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James Messina

Kant on the Unity of Space and the Synthetic Unity of Apperception

Abstract: In the Transcendental Aesthetic, Kant famously characterizes space as a unity, understood as an essentially singular whole. He further develops his account of the unity of space in the B-Deduction, where he relates the unity of space to the original synthetic unity of apperception, and draws an infamous distinction between form of intuition and formal intuition. Kant's cryptic remarks in this part of the Critique have given rise to two widespread and diametrically opposed readings, which I call the Synthesis and Brute Given Readings. I argue for an entirely new reading, which I call the Part-Whole Reading, in part by considering the development of Kant's views on the unity of space from his earliest works up through crucial reflections written during the silent decade.

Keywords: space, synthesis, unity, formal intuition

James Messina: University of Wisconsin-Madison; jmessina@wisc.edu

1 Introduction

In the Transcendental Aesthetic of the *Critique of Pure Reason*, Kant offers the following account of the unity of space:

> 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 are rather 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. (KrV, B 39)[1]

1 "Denn erstlich kann man sich nur einen einigen Raum vorstellen, und wenn man von vielen Räumen redet, so versteht man darunter nur Theile eines und desselben alleinigen Raumes. Diese Theile können auch nicht vor dem einigen allbefassenden Raume gleichsam als dessen Bestandtheile (daraus seine Zusammensetzung möglich sei) vorhergehen, sondern nur in ihm gedacht werden. Er ist wesentlich einig, das Mannigfaltige in ihm, mithin auch der allgemeine Begriff von Räumen überhaupt beruht lediglich auf Einschränkungen."
I have followed Guyer and Wood's translation of the *Critique of Pure Reason*, and Walford and Meerbote's translation of Kant's pre-Critical publications.

According to Kant, the space of which we have a pure intuition is an *essentially singular whole* [*totum*].[2] Though there are many spaces, these are necessarily all contained within a single spatial whole, of which they are parts. For Kant, a *whole* in the strict sense of the term is a complex object that is prior to the parts contained within it ("the manifold in it"), insofar as its parts can only be assigned definite properties (in Kant's language, "determined") in virtue of belonging to the whole.[3] By contrast, a *composite* is a complex object that is posterior to its parts, insofar as its properties depend on the properties of its parts.[4] The parts of a whole are *contained within it*; the parts of a composite *compose* it. In the above passage, Kant is claiming that space is a whole in the strict sense: the properties of its parts (i.e. regions of space) – in particular their sizes, shapes, and positions – can only be determined insofar as these parts are contained within an all-encompassing space. It is the fact that the object of our pure intuition of space is an *essentially singular whole* that Kant has in mind when he speaks of the *unity of space*.

The account of the unity of space that Kant offers in the Transcendental Aesthetic has received considerable attention.[5] But it is not the end of the story. Kant supplements the Aesthetic's account of the unity of space in the B-Deduction. He does this by explaining the relation of the unity of space to several other unities that he first introduces there: (i) the original synthetic unity of apperception (the "OSUA"), which is characterized as an essential feature of the discursive understanding, and (ii) the unity of a formal intuition of space, which Kant contrasts with "form of intuition" (KrV, B 160–161*).

A detailed, plausible reading of Kant's supplemented account of the unity of space is not simply necessary for an understanding of Kant's full *Raumlehre*. Given the central role that this supplemented account of the unity of space plays in the B-Deduction, such an interpretation promises to shed much-needed light on Kant's views about the workings of a discursive understanding and its influence (particularly through acts of *synthesis*) on sensible intuition.[6] Related to

2 For the description of space as a "totum" rather than a "compositum" see KrV, B 466.

3 In addition to KrV, B 466, see KU, AA 05: 409.06–08.

4 One example of a composite would be a line. The total length of a line depends on the lengths of its parts.

5 See, for instance, Quinton, Anthony: "Spaces and Times." In: *Philosophy* 37, No. 140, 1962, 130–46; Ward, Keith: "The Unity of Space and Time." In: *Philosophy* 42, No. 159. 1967, 68–74; Strawson, Peter: *The Bounds of Sense: An Essay on Kant's Critique of Pure Reason*. London 1966, 62ff; and Swinburne, Richard: *Space and Time*. London 1981, 28ff.

6 That the unity of space and time plays a crucial role in the argument of the B-Deduction is widely recognized by Kant commentators, though there is no agreement about what role it plays.

this, it promises to illuminate the similarities and differences between Kant's views on these matters and those of later German Idealists, particularly Hegel, who was clearly inspired by Kant's supplemented account of the unity of space, particularly the crucial footnote in § 26.[7]

Any satisfying interpretation of this account needs to provide detailed answers to the following questions: First, what is the relationship between the unity of space and the OSUA? (If it is one of dependence, what does this dependence consist in?) Second, what is the relationship between the unity of space and the unity of a formal intuition of space? Third, what does the distinction between a formal intuition and a form of intuition amount to?

There are currently two readings on the table that offer quite different answers to these questions. The *locus classicus* for the first reading is Hegel's discussion of Kant in *Glauben und Wissen*.[8] According to the contemporary version of this reading, which I call "the Synthesis Reading," the unity of space is a *synthetic* unity necessitated by the OSUA; this unity is further taken to be the output of an act of what Kant calls the "figurative synthesis" [*figürliche Synthesis*] (KrV, B 151).[9] (An explanation of these terms will be provided in the next section.) The

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See, e.g., Allison, Henry: *Kant's Transcendental Idealism: An Interpretation and Defense*. New Haven 2004, 189–193; Carl, Wolfgang: "Die transzendentale Deduktion in der zweiten Auflage". In: *Immanuel Kant: Kritik der reinen Vernunft*. Berlin 1998, 118–215 (esp. 205–207); and Henrich, Dieter: "The Proof-Structure of Kant's Transcendental Deduction". In: *Review of Metaphysics* 22, No. 4. 1969, 640–659 (esp. 646).

7 For a discussion of the importance of this footnote for Hegel, see Pippin, Robert: *Hegel's Idealism: The Satisfactions of Self-Consciousness*. Cambridge 1989, 29–30; McDowell, John: "Hegel's Idealism as Radicalization of Kant". In: *Having the World in View: Essays on Kant, Hegel, and Sellars*. Cambridge/Massachusetts 2009, 69–89; and Keller, Pierre: *Kant and the Demands of Self-Consciousness*. Cambridge 1998, 254.

8 Hegel, Georg: *Faith and Knowledge*. Ed. and trans. by Walter Carf and H. S. Harris. Albany 1977, 69–70. Beatrice Longuenesse, a key proponent of the Synthesis Reading, explicitly endorses Hegel's reading of Kant's crucial footnote in § 26. See Longuenesse, Beatrice: "Point of View of Man or Knowledge of God". In: *The Reception of Kant's Critical Philosophy*. Cambridge 2000, 253–282: "Hegel praises Kant for having introduced the idea of identity in his transcendental deduction of the categories: first as transcendental unity of apperception, then as the figurative synthesis of imagination which is, according to § 26 of the Transcendental Deduction in the B-edition, the source of the unity of time and space [...]. My thesis is that Hegel's account of the role of transcendental imagination and of its relation to the transcendental unity of apperception on the one hand, to the unity of intuition on the other hand, is accurate" (272).

9 In addition to the above, see Longuenesse, Beatrice: "Synthesis and Givenness". In: *Kant on the Human Standpoint*. Cambridge 2005, 64–78 (esp. 66–73) and Longuenesse, Beatrice: *Kant and the Capacity to Judge*. Princeton 1998, 212–225. Though I will focus here on Longuenesse's version of the Synthesis Reading, other versions of it can be found in McDowell (2009), 73–76; Keller

Synthesis Reading presupposes that the unity of space and the unity of a formal intuition of space are the very same (synthetic) unity. It construes the difference between a form of intuition and a formal intuition of space as the difference between a "potentiality" for a certain sort of intuition and the (actual) intuition itself.[10] According to the second reading, which I call "the Brute Given Reading," the unity of space is a "brute given."[11] As such, it is not a synthetic unity produced by the figurative synthesis.[12] The Brute Given Reading implies that the unity of space is not identical with the unity of a formal intuition. It construes the difference between a form of intuition and a formal intuition as the difference between the unitary whole of which we have a pure intuition and a "determinate intuition": an intuition of a finite region of space that has been assigned definite properties (for example, <triangle>).

The Synthesis Reading, originating as it does in Hegel's reading of Kant, brings Kant's account of the influence of the understanding on intuition nearer to Hegel's than does the Brute Given Reading. Nevertheless, key proponents of both readings agree on (at least) two key differences between Kant and Hegel. First, unlike Hegel, Kant thinks that sensibility has irreducible *a priori* forms (in our case, space and time) that cannot be derived from any operations of the understanding.[13] Second, unlike Hegel, Kant is committed to a radically anthropocentric approach to philosophy, one which explains the synthetic unity required for experience through the operations of a *discursive understanding* like ours rather than an *intuitive understanding* like God's.[14]

(1998), 107–112; and Waxman, Wayne: *Kant's Model of the Mind: A New Interpretation of Transcendental Idealism*. Oxford 1991, 79ff.

