euclidean geometries because "the only way to represent (the order properties of) a line – straight or curved – is by generating it in the space (and time) of pure intuition. But this space, for Kant, is necessarily Euclidean...."[168] In light of Friedman's endorsement of the logical interpretation of pure intuition, it is worth wondering whether the two positions are compatible. I deny that they are. For if the Kantian account of the rejection of non-Euclidean geometries developed above (and endorsed by Friedman) is correct, then Kant rejects the possibility of non-Euclidean

168 Friedman (1992), 82.

spaces in virtue of the dependence of *all* spatial representation – including the representation of qualitatively similar spatial regions – upon the representational content of pure intuition. But this seems to require the *denial* of the logical interpretation's conception of the relation between geometric reasoning and pure intuition.

By Kant's lights, one cannot conceive of a space in which, e.g., the parallel postulate does not hold because in order to generate such a conception one would be required to appeal to a prior, intuitive representation of space. But this space is necessarily Euclidean, and thus grounds only Euclidean spatial concepts. The point – which Friedman puts eloquently – is that precisely the sort of (non-Euclidean) spatial concepts that one would need to admit if one were to admit the possibility of a non-Euclidean geometry are impossible in virtue of the representational content of pure intuition, which grounds all possible spatial concepts. But it does not seem to me that the logical interpretation can consistently uphold the grounding of all spatial representation in pure intuition, and thus cannot consistently maintain that Kant endorses the unthinkability argument against non-Euclidean geometry. For the logical interpretation supposes that a pure intuition of space is posited *because* of facts about the limitations of conceptual representation. This account of the role of pure intuition implies that conceptual representation can count as *geometric* representation independently of any relation to sensibility or the conditions of possible experience. That is to say, the logical interpretation is committed to the view that geometric representation is possible independently of facts about the representational content of pure intuition: pure intuition has the representational

content that it does, on this view, precisely to compensate for particular limitations of conceptual representation, and not in virtue of facts about the irreducibly non-conceptual nature of spatial perception. On this view, according to which geometry is fundamentally *conceptual* and requires appeal to pure intuition as a means of *supplementing* conceptual representation, there does not appear to be any reason to suppose conceptual geometric representation – which is deemed to be fundamental – is necessarily Euclidean: if pure intuition is merely compensatory, then it does not appear well-suited to limit possible conceptual representations of geometric principles to those that are consistent with the postulates and theorems of Euclidean geometry. But on Friedman's own account, possible geometries are accounted for in terms of possible *representations*. So the logical interpretation does not appear to have the resources consistently to maintain the denial of the possibility of non-Euclidean geometries in terms of the dependence of all geometric representation on the content of pure intuition.

Now, it is open to a proponent of the logical interpretation to claim that my own objection misunderstands the sense in which pure intuition is posited to account for the expressive inadequacy of monadic logic. Friedman might plausibly maintain that *from within Kant's account of mathematics*, pure intuition must be understood as grounding geometric concepts, but that *from the perspective of evaluating that account* – i.e., the perspective Friedman takes – pure intuition must be understood as posited to account for the expressive inadequacy of monadic logic, and thus logically dependent upon a theory of conceptual geometric representation. On this characterization of the view, it would seem that the unthinkability argument

against non-Euclidean geometries is compatible with the logical interpretation of pure intuition.

Nevertheless, I think an objection similar to the one I have just raised remains plausible. Even on this adjusted logical interpretation, and even from *within* Kant's philosophy of mathematics, the logical interpretation must still suppose that Kant's doctrine of pure intuition is (or would have been) rendered obsolete in light of a more expressively sophisticated logic. This is a core implication of the logical view, and it is one that requires imputing to Kant the view that it is at least *possible* to express all geometric truths absent any appeal to perceptual evidence. And if Kant were indeed to hold this view, then he could not consistently maintain the unthinkability argument against non-Euclidean geometry because the unthinkability argument depends upon the notion that it is *intuitive* (or perceptual) content that determines what can be spatially conceived. If a purely conceptual account of geometric knowledge is even theoretically possible for Kant, then geometric knowledge loses its relation to intuition, and thus the constraint on spatial *conceivability* that undergirds Kant's rejection of non-Euclidean geometries is lost. The logical interpretation must explain precisely why, if a purely conceptual account of geometric knowledge might possibly be acceptable to Kant, only *one* set of geometric concepts is possible. For this is what Kant requires to maintain the unthinkability argument against non-Euclidean geometry. But if geometric concepts are not indeed ultimately grounded in intuition, then it is difficult to see how one might plausibly maintain that only one set of such concepts is possible, and thus how one might maintain the necessity of Euclidean geometry.