10 Longuenesse (2005), 69–70.

11 Keller (1998), 108. Keller ascribes the view that the unity of space is a brute given to Henry Allison.

12 See, for example, Allison (2004): "[...] such a synthesis presupposes the givenness of the single, all-inclusive space" (114). For further details of the reading, see Allison (2004), 115–116, 189–193, 482–483; Allison, Henry: "Where Have All the Categories Gone? Reflections on Longuenesse's Reading of the Transcendental Deduction". In: *Inquiry* 43, 2000, 67–80 (esp. 73ff.); Allison, Henry: "Reflections on the B-Deduction". In: *Idealism and Freedom: Essays on Kant's Theoretical and Practical Philosophy*. Cambridge 1996, 27–40 (esp. 36–37). Though I will focus on Allison's version of the Brute Given Reading, it can also be found in Falkenstein, Lorne: "Kant's Transcendental Aesthetic". In: *A Companion to Kant*. Ed. by Graham Bird. Malden 2006. 140–153 (esp. 146); and Falkenstein, Lorne: *Kant's Intuitionism: A Commentary on the Transcendental Aesthetic*. Toronto 1995, 77–102, 244–252, 383.

13 See, for example, Allison (2004), 112–116 and Longuenesse (2005), 66.

14 Kant's radical turn away from a "theocentric model" of cognition is a main theme in Allison's *Kant's Transcendental Idealism*. See, for example, Allison (2004), 27–34. Béatrice Longuenesse's acceptance of the revolutionary character of Kant's anthropocentric shift is evident in Longue-

I offer here a new reading (the Part-Whole Reading); this reading addresses the questions mentioned above in a novel way and has implications for the points of agreement between the other readings. In addition to philosophical and textual considerations directly related to the B-Deduction, my argument for the Part-Whole Reading rests on a consideration of the development of Kant's views on the unity of space. In particular, I consider how Kant's post-1770 account of the unity of space, which explains the unity of space through a property of the discursive understanding, is modeled after his earlier account of the unity of space, which explains the unity of space through a property of (what he would later describe as) the intuitive understanding. In addition, I show how the later account leaves room for a version of the earlier account.

One upshot of the Part-Whole Reading is that Kant's break with his earlier theocentric model of cognition is not quite as extreme as it is portrayed by proponents of the other readings. Another upshot is that Kant agrees with the German Idealists about their being a necessary agreement between the operations of sensibility and the understanding, while disagreeing with them in two key respects. First, he actually has a *principled* reason for thinking that sensibility must make a distinctive and irreducible *a priori* contribution to cognition. Second, he allows for an *a priori* synthetic unity that is not the result of an act of synthesis.

In § 2.1, I introduce the OSUA and the figurative synthesis. In § 2.2, I contrast the ways in which the Brute Given and Synthesis Readings address key passages in the B-Deduction. In § 2.3, I present some serious textual and philosophical difficulties for these readings. In § 3, I offer a preliminary defense of the Part-Whole Reading. In § 4 and § 5, I provide further support for this reading by considering the development of Kant's views about space. In § 6, I conclude.

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nesse (2000). Longuenesse recognizes that there are reactionary strands in Kant's thinking that allow a crucial place for God's understanding in lieu of the discursive understanding. However, she also thinks that these strands are foreign elements that can be separated out, and that Kant has the resources to give a radically anthropocentric account. By contrast, if my reading is correct, then Kant's explanation of the unity of space in terms of the discursive understanding is modeled after his earlier explanation of the unity of space in terms of the intuitive understanding and deliberately designed to leave room for it.

2 The Synthesis and Brute Given Readings and their Defects

2.1 Figurative Synthesis, the OSUA, and the Differences between a Discursive and Intuitive Understanding

Before considering the two readings mentioned above, and the specific remarks in the B-Deduction about the unity of space that they are responding to, it is necessary to offer a preliminary gloss on the terms "synthesis," "figurative synthesis" and "original synthetic unity of apperception" (OSUA). I will also explain how these terms figure into Kant's discussion of the differences between a discursive understanding and an intuitive one.

Kant's general task in the B-Deduction is to show that the categories have a legitimate (i.e. theoretically justified) application to all possible objects of our (spatio-temporal) empirical intuition but no legitimate application to any other objects. In other words, we can use the categories to cognize the former sorts of objects but no other. There is widespread agreement that Kant's general strategy is, at least in part, to show that any intuitions whose objects are to be anything "for" a thinking subject – that is, objects of consciousness and possible objects of judgment – must undergo a pre-judgmental synthesis in accordance with the categories. By "synthesis", I suggest, we can understand the act of combining a manifold (that is, a plurality) of representations that are severally 'of' properties and/or parts of an object or objects into one complex, conscious representation that is simultaneously 'of' everything that the input representations are severally of. Kant famously distinguishes between intellectual synthesis – the synthesis of concepts that results in a judgment – and the so-called figurative synthesis, the pre-judgmental synthesis mentioned above (KrV, B 151, B 154). Unlike the input for the synthesis resulting in judgment, the immediate input for an act of figurative synthesis is not concepts, but rather the "manifold of representations given in a certain intuition" [*die mannigfaltigen Vorstellungen, die in einer gewissen Anschauung gegeben werden*] (KrV, B 132). In other words, the figurative synthesis takes as its input the many intuitions that are contained in an intuition of an object (the "manifold of intuition" [*Mannigfaltige der Anschauung*][15] for short), a claim which presupposes that every intuition of an object X comprises other intuitions (namely, intuitions of the *parts* of X). The output of the figurative synthesis

15 See, e.g., KrV, B 132 for this phrase, which is repeated throughout the B Transcendental Deduction.

is a "determinate intuition" [*bestimmte Anschauung*] (KrV, B 154): that is, a complex, conscious intuition of an object composed of parts and instantiating the properties (or "determinations") represented severally by the constituent intuitions.

In addition to their inputs, another difference between the intellectual synthesis and the figurative synthesis is their degree of generality. The former is a synthesis of the manifold of intuition *in general*, and its outputs are not unitary intuitions of unitary, determinate objects but rather unitary judgments about "objects of intuition in general" [*Gegenstände der Anschauung überhaupt*] (KrV, B 150) – that is, unitary representations about unitary states of affairs (e.g. "The sun warms the stone") involving objects of intuition thought generally, in terms of potentially shared marks (e.g. "sun" and "stone"). These marks need not include spatio-temporal characteristics, and this explains our ability to form judgments about non-spatio-temporal objects (things-in-themselves). By contrast, the figurative synthesis is always carried out with respect to a specific type of manifold:[16] namely, a spatial one, and on each occasion results in the determinate intuition of a single object: namely, "a determinate space" [*ein bestimmter Raum*], a region of space with determinate spatial properties (KrV, B 138). As we will see in a moment, one example of a determinate intuition is the intuition of a line, while the figurative synthesis would be the act of synthesis whose output is the determinate intuition of this line. In this case, the "manifold of intuition" would be the intuitions of the various parts of the line that are contained in the complex intuition of the line.

Though the immediate input for the figurative synthesis are not concepts, and its output are not judgments, the figurative synthesis is governed by concepts (including the categories), as representations that give *unity* to its synthesis – that is, that make it so that the output is, in each case, *one* complex representation of one complex object (namely, a determinate space) (KrV, B 143). For example, in order to have *one* intuition of a two-dimensional object enclosed by multiple lines, I must conceive of the object as one shape with a certain quantity generated by putting multiple lines of a certain quantity together. Without such a unifying conception, there is nothing that holds the parts of my intuition of the object together, so that they are parts of one representation. Kant's general idea is that we are justified in applying (at least some of) the categories – for example, the category of quantity – to objects of determinate empirical spatio-temporal intuition, since it is only through a pre-judgmental and yet categorically-governed synthesis that they became available to judgmental thought as determinate objects.

16 Cf. Guyer, Paul: "The Deduction of the Categories." In: *The Cambridge Companion to Kant's Critique of Pure Reason*. Cambridge 2010, 118–150 (esp. 144).

These determinate objects of intuition are the only legitimate ones for our discursive thought – the only objects about which we can form well-grounded (theoretical) judgments.

So far, I have managed to describe the B-Deduction without mentioning the "original synthetic unity of apperception" (*ursprünglich-synthetische Einheit der Apperception*) (KrV, B 136). As the term is initially introduced, it refers to a condition that the manifold of intuition must satisfy, insofar as the object of this intuition (what it is 'about') is to be "for me": that is, something I am conscious of and something that I could form an explicit judgment about. Thus, we could call it the OSUA-*Condition*: if the object of a manifold of intuition is to be for a thinking subject (something it is conscious of and something it could form judgments about), then the thinking subject must perform a unitary act of synthesis on this manifold.[17] 'Thinking subject' here refers to any discursive understanding. The condition is completely general in that respect. Just what sort of unitary synthesis is called for varies depending on what specific kind of discursive understanding is at issue. For a discursive understanding that has space and time as its forms of intuition, the unitary synthesis in question is the figurative synthesis. This explains why Kant uses a geometrical example to explain what he means by a unitary act of synthesis (here described as "combination in one consciousness"):

> Thus, the mere form of outer sensible intuition, space, is not yet cognition at all; it only gives the manifold of intuition *a priori* for a possible cognition. But in order to cognize something in space, e.g., a line, I must *draw* it, and thus synthetically bring about a determinate combination of the given manifold, so that the unity of this action is at the same time the unity of consciousness (in the concept of a line) and thereby is an object (a determinate space) cognized. (KrV, B 137–138)[18]

17 Kant also suggests that something else is required: namely, the subject must be able to become conscious of its unitary act of synthesis. As he writes, "The thought that these representations given in intuition all together belong to me means, accordingly, the same as that I unite them in a self-consciousness, or at least can unite them therein, and although it is itself not yet the consciousness of the synthesis of the representations, it still presupposes the possibility of the latter" [Der Gedanke: diese in der Anschauung gegebene Vorstellungen gehören mir insgesammt zu, heißt demnach so viel, als ich vereinige sie in einem Selbstbewußtsein, oder kann sie wenigstens darin vereinigen; und ob er gleich selbst noch nicht das Bewußtsein der *Synthesis* der Vorstellungen ist, so setzt er doch die Möglichkeit der letzteren voraus] (KrV, B 134). For the purposes of this paper, it is not necessary to take a stand on what such possible consciousness of synthesis amounts to.

18 So ist die bloße Form der äußeren sinnlichen Anschauung, der Raum, noch gar keine Erkenntniß; er giebt nur das Mannigfaltige der Anschauung *a priori* zu einem möglichen Erkenntniß. Um aber irgend etwas im Raume zu erkennen, z.B. eine Linie, muß ich sie *ziehen* und also eine bestimmte Verbindung des gegebenen Mannigfaltigen synthetisch zu Stande bringen, so

When a thinking subject has a conscious representation of a line, this is the result of combining a given manifold of intuition in one consciousness. Here the given manifold of intuition consists of the intuitions of the parts of the spatial area that make up the line. The resulting intuition is a *determinate* intuition: it is an intuition of one part of the (infinite) whole of space that has been assigned determinate properties (in particular, size and shape). Kant does not make it clear whether the line is one that is encountered in the environment (for instance, as the side of a piece of paper) or whether it is one that has been drawn for the purposes of geometry. In either case, in order to have one conscious representation of one object (the line), the subject needs to conceive of the object as generated by continuous movement beginning at a point (KrV, B 154). Without the concept of a line, understood as a conception of a certain sort of spatial quantity generated by a certain sort of movement, there is nothing to hold together the plurality of intuitions of the various parts of the line to make them *one* representation of one object.

Kant's argument for the OSUA-Condition relies on a consideration of the nature of a discursive understanding and its differences from an intuitive understanding, the sort of understanding possessed by God. Though both sorts of understanding are apparently essentially capable of self-consciousness, and this self-consciousness is inextricably linked to a manifold of intuition, in the case of the intuitive understanding the self-consciousness has a special feature:

> That understanding through whose self-consciousness the manifold of intuition would at the same time be given, an understanding through whose representation the objects of this representation would at the same time exist, would not require a special act of synthesis of the manifold for the unity of consciousness, which the human understanding, which merely thinks but does not intuit, does require. (KrV, B 138–139)[19]

For an intellectual understanding, self-consciousness is expressed in an intuition that both contains a manifold of intuition and creates it (along with its object). In the *Critique of Judgment*, Kant refers to this intuition as a "synthetic universal (the intuition of a whole as such)" [*Synthetisch-Allgemeinen (der Anschauung eines Ganzen als eines solchen)*] (KU, AA 05: 407.21–22). This intuition of a whole (in

daß die Einheit dieser Handlung zugleich die Einheit des Bewußtseins (im Begriffe einer Linie) ist, und dadurch allererst ein Object (ein bestimmter Raum) erkannt wird.

19 Derjenige Verstand, durch dessen Selbstbewußtsein zugleich das Mannigfaltige der Anschauung gegeben würde, ein Verstand, durch dessen Vorstellung zugleich die Objecte dieser Vorstellung existirten, würde einen besondern Actus der Synthesis des Mannigfaltigen zu der Einheit des Bewußtseins nicht bedürfen, deren der menschliche Verstand, der bloß denkt, nicht anschaut, bedarf.

Kant's technical sense of the term) creates and fully determines the world and its parts.

Though the self-consciousness of a discursive understanding is similarly linked to a manifold of intuition, it does not create this manifold. For a discursive understanding, self-consciousness is a "thoroughgoing identity of the apperception of a manifold of given intuition" [*durchgängige Identität der Apperception eines in der Anschauung gegebenen Mannigfaltigen*] (KrV, B 133). In other words, it is an "I's" consciousness that it is the common subject of a given manifold of intuition – that each of the intuitions in a given manifold belongs to one subject. An *intuitive* understanding does not become conscious of its unity with respect to the manifold of intuition by synthesis. By definition it does not subsume objects under concepts, so it does not perform a judgmental synthesis. Since it does not have forms of intuition, it does not perform anything like the figurative synthesis either. Fortunately, it does not need to synthesize in order to be conscious of its identity. Its identity is manifest in the unity of the object that it creates through its intuition: the world.

By contrast, a discursive understanding can only become conscious of its identity by performing a unitary synthesis of the manifold – that is, a synthesis that results in one complex, conscious representation of one complex object (for example, a line). As Kant writes, "I am therefore conscious of the identical self in regard to all the manifold of the representations that are given to me in an intuition because I call them all together *my* representations, which constitute *one*" (KrV, 135).[20] It is because the discursive subject can only become conscious of its identity by synthesizing the given manifold of an intuition, turning it into one determinate intuition, that the OSUA-Condition holds. As noted above, for humans, the sort of synthesis at issue here is the figurative synthesis.

It should be clear from the above that one meaning of "synthetic unity" in the synthetic unity of apperception is "unity of a manifold of intuition that is effected by the figurative synthesis." However, it remains to be seen whether this is the only meaning of "synthetic unity." Kant's talk of a "synthetic universal" that is not a representation resulting from synthesis leaves open the possibility that there might be a kind of synthetic unity pertaining to the self-consciousness of a discursive understanding that does not result from an act of figurative synthesis (or any synthesis for that matter).

20 Ich bin mir also des identischen Selbst bewußt in Ansehung des Mannigfaltigen der mir in einer Anschauung gegebenen Vorstellungen, weil ich sie insgesammt *meine* Vorstellungen nenne, die *eine* ausmachen.

2.2 Kant's Supplemented Account of the Unity of Space

With at least a preliminary understanding of figurative synthesis and the OSUA in hand, we can now turn to Kant's account of the unity of space in the B-Deduction and the questions that it raises. The first relevant passage occurs in a footnote to § 17:

> Space and time and all their parts are *intuitions*, thus individual representations along with the manifold that they contain in themselves (see the Transcendental Aesthetic), thus they are not mere concepts by means of which the same consciousness is contained in many representations, but rather are many representations that are contained in one and in the consciousness of it; they are thus found to be composite, and consequently, the unity of consciousness, as *synthetic* and yet as original, is to be found in them. This *singularity* of theirs is important in its application (see § 25). (KrV, B 136*)[21]

In referring to the Transcendental Aesthetic for the claim that "space and time and all their parts are intuitions, thus individual representations," Kant is alluding specifically to the third and fourth arguments of the Metaphysical Exposition in the Transcendental Aesthetic. In the third argument, which I cited in the opening paragraph of this essay, Kant argues for the existence of a pure intuition of space based on the essential unity of space. In the fourth argument, he argues for the existence of a pure intuition of space based on the fact that this intuition contains infinite parts within itself (KrV, B 39–40). When Kant describes space and time as individual representations in this footnote, it is clear that he has these pure intuitions of space and time in mind.

As I read this footnote, Kant is making two new additions to the doctrine of the unity of space that he had introduced in the Transcendental Aesthetic. Recall that the unity of space, as explained in the Aesthetic, consisted in the fact that space is an essentially singular whole. Kant had claimed that the latter is the object of our pure intuition of space.[22] One thing that this footnote makes clear is that there is *more* to the unity of space than the fact that the object of our pure in-

21 Der Raum und die Zeit und alle Theile derselben sind *Anschauungen*, mithin einzelne Vorstellungen mit dem Mannigfaltigen, das sie in sich enthalten (siehe die transsc. Ästhetik), mithin nicht bloße Begriffe, durch die eben dasselbe Bewußtsein als in vielen Vorstellungen, sondern viel Vorstellungen als in einer und deren Bewußtsein enthalten, mithin als zusammengesetzt, folglich die Einheit des Bewußtseins als *synthetisch*, aber doch ursprünglich angetroffen wird. Diese *Einzelheit* derselben ist wichtig in der Anwendung (siehe § 25).