Thus, I conclude that one cannot both accept Friedman's account of the relation between pure intuition and geometric knowledge *and* his story about Kant's rejection of the possibility of non-Euclidean geometry. Insofar as one thinks, as I do, that Kant's rejection of non-Euclidean geometry is correct and worth preserving, one must give up Friedman's claim that Kant's theory of space as pure form of intuition is dependent on conceptual geometric representation (and a claim which might be extracted from this: that Kant, had he been in possession of a more expressively robust logic, ought to have been a logicist).

5.5 The Unthinkability Argument and the Phenomenological Interpretation

I turn now to the phenomenological interpretation. In light of the foregoing, it should be clear that the phenomenological interpretation is particularly well-suited to establish the unthinkability argument against non-Euclidean geometries. Because the phenomenological account holds that all geometric concepts, and thus all geometric reasoning and proof, are ultimately drawn from, and thus dependent upon, a non-conceptual representation of space as an infinite, singular whole (one that is adequately describable by Euclidean postulates and theorems), it ought to be able to account for the sense in which non-Euclidean spatial concepts are impossible

by Kant's lights. Insofar as the Euclidean representational content of pure intuition governs what can coherently be conceived about space, no non-Euclidean spatial concepts are possible. Thus, it would appear that insofar as Kant indeed endorses the unthinkability argument against non-Euclidean geometries, the phenomenological view is vindicated, since it alone is consistent with that view. Moreover, the phenomenological view appears also able to *explain* the unthinkability argument: the grounding of geometric reasoning in pure intuition that the phenomenological interpretation purports to establish would appear to supply a crucial premise in the argument for the unthinkability of non-Euclidean spatial concepts.

Carson, in her critique of Friedman's logical interpretation, takes issue with his imputation to Kant of the unthinkability argument. But what is puzzling is the precise nature of her objection to Friedman. She does *not* object – as I do – that Friedman's logical interpretation is incompatible with the unthinkability argument. Rather, she claims that Kant does not endorse the unthinkability argument *at all*, and she appeals to her own phenomenological interpretation to explain why he does not. She writes:

> While it may be true, as Friedman says, that only the intuitive representation of a line is adequate for mathematical reasoning, it by no means follows that there can be "no idea" of a non-Euclidean line or figure. Since Kant admits that we may possess empty concepts (concepts for which there can be no corresponding intuition), he clearly cannot hold that the criteria for possessing a concept satisfy the standards of mathematical rigor. At most, what is required is that we be able to entertain the possibility of other spaces; there need be no determinate conception of what that space would be like. Kant explicitly recognizes the possibility of other creatures with different modes of intuition (e.g., A 27/B 43, B 148-150, Inaugural Dissertation §1).

> But while we can have no determinate idea of their experience, we can imagine that it is unlike ours. We can, he says, *represent* an object of a non-sensible intuition negatively 'through all the predicates which are implied in the presupposition that it has none of the characteristics proper to sensible intuition' (B 149); thus we can *represent* it as not extended or in space, as not enduring through time, as not capable of change, etc.... What is important here is that Kant allows that we can indeed *represent* such an object by listing certain (negative) 'predicates.' In a similar way, I would suggest, we can *represent* a figure enclosed between two straight lines; we needn't be able to imagine what it would be like.[169]

Carson here invokes Kant's distinction between mere thought and cognition, and imputes to Kant the view that such a distinction is applicable *even to spatial concepts*. She goes on to note that "the distinction [Kant] draws in his lectures on logic between real and nominal definitions allows, I think, for the possibility that one can entertain a mathematical concept in abstraction from the conditions of pure intuition."[170] Moreover, Carson explains how her phenomenological view is meant to be compatible with the possibility of non-Euclidean spatial concepts:

> The basic claim with which Friedman takes issue is the claim that the role Kant assigns to pure intuition arises out of some kind of anti-formalism: pure intuition is supposed to provide mathematical concepts with content, thereby distinguishing the objectively true geometry from other logically possible (but empty) systems.[171]

The view she portrays Friedman as rejecting – the anti-formalist view that pure intuition distinguishes "objectively true geometry from other logically possible...systems" is Carson's own. Thus, on Carson's view, the grounding of geometry in pure intuition (which itself is grounded in the conditions of the possibility of *experience*) does not preclude the possibility of non-Euclidean