22 As other commentators have noted, Kant uses the term "pure intuition" ambiguously; it sometimes designates a mental state and other times, its object. When I speak of the pure intuition of X I am using the term in the first sense.

tuition is a whole with this structure. In fact, the pure intuition itself – that is, the intuition considered just as a representation (as opposed to what the representation is 'of') – has exactly the same structure. Like its object (that which it represents), our pure intuition of space is an essentially singular whole that contains a manifold in itself as its parts. The manifold in question consists of all other spatial intuitions: every intuition of a part (i.e. a region) of space. (Recall that, throughout the B-Deduction, Kant has been presupposing that every intuition is a complex representation that contains a manifold of other intuitions in itself.)[23]

Though the two-sidedness of the unity of space has not been widely recognized,[24] I do not think it can be seriously denied. (As we will see shortly, though, it has implications for one of the points at issue between the Synthesis and Brute Given Readings.) The controversial aspect of the above footnote has historically been the second new addition that it makes to the doctrine of the unity of space: the claim that the "unity of consciousness, as synthetic and yet as original is to be found in them [*that is, space and time*]" (KrV, B 136*). The unity of consciousness at issue here is the OSUA. For proponents of the Synthesis Reading, Kant is to be understood as saying in this remark that the unity of space is a synthetic unity; in particular, they take it to be the output of the figurative synthesis that is necessitated by the OSUA.[25] The Synthesis Reading finds further textual support for this claim in passages like the following:

> Thus if, e.g., I make the empirical intuition of a house into perception through the apprehension of its manifold, my ground is the *necessary unity* of space and of outer intuition in general. This very same synthetic unity, however, if I abstract from the form of space, has its seat in the understanding, and is [...] the category of quantity. (KrV, B 162)[26]

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23 Though the above footnote is perhaps the first time in the *Critique* that Kant has been fully explicit about the two-sided unity of space, this doctrine is one that we should expect given Kant's repeated claims throughout the *Critique* that space *is* a representation (namely, a pure intuition) (see, for example KrV, A 373–374). If the unity of an intuition consists both in the unity of its object and its unity as an intuition that contains a manifold of other intuitions in itself, then as pure intuition, the unity of space will be correspondingly two-sided. For further discussion of this point, see Aquila, Richard: "Infinitude, Whole-Part Priority, and the Ambiguity of Kantian 'Space' and 'Time'". In: *Kant und die Berliner Aufklärung: Akten des IX. Internationalen Kant-Kongresses*. Vol. 2. Berlin 2001, 99–109.

24 One exception here is Aquila (2001), quoted above. Another is Brook, Andrew: *Kant and the Mind*. Cambridge 1994, 227–228. One key difference between my reading of this passage and Brooke's is that Brooke holds that the unity of this all-encompassing spatial intuition is the result of synthesis. In this respect, Brooke counts as a proponent of the Synthesis Reading.

25 See footnotes 8 and 9 for references.

26 Wenn ich also z.B. die empirische Anschauung eines Hauses durch Apprehension des Mannigfaltigen derselben zur Wahrnehmung mache, so liegt mir die *nothwendige Einheit* des Raumes

Kant's claim that space is a synthetic unity obviously fits with the Synthesis Reading, as does his claim that this unity has its seat in the understanding. Finally, proponents of the Synthesis Reading have the resources to make sense of Kant's reference to the category of quantity: the figurative synthesis that generates the synthetic unity of space also generates a "particular synthesis" in accordance with the category of quantity.[27]

Another key passage in which Kant supplements the Transcendental Aesthetic's account of the unity of space is KrV, B 160–161*:

> But space and time are represented *a priori* not merely as *forms* of sensible intuition, but also as *intuitions* themselves (which contain a manifold) and thus with the determination of the *unity* of this manifold in them (see the Transcendental Aesthetic).*
> * Space, represented as *object* (as is really required in geometry), contains more than the mere form of intuition, namely the *comprehension* of the manifold given in accordance with the form of sensibility in an *intuitive* representation, so that the *form of intuition* merely gives the manifold, but the *formal intuition* gives unity of the representation. In the Aesthetic I ascribed this unity merely to sensibility, only in order to note that it precedes all concepts, though to be sure it presupposes a synthesis, which does not belong to the senses but through which all concepts of space and time first become possible. For since through it (as the understanding determines the sensibility) space or time are first *given* as intuitions, the unity of this *a priori* intuition belongs to space and time, and not to the concept of the understanding (§ 24). (KrV, B 160–161*)[28]

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und der äußeren sinnlichen Anschauung überhaupt zum Grunde, und ich zeichne gleichsam seine Gestalt dieser synthetischen Einheit des Mannigfaltigen im Raume gemäß. Eben dieselbe synthetische Einheit aber, wenn ich von der Form des Raumes abstrahire, hat im Verstande ihren Sitz und ist die Kategorie der Synthesis des Gleichartigen in einer Anschauung überhaupt, d. i. die Kategorie der Größe [...].

27 See Longuenesse (2005), 77 for a position along these lines.

28 Aber Raum und Zeit sind nicht bloß als *Formen* der sinnlichen Anschauung, sondern als *Anschauungen* selbst (die ein Mannigfaltiges enthalten), also mit der Bestimmung der *Einheit* dieses Mannigfaltigen in ihnen *a priori* vorgestellt (siehe transsc. Ästhet.)*)
*) Der Raum, als *Gegenstand* vorgestellt (wie man es wirklich in der Geometrie bedarf), enthält mehr als bloße Form der Anschauung, nämlich *Zusammenfassung* des Mannigfaltigen nach der Form der Sinnlichkeit Gegebenen in eine *anschauliche* Vorstellung, so daß die *Form der Anschauung* bloß Mannigfaltiges, die *formale Anschauung* aber *Einheit der Vorstellung* giebt. Diese Einheit hatte ich in der Ästhetik bloß zur Sinnlichkeit gezählt, um nur zu bemerken, daß sie vor allem Begriffe vorhergehe, ob sie zwar eine Synthesis, die nicht den Sinnen angehört, durch welche aber alle Begriffe von Raum und Zeit zuerst möglich werden, voraussetzt. Denn da durch sie (indem der Verstand die Sinnlichkeit bestimmt) der Raum oder die Zeit als Anschauungen zuerst *gegeben* werden, so gehört die Einheit dieser Anschauung *a priori* zum Raume und der Zeit und nicht zum Begriffe des Verstandes (§ 24).

In addition to the obvious question about precisely what "form of intuition" and "formal intuition" refer to, this passage raises a question about the relationship between the unity of space and the unity of the formal intuition of space.

According to the most prominent and well worked-out version of the Synthesis Reading, the answer to the first question is as follows: "form of intuition" is being used at KrV, B 160–161* to denote our receptive faculty's potential for representing a manifold of things in a spatial manner. In order to be actualized, our receptive capacity must be acted on by things in themselves (affection from outside) as well as by our understanding in the guise of the figurative synthesis (affection from inside). The result of such actualization is the formal intuition of space.[29] With regard to the second question mentioned in the previous paragraph, proponents of the Synthesis Reading take the unity in question to be the very same.[30]

Proponents of the Brute Given Reading offer a completely different reading of these passages. Whereas on the Synthesis Reading, Kant's supplemented account of space amounts to a "re-reading" (to use Beatrice Longuenesse's term)[31] of the Aesthetic's account, on the Brute Given Reading, the unitary space of the Aesthetic is what it initially seems to be: a "brute given" which depends in no way on the operations of the understanding. When Kant claims that the synthetic unity of apperception is to be met with in space, he is not to be understood as claiming that this unity is the product of a synthesis. Instead, what he is claiming is that, in order to take space (or, rather, the representation thereof) into *consciousness*, we must perform an act of figurative synthesis, the result of which, as we have seen, is what Kant calls a "determinate intuition". Thus, it is not the unitary space of the Aesthetic that is the product of a synthesis; it is the *determinate intuition* of space that is the product of synthesis.[32]

The Brute-Given Reading, then, offers the following answer to the question of how the OSUA is related to the unity of space: insofar as the representation of the latter is taken up into consciousness, it must satisfy the OSUA-Condition, which means that it must be synthesized. As for the relation between a form of intuition and a formal intuition, according to the Brute Given Reading, this is the difference

29 See Longuenesse (2005), 69–72 and Longuenesse (1998), 220–222. It is important to emphasize that this is Longuenesse's gloss on a very specific usage of the term "form of intuition." Longuenesse readily admits that Kant uses the term differently in other contexts; indeed, she points to usages of the term where it is equated with formal intuition.

30 This is evident, inter alia, from their tendency to slide between talk of the unity of space and the unity of the intuition of space. See, for example, Longuenesse (2000), 272.

31 Longuenesse (2005), 67 and Longuenesse (1998), 213.

32 For references, see footnote 12.

between the unitary whole which Kant describes in the Aesthetic as the object of our pure intuition and a determinate intuition of (a portion of) this unitary whole. Since the latter unity is synthetic and the former supposedly is not, the Brute Given Reading implies that the unity of space is different from the unity of a formal intuition.

2.3 Evaluation

One problem with the Brute Given Reading concerns its denial that the unity of the space of the Aesthetic is the same as the unity of a formal intuition of space. In § 2.1, I argued that the unity of space and the unity of the pure intuition of space are the same (two-sided) unity. There is a good deal of evidence to suggest that pure intuition and formal intuition are synonyms.[33] If this is right, then the unity of space is obviously the same as the unity of the formal intuition of space.

This reading also has a general philosophical problem. It regards the fit between the unity of space as our form of intuition and the OSUA as contingent: it allows that there could be non-human discursive beings whose forms of intuition lack unity. For such beings, it would be impossible to synthesize the given manifold of intuition.[34] But, according to the OSUA-Condition, this would mean that they could not think of any object of their particular type of intuition (where the type in question is determined by their particular forms of intuition). Since thought of an object in general is presumably the result of abstracting from

33 Consider for example that KrV, B 160–161* is clearly building on the discussion at B 136*. Since the intuitions described in B 136* are pure intuitions (in the footnote, Kant refers us back to the Transcendental Aesthetic and seems to have in mind specifically the 3rd and 4th metaphysical expositions), and since immediately prior to the footnote at KrV, B 160–161 Kant again refers us back to the Transcendental Aesthetic, the most plausible reading of "formal intuition" is that it is simply a synonym for "pure intuition". Consider also that "form of intuition" (as the term is used in the Aesthetic – not as it is used in B 160–161) is used synonymously with "pure intuition": e.g. "This pure form of sensibility itself is also called pure intuition" [KrV, B 34–35]). Now, "form of intuition" (again, as the term is used in the Aesthetic – not as it used in B 160–161) is used synonomously with "formal intuition": "Space is merely the form of outer intuition (formal intuition)" [*Der Raum ist bloß die Form der äußeren Anschauung (formale Anschauung)*] (KrV, B 457*). If form of intuition (as the term is used in the Aesthetic) is a synonym for both "pure intuition" and "formal intuition", then the latter are synonyms as well. The fact (noted earlier) that Kant uses the term "pure intuition" ambiguously (sometimes to denote the mental state, other times to denote the object) is not, I think, a valid objection to my claim that "formal intuition" is a synonym for "pure intuition" since the same ambiguity pervades the former term.

34 Allison (1996), 36 and Falkenstein (2006), 146.

thought of objects of a particular type of intuition, such beings could apparently not think of objects in general either. Moreover, since as we have seen, synthesis is a requirement of self-consciousness, such beings would apparently be incapable of self-consciousness. Thus, on the Brute Given Reading, it is highly fortuitous that our forms of intuition allow us to satisfy the OSUA-Condition. But it is far from clear that Kant would in fact countenance the possibility of discursive beings that are not simply incapable of cognition, but actually incapable of thinking of objects *at all* and incapable of self-consciousness. Kant strongly suggests that these attributes are essential to all discursive beings, attaching to them by definition. This seems right: in what sense is a being a discursive being if it is prevented on metaphysical grounds of thinking of anything or even thinking "I think"?

There is yet a further problem with the Brute Given Reading: Kant has a deep and long-standing commitment to the claim that the (metaphysical) unity[35] of space is *not* a brute fact. Instead, he thinks that this unity is ultimately to be explained in terms of a property of an *understanding*. This is a point that I will argue for in § 4 and § 5.

The Synthesis Reading has its own problems. Its proponents deny that the formal intuition of space is the same thing as a determinate intuition. However, Kant seems to be defining the figurative synthesis by claiming that it results in determinate intuitions.[36] This appearance is only strengthened in the Axioms of Intuition. There, Kant appears to be describing the figurative synthesis as a successive synthesis of the imagination that results in the representation of extensive magnitudes. If this is what the figurative synthesis is, then it does not yield the unity of a formal intuition of space, since (1) we cannot complete an infinite successive synthesis (of the sort that would be required to successively unify all the infinite parts contained in the formal intuition of space), and (2) an extensive magnitude is not a whole in Kant's technical sense, whereas a formal intuition is. Instead, the figurative synthesis could only yield determinate intuitions. Such intuitions have as their objects regions of space with determinate properties, for example, a line. Such entities are *composites* whose overall magnitude is determined by the magnitude of the parts that compose them.

Proponents of the Synthesis Reading need to deny that things are as they seem here. One thing they could do is deny that figurative synthesis only yields

35 I qualify 'unity' with the term 'metaphysical' here in order to contrast what I am talking about with what some call the "cognized unity of space". Many commentators, including Allison, are willing to concede that cognition or representation of the unity of space requires an understanding with a distinctive sort of unity. I am claiming that, throughout his career, Kant holds the view that space itself would not be a unity without there being a unitary understanding.

36 See, for example KrV, B 138 and B 154.

determinate intuitions and, related to this, that it is (always) a successive synthesis that yields representation of extensive magnitudes.[37] Instead, they might claim that Kant is merely describing *a specific type of* figurative synthesis when he makes these claims; there would remain another (more general) type of figurative synthesis that is able to generate the unity of space, and that renders the other type of figurative synthesis possible. The trouble with this response is that these acts would be so radically different that it's hard to see why they should deserve the common name "figurative synthesis". Moreover, as we will see below, Kant has principled reasons for thinking that the unity of a formal intuition does not come from synthesis.

Another set of difficulties arises in connection with the "form of intuition" that Kant contrasts with a formal intuition. As we saw, Longuenesse thinks that the term "form of intuition" is being used at KrV, B 160–161* to denote our receptive faculty's potential for having a certain sort of intuition, namely, the formal intuition of space. There are two problems here. The first problem is minor: the account invites a question for which no explicit answer has yet been provided. Namely, if a form of intuition requires the influence of the understanding in order to be actualized, then what principled reason could Kant have for attributing forms of intuition to a distinct stem of cognition? What principled reason could he have for thinking that sensibility is not simply a branch of the understanding? This, after all, is the position taken by Fichte and Hegel.

The second problem is more serious. Kant's language in KrV, B 160–161* suggests that the relationship between them is not that of a faculty for a certain sort of intuition and the intuition itself. Indeed, Kant claims that they are both represented *a priori*, which implies that they are both *a priori* representations: "But space and time are represented *a priori* not merely as *forms* of sensible intuition, but also as *intuitions* themselves (which contain a manifold)." Instead of pointing to a distinction between a capacity for a representation and the representation itself, Kant's language in this sentence and in the footnote points to a distinction between the manifold of intuitions that are contained in a unitary formal intuition and that intuition itself. As Kant writes, the "*form of intuition* merely gives the manifold, but the *formal intuition* gives unity of the representation."

In other words, the relationship between form of intuition and formal intuition is that between a (certain kind of) manifold of parts and the whole that contains these parts, where "whole" is meant in Kant's technical sense of a "totum", which he contrasts with "compositum" (KrV, B 466). One example of a manifold of parts would be the intuitions that make up the intuition of – what *will* be – de-

37 This is Longuenesse's strategy. See Longuenesse (2005), 47.

termined as a line, once I perform the requisite figurative synthesis. An example of an *empirical* manifold of parts would be the various empirical intuitions that make up the empirical intuition of – what *will* be – determined as a region of space occupied by a house, once I perform the requisite figurative synthesis.[38] In both cases, the resulting determinate intuitions are of extensive magnitudes.

Such a reading makes sense of why Kant associates the capacity for such a form with sensibility, and why he thinks the understanding could not be its source. One of the characteristics of a spatial part (i.e. a region of space), as Kant makes clear in the Amphiboly, is that it can be numerically distinct from another spatial part (that is, a part that is spatially outside of it) – and thus constitute, together with it, a manifold – despite being qualitatively identical with the other part (KrV, B 319). In this respect, spatial parts do not obey the *law* of the Identity of Indiscernibles, a law which Kant associates with the understanding in the Amphiboly chapter. For this reason, the cause of the existence and distinctness of this manifold could not lie in the understanding. Instead, it *must* lie in sensibility as a faculty distinct from the understanding.

3 The Part-Whole Reading

The Part-Whole Reading is so-called because it understands the relationship between form of intuition and formal intuition as that between a manifold of given parts and the whole within which they are contained. As an interpretation of Kant's supplemented account of the unity of space, it also provides answers to the other two questions mentioned above: (1) What is the relation between the unity of space and the unity of a formal intuition; (2) What is the relation between the unity of space and the OSUA?

The answer to the first question emerged in the course of evaluating the Brute Given and Synthesis Readings: the unity of space is identical to the unity of the formal intuition of space, as is maintained on the Synthesis Reading. The unity in question is two-sided, as we have seen, referring at once to the unity of a distinctive sort of spatial intuition, one which contains any given manifold of spatial intuitions as its parts, *and* to the unity of the *object* of this intuition, which like the intuition itself, is a whole that contains all other objects of spatial intuition as its parts. This given manifold of parts is what Kant calls a form of intuition at KrV, B 160–161*. An example of such a form of intuition is the manifold of intuition

38 See KrV, B 162 (cited above) for this example.

whose synthesis results in the determinate intuition of a line. As parts contained within a formal intuition, the members of this manifold of intuition are two-sided: they are at once *representations* of regions of space, and the objects of those representations (the parts that make up the line). Both are contained within space as a formal intuition – the former in it qua representation, the latter in it qua object of the representation.