169 Carson (1997), 503.
170 Carson (1997), 504.
171 Carson (1997), 502.

representation because the grounding of geometry in pure intuition is fundamentally an *epistemic* grounding: pure intuition distinguishes the "objectively valid" geometry from other "logically possible" geometries. The merely epistemic function of pure intuition in the theory of geometry thereby allows Kant to coherently apply his distinction between mere thought and cognition (according to which mere thoughts have representational content, but do not apply to possible experiences) to spatial representation. She thinks that this can be illustrated by invoking Kant's distinction between mere *nominal* definitions of concepts, and *real* definitions; non-Euclidean spatial concepts do not have real definitions, but are not precluded from having nominal definitions, which alone is sufficient to establish their logical possibility.

I briefly mentioned an objection grounded in the thought/cognition distinction above.[172] As we have now seen, even in spite of Carson's endorsement of what would appear to be the interpretation of pure intuition most naturally suited to grounding the unthinkability argument, she herself raises this objection to it. It is thus worth considering more carefully whether Carson has indeed hit upon the view Kant actually endorses – and, if she has not, where her objection to the unthinkability argument goes wrong.

I believe Carson is mistaken to suppose that Kant endorses the logical possibility of non-intuitively grounded spatial concepts that are genuinely representational. I think this for two reasons. First, I believe Carson only mistakenly holds that Kant intends for his distinction between thought and cognition to apply to

172 See above, Chapter 5, pp. 162 – 63.

spatial representation. Second, I think her contention that geometry is merely *epistemically* grounded in pure intuition involves a misreading of Kant's actual claims; I contend that the grounding is *metaphysical*.

First, since Carson rests her objection to the unthinkability argument in part on Kant's distinction between nominal and real definitions, I want to consider what Kant says about nominal and real definitions. In his *Vienna Logic*, he writes:

> A *nominal definition* is that distinct concept which suffices for the differentiation of a thing from others. A *real definition* is that distinct concept which suffices for cognizing and deriving everything that belongs to the thing[;] it suffices for explaining the thing internally, consequently, and for understanding what belongs to the things. [Ak 24:919]

He goes on to say, of the notion of a nominal definition, that:

> It means almost nothing more than what the expression *nominal definition* says, a certain attestation to the name of the thing, in order to make the name of the thing distinct, but not to have better insight into the thing itself. [Ak 24:920]

Now, Carson takes these passages to indicate that one *can* nominally define non-Euclidean spatial concepts – her example is that of a two-sided closed plane figure, i.e., a biangle – and thus that there are logically possible (but not objectively valid) non-Euclidean spatial representations.

However, I think a different reading of these passages is available. In the second of the passages, Kant says that a nominal definition is "almost nothing more" than a *name*. There should be no doubt that Kant, of course, holds that we can *say* "there are two-sided closed plane figures." We can, in fact, *say* whatever we like,

including contradictions. But Kant held quite clearly that we cannot *think* a contradiction because contradictions purport to represent impossible states of affairs, and we cannot think the impossible. The question, then, is whether we can *think* "there are two-sided closed plane figures" in any sense more meaningful than that we can simply say it. It is not clear that Kant intends in passages such as these to be indicating anything more than that there are non-contradictory collections of predicates that would appear to *name* logically possible non-Euclidean spaces. This, however, does not alone imply that such collections of predicates are themselves genuinely representational.

Furthermore, Carson holds that nominal definitions represent their objects by "listing certain (negative) 'predicates.'" Her example of a non-Euclidean concept that can be given a mere nominal definition, and thus is logically possible, is biangle. Carson's emphasis on the composition of nominal definitions by merely negative predicates includes an appeal to a passage at B 149. In this passage, from the Transcendental Deduction, Kant's burden is to argue that the categories *are* genuinely representational beyond the limits of sensible intuition, even if they cannot ground cognition under such conditions. Kant writes:

> Thus if one assumes an object of a *non-sensible* intuition as given, one can certainly represent it through all of the predicates that already lie in the presupposition that *nothing belonging to sensible intuition pertains to it*: thus it is not extended, or in space, that its duration is not a time, that no alteration (sequence of determinations in time) is to be encountered in it, etc. [B 149]

I think this passage, in its full context, quite clearly proves insufficient to ground the logical possibility of non-Euclidean spatial representation. For Kant here means to talk about the possibility of representing things in themselves, which he conceives as non-spatial. This is why he says that they may be "represented" only through the negations of the predicates through which one conceives of sensible objects. But this is explicitly *not* the story one would have to tell about the possibility of non-Euclidean spatial representation. This is because I don't believe Carson is right to suppose that the predicates that compose the (nominal) definition of biangle are merely negative predicates. She includes among the definition the predicates straight, line, and enclosed. But these are not predicates that merely indicate what something *is not*, and they certainly are not the sort of non-spatiotemporal predicates that Kant adverts to in explaining the notion of a negative predicate. Rather, they are predicates that can be given real definitions *via* construction in pure intuition. Carson's appeal to the notion of nominal definitions composed of merely negative predicates thus ultimately does not succeed: her paradigm example of a non-Euclidean spatial concept simply does not conform to Kant's conception of a negative predicate, not least because biangle is defined by predicates that themselves have particular spatial meanings for Kant.

As a final point about Carson's discussion of nominal definitions and biangle, I want to note that Kant explicitly denies that biangle is genuinely representational. He writes:

> The object of a concept that contradicts itself is nothing because the concept is nothing, the impossible, like a rectilinear figure with two sides. [A 291/B 348]

Kant here compares biangle to a contradiction: he denies that there are such concepts because such concepts, if there were such things, would purport to represent the impossible, which no representation can do.[173] Kant is not, of course, claiming that biangle contains a contradiction; rather, he is elucidating the impossibility of contradictory concepts by pointing to what he takes to be a clear example, i.e., biangle. Thus, even if it were conceded to Carson that there are nominal definitions of non-Euclidean spatial concepts, this passage provides all the more reason to believe that Kant does not take a nominal definition to suffice for genuine representational content.

I turn now to Carson's second consideration against the unthinkability argument. She conceives of the grounding of geometry in pure intuition as a primarily *epistemic* grounding. She says that "pure intuition is supposed to provide mathematical concepts with content, thereby distinguishing the objectively true geometry from other logically possible (but empty) systems." Carson thus appears to understand Kant's anti-formalism as amounting to the necessary epistemological role of pure intuition in geometric reasoning: pure intuition is the model to which our geometric representations are accountable. This is why pure intuition is supposed to give content to our geometric concepts, thereby ruling out other possible systems. It is thus this conception of the grounding of geometry in pure

173 Kant is not claiming here that the concept is contradictory. This would contradict his conception of geometric truth as synthetic. As I read him, he is saying elucidating the impossibility of contradictions by pointing to what he takes to be an obvious case: the case of the biangle.

intuition that is meant to allow for and explain the possibility of non-Euclidean representation: pure intuition tells us which concepts are "objectively true," but, in virtue of its mere epistemic function, does not thereby constrain *logical* possibility.

This grounding thesis can readily be separated into two distinct claims:

1) Pure intuition gives geometric concepts content.

2) In order for pure intuition to give geometric concepts content, it must distinguish the objectively possible concepts from the merely logically possible concepts.

(1) alone does not require the possibility of non-Euclidean representation: pure intuition might endow geometric concepts with content by virtue of providing a model to which any even logically possible spatial concept must conform. However, insofar as (2) denies that logical and objective possibility collapse, it *does* allow for the possibility of non-Euclidean spatial representation.

What I take to be important, here, is that Carson needs only to establish that Kant endorses (1) in order to refute Friedman's formalist reading of Kant's philosophy of geometry. For Friedman holds that the content of pure intuition is in part determined by logic, conceived as independent of sensibility altogether. But the grounding adverted to in (1) need not be understood as merely epistemic. It could, in addition, amount to a *metaphysical* grounding of geometry on pure intuition.[174] One might readily understand Kant's conception of geometry as *metaphysically*

174 By contrast, (2) is clearly an epistemic claim, and it is in virtue of her commitment to (2) that I take Carson to endorse the reading of the phenomenological interpretation according to which the grounding of geometry in pure intuition is primarily epistemic.

grounded in pure intuition in the sense that Kant takes geometry to be a *science of* the conditions of possible spatial experience. On this reading, representations that do not conform to the intuitively representable constraints on perceptual space are not properly *spatial* representations at all in virtue of the fact that they bear no discernible relation to *space*, understood as that which one fundamentally represents *a priori* in intuition.[175]

As we have seen, Carson agrees with this conception of geometry (in Kant's sense) to be "knowledge of that form of intuition which is derived from the conditions of the possibility of experience."[176] But she evidently does not take this conception of geometry to rule out logically possible non-Euclidean geometries because she takes pure intuition to have a primarily justificatory role. I have argued above that one might instead understand this grounding to be primarily *metaphysical*. I shall close by pointing out that the very passage Carson employs to bolster her phenomenological interpretation weighs more heavily in favor of understanding the grounding of geometry in pure intuition to be *metaphysical* than it does understanding it as *epistemological*.