As for the second question, there are two components to the answer provided by the Part-Whole reading. First, the (metaphysical) unity of space is *not* a brute given. Instead, it is necessitated by the OSUA, as is the unity of any sort of formal intuition (including the non-spatio-temporal intuitions that might be possessed by non-human discursive creatures). One reason for accepting this point is that, as we have seen, to deny it is to countenance the possibility of a discursive creature that can neither think of any object nor become self-conscious. Other reasons for accepting it emerge once we consider the development of Kant's views on the unity of space, as we will do below.

On this point, the Part-Whole Reading is in agreement with the Synthesis Reading. Moreover, both readings hold that the unity of space is a *synthetic* unity. The Part-Whole reading denies, though, that this unity is the output or result of the figurative synthesis, or any other act of synthesis for that matter. Though the claim that there could be a synthetic unity without synthesis might initially sound paradoxical, there is a clear example of this in Kant's Critical writings. As I noted earlier, in the *Critique of Judgment*, Kant describes God's representation of the world as a *synthetic universal* (KU, AA 05: 407.21–22). What makes this representation synthetic is not that it is the result of synthesis. Indeed, as we saw in § 2, God does not synthesize representations. As I will argue below, what makes this representation synthetic is both that it is a whole (in Kant's strict sense) *and* that it makes possible a combination of the manifold contained within it. As we will see, the combination at issue results in a unitary, complex world consisting of many unitary entities. On pain of regress, this combination and the sorts of unity that it brings about could not themselves be the source of the synthetic unity that is God's representation: the latter unity is what makes the former combination, along with the unities it brings about, possible.

According to the Part-Whole Reading, the synthetic nature of our formal intuition of space is closely analogous to the synthetic nature of God's intellectual intuition. (Kant himself points out the similarities between them in the *Critique of Judgment*: KU, AA 05: 409). The difference, though, is that for discursive understandings like ours, the particular sort of necessary combination that our formal intuitions make possible is *synthesis*. This is a direct result of the fact that we are discursive understandings for whom the manifold in question must be given. When the given manifold is spatial (that is, when space is the form of intuition),

the synthesis in question is the *figurative synthesis*. Our formal intuition of space is a synthetic unity, then, insofar as it is a whole that makes possible the figurative synthesis of the manifold contained within it. On pain of regress, this figurative synthesis could not generate the synthetic unity of our formal intuition. Instead, the figurative synthesis issues in unitary intuitions of a different sort: determinate intuitions. This is what Kant is getting at when, at KrV, B 162, he describes the "necessary unity of space" as a synthetic unity that "grounds the apprehension" (that is, the synthesis) of the manifold. The former synthetic unity is the unity of the formal intuition of space; the latter is the unity generated by an act of synthesis.

So the synthetic nature of the unity of space need not entail that it is itself the result of synthesis. But what about the claim that it is necessitated by the OSUA? What could that mean other than that the unity of space is the product of the synthesis called for in the OSUA-Condition? Here it is necessary to distinguish two closely connected ways that Kant uses the term "synthetic unity of apperception". On the one hand, it refers to what I have been calling the OSUA-Condition. One can begin to understand the second usage of the term, which Kant fails to explicitly distinguish from the first, when one poses the following question: "what makes it possible for a discursive subject to carry out this unitary synthesis of the manifold of intuition?" "What is it that allows the OSUA-Condition to be fulfilled?" It is not unreasonable to think that I could only synthesize a manifold of intuition of a certain type (for example, spatial) if the intuitions that comprise this manifold *already* stand in a relation to each other and to me. In particular, these intuitions must collectively be contained *in me*, their common subject. As Kant writes, "all manifold of intuition has a necessary relation to the *I think* in the same subject in which this manifold is to be encountered" (KrV, B 132). On pain of regress, the fact that a manifold of intuitions have this relation to each other and to me *could not itself be the result of synthesis*. Kant's way of making sense of how the members of a manifold of intuition could be in me prior to their synthesis and thus able to be synthesized is to say that I have a "whole" intuition that (1) contains any given manifold of intuition of a certain type (for example, spatial) as parts; (2) is of the same type as the manifold that it contains; and (3) is not *in me* in the way that the members of the manifold are, but yet still *mine*. Any intuition that satisfies these conditions would be a synthetic unity that makes possible the synthesis of the manifold within it. In other words, it would be a *formal intuition*.

With these pieces in place, we are in a position to discern another sense of the OSUA, one where it refers not to a condition but rather to a property that enables the execution of the unitary synthesis mentioned in the OSUA-Condition. The property in question is a property of a thinking subject: namely, its being in possession of a formal intuition that contains any given manifold of intuition (1) whose object is a potential object of thought for the thinking subject, and (2) is

of the same type (for example, spatial) as the formal intuition. The OSUA-Property is essential to a thinking subject, insofar as without being in possession of (at least one) formal intuition, a thinking subject could not synthesize any representations, and thus would not be a thinking subject. Just as every discursive being is subject to the OSUA-Condition, every discursive being has (at least one) kind of formal intuition. The specific kind of formal intuitions vary depending on the character of the manifolds (that is, the forms of intuition). In my case, and in the case of any other discursive understandings that have space and time as their forms of intuition, the specific formal intuitions at issue are space and time. It is in this sense that the "essential" unity of space and the unity of time depend on the OSUA: I am in possession of essentially unitary intuitions of this sort because of the OSUA-Property, which is essential to any discursive understanding. Thus, it is the OSUA-Property that explains the unity of space.

The "mineness" of my formal intuition of space has important implications. What makes the formal intuition of space *mine* is not that it is contained in me (it is the containment of other intuitions in this one that accounts for *their* mineness). Instead, what makes it *mine* is that it is essential to me as a thinking being with space as a form of intuition. Insofar as other intuitions given within this formal intuition are *mine*, and their being mine means that their objects are "for me", the OSUA-Condition says that I must synthesize them. As we have now repeatedly seen, this synthesis is not what generates the unity of the whole that is a formal intuition of space. Instead the synthesis called for by the OSUA-Condition is a synthesis of any manifold of intuition given within the whole (so a synthesis of given parts of space), namely, a figurative synthesis. The outputs of this figurative synthesis are, as we have seen, determinate intuitions. Determinate intuitions are, to be sure, unitary, but their unity is of a fundamentally different sort than the unity of the formal intuition of space. The former is the unity of a composite (in particular, an extensive magnitude); the latter is the unity of a totum. The unity of the latter makes possible the figurative synthesis that generates instances of the former unity; it also, when coupled with the OSUA-Condition, makes this synthesis necessary for any given manifold of parts of space.

It is the close connection between the unity of a formal intuition and figurative synthesis that allows us to explain remarks in the B-Deduction that would otherwise be problematic. For example, KrV, B 136* (quoted above):

> Space and time and all their parts are *intuitions*, thus individual representations along with the manifold that they contain in themselves (see the Transcendental Aesthetic), thus they are not mere concepts by means of which the same consciousness is contained in many representations, but rather are many representations that are contained in one and in the consciousness of it; they are thus found to be composite [...].

On the Part-Whole Reading, the "individual representations" at issue here are the formal intuitions of space and time. What might appear initially problematic is the apparent claim that these representations are "composite". As we have seen, the formal intuitions of space and time are not composite, since composites require synthesis and these intuitions are not the results of synthesis. Fortunately, we are in a position to make better sense of what Kant is saying here. The key is the claim that space and time are "many representations that are contained in one and *in the consciousness of it*" (my emphasis). With this last part of the clause, Kant has shifted his attention to the figurative synthesis that has to be performed on the manifold of parts given within a formal intuition. For Kant, becoming conscious of a set of representations requires more than simply having them; it requires synthesizing them. The result of such synthesis is a determinate intuition: one complex, composite representation of one complex, composite object (namely, a determinate space).[39] Thus, we can make sense of Kant's claim that they (space and time) are composites, while also seeing that it is such composite representations, rather than the formal intuitions themselves, that he is talking about here.

In the same spirit, we can make sense of KrV, B 161*:

> In the Aesthetic I ascribed this unity merely to sensibility, only in order to note that it precedes all concepts, though to be sure it presupposes a synthesis, which does not belong to the senses but through which all concepts of space and time first become possible. For since through it (as the understanding determines sensibility) space or time are first *given* as intuitions, the unity of this *a priori* intuition belongs to space and time, and not to the concept of the understanding (§ 24).

The synthesis that the unity of space presupposes (the synthesis by which the understanding determines sensibility) is the figurative synthesis.[40] By means of this synthesis, I have an intuition of a finite region of space with determinate spatial properties (for example, <triangle>). Such intuitions – determinate intu-

39 On these points, I am in agreement with the Brute Given Reading, and I have adopted its proponents' general strategy for interpreting passages in which Kant appears to be saying that space is a composite produced from synthesis. It is in this same spirit that I would handle remarks like the following: "we must *compose*, if we are supposed to represent something as *composed* (even space and time)" [wir müssen *zusammensetzen*, wenn wir uns etwas als *zusammengesetzt* vorstellen sollen (selbst den Raum und die Zeit)] (Br, AA 11: 515.16–18).

40 Note that when Kant says that the unity of space presupposes synthesis, he should not be understood as claiming that the unity of space is generated by synthesis. Instead, the unity of space presupposes synthesis insofar as, when coupled with the OSUA-Condition, it makes the figurative synthesis of the parts of space not just possible but also necessary.

itions – only arise through the figurative synthesis. It is these that Kant is talking about in the last sentence, not the formal intuitions of space and time. By noticing the similarities between the objects of such intuitions, I can abstract concepts of specific spatial objects, like the concept of triangle. In this way, the figurative synthesis makes possible concepts of space and time.

To summarize: according to the Part-Whole Reading, space as a form of intuition is any given manifold of parts that is contained within space as a formal intuition. The latter has synthetic unity insofar as it is a whole (in Kant's technical sense) that makes possible the figurative synthesis of the given manifold contained within it. The synthetic unity of space/the formal intuition of space has its basis (and explanation) in the OSUA-Property. The OSUA-Condition dictates that any given manifold of spatial intuitions (whose object is "for me") must undergo the figurative synthesis. The OSUA-Property is what grounds the unity of the formal intuition of space, which both enables the synthesis prescribed by the OSUA-Condition to occur and which necessitates this synthesis for any given manifold of spatial intuition by guaranteeing that this manifold is for me (because it is in my formal intuition) and so subject to the OSUA-Condition.

The Part-Whole Reading avoids the serious problems facing the Synthesis and Brute Given readings; it is also fits with the key texts in the B-Deduction. In the next two sections, I provide an account of the development of Kant's views on the unity of space. The purpose of this account of Kant's development is two-fold. First, it provides additional (albeit indirect) evidence against the Brute Given and Synthesis Readings, and in support of key features of the Part-Whole Reading. In particular, it provides (indirect) support for an interpretation of Kant's supplemented account of space, according to which (1) the unity of space is identical with the unity of the formal intuition of space, (2) the synthetic unity of space is not a unity brought about by synthesis, but rather the unity of a whole intuition that makes the figurative synthesis possible, and (3) the unity of space is to be explained in terms of the OSUA-Property. Second, this account reveals that there is more continuity than one might expect between Kant's pre-Critical account of the unity of space (in which he appeals to an intuitive understanding), and his Critical account in which he appeals to a property of the discursive understanding (namely, the OSUA-Property). Kant's later explanation of space is not only modeled on his earlier one; it is so designed as to leave room for (a version of) the earlier one.

§ 4 deals specifically with Kant's pre-Critical publications. § 5 deals with various *Reflexionen* from the silent decade. As will become clear, from his earliest publication up until the time that he was at work on the *Critique of Pure Reason*, Kant holds that the unity of space is something that requires explanation in terms of a property of some understanding. What changes during this period is that

Kant *moves away* from a view in which space is a non-representational entity whose existence depends on actual combinations of things and whose unity can be known to rest on a property of an intuitive understanding. Instead, Kant *moves towards* a view in which (a) space is a representation that has the structure of a whole, (b) the unity of this representation makes possible the combination of the manifold in it, (c) this unity *might well* ultimately rest on a property of the intuitive understanding, and (d) this unity rests immediately on a property of the discursive understanding.

4 The Unity of Space in Kant's Pre-Critical Publications

4.1 Thoughts on the *True Estimation of Living Forces* [1747], the *New Elucidation* [1755], and the *Physical Monadology* [1756]

For my purposes, these texts can be treated together, because Kant endorses roughly the same account of space in all of them: space is an order of co-existing substances.[41] Kant's view at this time is that the order in question is constituted by "the interconnected actions of substances" [*substantiarum actionibus*] (PND, AA 01: 415). (As Kant makes clear in the *Physical Monadology*, the substances in question are physical monads – simple substances that, unlike Leibnizian monads, really influence one another.) According to this view, substances do not have spatial locations relative to one another, and thus do not belong to the same spatial order, unless they bring about changes in one another's states through the action of their respective forces. Kant holds further that the parts of physical space are parts of the causal activity by means of which the substances influence one another (MoPh, AA 01: 480).

Kant's account of the unity of space at this time is shaped by his views about the nature of substance and about what is required for a set of substances to interact causally with one another. Kant holds that "individual substances [...] have a separate existence, that is to say an existence which can be completely understood independently of all other substances" (PND, AA 01: 413.03–05).[42] Because

41 I have found Friedman, Michael: *Kant and the Exact Sciences*. Cambridge/Massachusetts 1992, 5ff. especially helpful for understanding Kant's pre-Critical account of space.

42 Substantiae singulae, quarum neutra est causa exsistentiae alterius, exsistentiam habent separatam h. e. absque omnibus aliis prorsus intelligibilem.

each substance is ontologically and conceptually independent of the others, the interaction of a set of existing substances does not follow from the mere fact that each of the members of the set exists. Indeed, Kant thinks it is metaphysically possible for several substances to exist without causally interacting; in such a scenario, the substances would not have any location in space. Kant also thinks it is metaphysically possible for there to exist two or more sets of substances such that the members of each set interact with one another but not with the members of any other set. In such a scenario, the substances constituting each set would have a spatial location relative to the other members of the set, but they would not have a spatial location relative to the members of any other set. If this were the case, space would not be unitary; there would be no spatial path connecting the members of different sets.

Kant argues that the mutual interaction of ontologically distinct substances depends "on a communality of cause, namely on God, the universal principle of beings" (*communione causae, nempe Deo, exsistentium generali principio*) (PND, AA 01: 413).[43] That is, substances can only interact with one another if they are created by the same being. But the mere existence of a common creator on its own is not sufficient to establish a reciprocal causal connection among individual substances, since God, according to Kant, could have created individual substances without their being connected. The causal interaction of substances requires in addition that "the self-same schema of the divine understanding, which gives existence, also established the relations of things to each other, by conceiving their existence as correlated with one another" (PND, AA 01: 413).[44] Kant thus takes the fact that all existing substances interact with one another to imply that God is endowed with a creative understanding, by means of which He can create substances and their relations in the act of representing them.

Kant calls God's creative representation of a set of substances a *schema*. The object that is created by a schema is a world, a (maximal) set of causally interconnected substances. This schema has an obvious parallel to what Kant will later describe as an intellectual intuition and a synthetic universal. One distinctive feature of Kant's view during this period is that it seems to allow for the possibility of many (simultaneously existing) schemata. This position is entailed by Kant's view that it is ultimately God's choice whether to create in such a way that exist-

43 See Watkins, Eric: *Kant and the Metaphysics of Causality*. Cambridge 2005, 140–155 and Watkins, Eric: "Kant's Theory of Physical Influx". In: *Archiv für Geschichte der Philosophie* 77, 1995, 285–324 (esp. 292–299) for an illuminating explication of this claim as well as of Kant's various arguments on its behalf.

44 [...] idem, quod exsistentiam dat, intellectus divini schema, quatenus exsistentias ipsarum correlatas concepit, eorum respectus firmaverit [...].

ing substances interact with one another and thus belong to the same world (by representing them all in one schema), or to create separate worlds of causally interacting substances (by representing some in one schema and others in another), or to create in such a way that no substance interacts with any other (by representing each in its own schema). Because the unity of space depends on God's decision in this regard, the unity of space is not metaphysically necessary. If God chooses to represent all substances in one schema, then all existing substances belong to one space; otherwise, there will be many (disconnected) spaces, or no space at all (if no existing substance stands in mutual interaction with any other).

At this early stage in his career, then, Kant neither regards the unity of space as metaphysically necessary nor as a brute fact. In the (contingent) circumstance where only one space exists, there is a deeper metaphysical ground for this unity: the thoroughgoing mutual interaction of all existing substances. In order for there to be such a thoroughgoing mutual interaction, all the substances that exist, along with their causal activities, must be contained in a unitary schema, to which they all owe their existence. This unitary schema is a (contingent) property of God's understanding. In the contingent circumstance in which there is just one space, it is this contingent property that explains the fact.

4.2 The Only Possible Argument

By the time of *The Only Possible Argument*, Kant has changed his mind about the modal status of the unity of space. He now regards it as metaphysically necessary.[45] One might expect that this new necessitarianism would lead Kant to abandon his earlier view that there is a ground for the unity of space. But it does not. By Kant's lights, once the unity of space is regarded as necessary, it becomes that much more puzzling and that much worthier of an explanation.

This sentiment is especially evident in the following passage, which follows a discussion of various geometrical problems involving circles:

> The purpose of our discussion has been to draw attention to the existence, in the necessary properties of space, of unity alongside the highest degree of complexity, and of the connection between things where all seem to have their own separate necessity. To achieve this objective, we have focused our attention on the figure of the circle alone, which has infinitely many properties of which only a small number is known. From this we can infer how im-

45 He has also apparently changed his mind about the modal status of the three-dimensionality of space, which he regarded as contingent in *Living Forces*. See BDG, AA 02: 71.