Kant writes:

> For the representation of space (together with that of time) has a *peculiarity* found in no other concept; viz., that all spaces are only possible and thinkable as parts of one single space, so that the representation of parts already presupposes that of the whole. Now, if the geometer says that a straight line, no matter how far it has been extended, can still be extended further, this does not mean the same as what is said

175 It is worth noting that the metaphysical grounding of geometry in pure intuition does not preclude there *also* being an epistemic grounding: pure intuition serves as an epistemic model for geometry, on this metaphysical reading, by virtue of being the only possible model for geometry. My point is that Carson seems to believe that the grounding is *merely* epistemic.

176 Carson (1997), 511.

> in arithmetic concerning numbers, viz., that they can be continuously and endlessly increased through the addition of other units or numbers. In that case the numbers to be added and the magnitudes generated through this addition are possible *for themselves*, without having to belong, together with the previous ones, as *parts of a magnitude*. To say, however, that a straight line can be continued infinitely means that *the space in which I describe the line is greater than any line which I might describe in it*. Thus the geometrician expressly ground the possibility of his task of infinitely increasing a space (of which there are many) on the original representation of a single, infinite, subjectively given space. This agrees very well with the fact that the geometrical and objectively given space is always finite. For it is only given in so far as it is generated. To say, however, that the metaphysical, i.e., original, but merely subjectively given space, which (because there is not a plurality of them) cannot be brought under any concept capable of construction, but which still contains the ground of the possibility of all geometrical concepts, is infinite, means only that it consists in the pure form of the mode of sensible representation of the subject, as an *a priori* intuition, and therefore as a singular representation, in which the possibility of all space, proceeding to infinity, is given. [Ak. 20:419-21]

Carson rightly notes that this passage weighs heavily against Friedman's logical interpretation because Kant here indicates that the possibility of geometry is grounded in intuitive space, which is evidently accounted for independently of considerations about the expressive power of logic.[177] But I think Carson is mistaken to suppose that this passage supports a reading of that grounding relation as merely epistemic. Kant here says that "the metaphysical, i.e., original, but merely subjectively given space...contains the ground of the possibility of all geometrical concepts...." The most natural reading of this claim is that no concept that does not conform to the representational content of pure intuition can properly be considered a geometric concept at all. Moreover, Kant says that "all spaces are possible and thinkable as parts of a single whole." This would appear to undermine the possibility of non-Euclidean spaces (and thus non-Euclidean spatial

177 Carson (1997), 498.

representation) since such spaces would *not* be thinkable as mere parts of the single whole represented in intuition.

This passage, which is indeed crucial to undermining Friedman's logical interpretation, nevertheless does not ultimately support Carson's phenomenological interpretation – not, at least, insofar as she takes the grounding of geometry in pure intuition to be epistemic. But this passage does support a metaphysical version of the phenomenological interpretation, according to which such grounding is metaphysical. And, indeed, it is this metaphysical version of the phenomenological interpretation that is needed to ground the unthinkability argument against non-Euclidean geometries.

5.6 Concluding Remarks

Kant's notion of pure intuition has been the source of a great deal of controversy among his interpreters. One recent controversy has been over the role that pure intuition plays in Kant's philosophy of mathematics.[178] I have approached this debate first by attributing to Kant a particular argument against the possibility of non-Euclidean geometries – an argument that relies on the claim that the space represented in pure intuition is adequately describable by Euclidean representations and is the only conceivable space. This interpretation of Kant is developed by Friedman, but I have argued that his overall account of pure intuition in Kant's philosophy of mathematics cannot account for it. I claim that an opposing

178 I have not considered a separate interpretation of the role of pure intuition in Kant's philosophy of mathematics developed by Daniel Sutherland. See Sutherland (2004a), (2004b), and (2005).

interpretation *can* – even in spite of one of its leading proponents' dismissal of this unthinkability argument as a strategy for upholding the necessity of Euclidean geometry. If I am right, then insofar as this unthinkability argument is indeed properly attributed to Kant, then the debate over the role of pure intuition in Kant's philosophy of mathematics requires some reconsideration. I aim to have taken a first step towards such a reconsideration here.

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