> measurably great is the number of the harmonious relations which inhere in the properties of space in general. [...] If, in the case of such arrangements in nature, we are justified in searching for the foundation of the extensive harmony of the manifold, are we less justified in searching for a similar foundation for the regularity and unity which we perceive in the infinitely various determinations of space? Is this harmony any the less amazing for being necessary? (BDG, AA 02: 95.19–35)[46]

For Kant, what is amazing about circles is that, though they are very simple to construct, they have a seemingly inexhaustible store of necessary and "harmonious" properties, properties expressed in the many interlocking theorems that geometers and physicists are continually demonstrating of them. Though Kant focuses on circles, he regards them as indicative of the sort of unity and harmony that prevails throughout space (BDG, AA 02: 93).

Kant regards the unity and harmony of space as amazing precisely because it is necessary (BDG, AA 02: 95.34–35). Because no necessary unity or order among a multiplicity can exist without a special ground, according to Kant, we are just as justified in searching for the ultimate foundation of the unity of space as we are in searching for the foundation of the necessary order of (inorganic) matter, the laws of mechanics. For Kant, the answer in both cases is the same: there is a "supreme ground of the very essences of things themselves, for unity in the ground also produces unity in the realm of all consequences" [*obersten Grundes selbst der Wesen der Dinge [...] da die Einheit des Grundes auch Einheit in dem Umfange aller Folgen veranlaßt*] (BDG, AA 02: 96.03–05). The ground in question is apparently again the divine schema, which is now taken to be the source, not just of the existence of (inorganic) material substances and their relations with one another, but of the very possibility of such things and their relations. The unity of space is metaphysically necessary precisely because it is an expression of the necessary unity of all (inorganic) matter. Since the latter unity is immediately grounded in the unity of

46 Wir haben, um in den nothwendigen Eigenschaften des Raums Einheit bei der größten Mannigfaltigkeit und Zusammenhang in dem, was eine von dem andern ganz abgesonderte Nothwendigkeit zu haben scheint, zu bemerken, nur blos unsere Augen auf die Cirkelfigur gerichtet, welche deren noch unendliche hat, davon ein kleiner Theil bekannt ist. Hieraus läßt sich abnehmen, welche Unermeßlichkeit solcher harmonischen Beziehungen sonst in den Eigenschaften des Raums liege, deren viele die höhere Geometrie in den Verwandtschaften der verschiedenen Geschlechter der krummen Linien darlegt, und alle außer der Übung des Verstandes durch die denkliche Einsicht derselben das Gefühl auf eine ähnliche oder erhabnere Art wie die zufällige Schönheiten der Natur rühren. Wenn man bei dergleichen Anordnungen der Natur berechtigt ist nach einem Grunde einer so weit erstreckten Übereinstimmung des Mannigfaltigen zu fragen, soll man es denn weniger sein bei Wahrnehmung des Ebenmaßes und der Einheit in den unendlich vielfältigen Bestimmungen des Raums? Ist diese Harmonie darum weniger befremdlich, weil sie nothwendig ist?

the divine schema, Kant still holds that the (now metaphysically necessary) unity of space is grounded in a (now metaphysically necessary) property of the divine intellect: namely, its being in possession of one all-encompassing schema.

4.3 Inaugural Dissertation

In the *Inaugural Dissertation*, Kant continues to regard the unity of space as necessary.[47] As he writes, "by its essence space is nothing if not unique, embracing absolutely all things which are externally sensible" [*per essentiam non est nisi unicum, omnia omnino externe sensibilia complectens*] (MSI, AA 02: 405.08–09). However, by this point, it is possible to discern a definite shift in Kant's views about space, one which was at best implicit in *The Only Possible Argument*. Whereas in his earliest works he regarded space as an objective order of coexistence founded on physical substances and their reciprocal causal relations, in the *Inaugural Dissertation* he regards the single all-encompassing space mentioned above as "the intuitively given possibility of universal co-ordination" [*intuitive datam coordinationis universalis possibilitatem*] (MSI, AA 02: 407.04–05). In other words, this unitary space is a *sensible intuition*. This intuition is an all-encompassing whole in Kant's technical sense. Its unity makes possible, on the one hand, the sort of combination that results in unitary sensible substances (now conceived of as *composites* rather than simple substance), and on the other hand, the sort of combination by which sensible substances belong to a unitary world. This is why Kant describes space as "the absolutely first formal principle of the sensible world" [*principium formale mundi sensibilis absolute primum*] (MSI, AA 02: 405.06).

The above description of Kant's view in the *Inaugural Dissertation* might give the impression that Kant now regards the unity of space as a brute given. But this is not Kant's view. He explicitly denies that space and time are "primitive conditions which are already given in themselves" [*quasi condicionibus per se iam datis atque primitivis*]. Instead, they "bear witness to some common principle constituting a universal connection" [*testari quidem principium aliquod nexus universalis commune*] (MSI, AA 02: 391). As he writes:

> Those who take space and time for some real and absolutely necessary bond, as it were, linking all possible substances and states, do not think that anything further is required in order to understand how a certain originary relation, as the fundamental condition of possible influences and the principle of the essential form of the universe, should belong to a

47 Assuming, that is, that space exists, which presupposes that perceivers like us exist.

> plurality of existing things. [...] For this, it seems to them, would be determined in itself by the entirety of space, which includes all things. But, apart from the fact that this concept, as has already been demonstrated, rather concerns the sensitive laws of the subject than the conditions of the objects themselves, even if you were to grant this concept the greatest possible reality, it would still only signify the intuitively given possibility of universal co-ordination. Accordingly, the following question, which can only be solved by the understanding, remains untouched, namely: what is the principle upon which this relation of all substances rests, and which, when seen intuitively, is called space? (MSI, AA: 02: 406–407)[48]

Against philosophers who think that it is sufficient to appeal to the unity of space in order to explain the connection among substances in a world, Kant is making three points. First, the only substances in space are substances that we sense (that is, sensible substances). Because non-sensible substances (that is, *intelligible* substances) are not in space, it cannot be our unitary space that grounds the possibility of their coordination. Second, though our intuition of space makes *possible* the coordination of sensible substances, it cannot, at least on its own, impose definite relations on them. Space is not causally efficacious; it can no more produce actual relations among sensible substances than it can produce the relata themselves.[49] Finally, the unity of space is not the *ultimate* reason for the possibility of the thoroughgoing mutual interaction of substances. Instead, the unitary intuition that constitutes space is the sensible expression or manifestation of some deeper unifying principle.

It emerges in the course of the *Inaugural Dissertation* that this deeper unifying principle is the ground of the possibility of the coordination of all *intelligible substances*. As Kant writes, "the unity in the conjunction of substances in the universe is a corollary of the dependence of all substances on one being" [*Ergo UNITAS in coniunctione substantiarum universi est consectarium dependentiae omnium ab uno*] (MSI, AA 02: 408.16–17). The manifold of intelligible substances are able to be combined with each other, because there is a single divine repre-

48 Qui spatium et tempus pro reali aliquo et absolute necessario omnium possibilium substantiarum et statuum quasi vinculo habent, haud quidquam aliud requiri putant ad concipiendum, quipote exsistentibus pluribus quidam respectus originarius competat, ceu influxuum possibilium condicio primitiva et formae essentialis universi principium. Nam quia, quaecunque exsistunt, ex ipsorum sententia necessario sunt [...] alicubi, cur sibi certa ratione praesto sint, inquirere supervacaneum ipsis videtur, quoniam id ex spatii, omnia comprehendentis, universitate per se determinetur. Verum praeterquam, quod hic conceptus, uti iam demonstratum est, subiecti potius leges sensitivas quam ipsorum obiectorum condiciones attineat, si vel maxime illi realitatem largiaris, tamen non denotat, nisi intuitive datam coordinationis universalis possibilitatem, adeoque nihilo minus intacta manet quaestio, nonnisi intellectui solubilis: *quonam principio ipsa haec relatio omnium substantiarum nitatur, quae intuitive spectata vocatur spatium*.

49 I am indebted to Watkins (1995), 301 for this point.

sentation that contains representations of all these things. The unity of space – which is the immediate source of the possibility of the combination of sensible substance – is itself a result of this property of the divine understanding. Such a reading is supported by the following reflection, written around the time of the *Inaugural Dissertation*:

> The first ground of combination is also the formal ground of the possibility of community. Sensibly expressed it is space. However, space is presumably only sensible intuition, which the immediate consciousness (intellectual intuition) underlies, but cannot be found therein through analysis. (AN, AA 17: 456.13–17)[50]

In addition to Kant's talk here of "intellectual intuition," what's particularly striking about this passage is the use of the term "combination," and the explicit link between space and intellectual intuition.

4.4 Upshot

In all of the pre-Critical texts considered above, Kant holds that the unity of space is something that requires explanation. This view holds constant, despite Kant's change of mind about whether, in creation scenarios in which space exists, space must be a unity. This commitment seems to be rooted in Kant's rationalism, which leads him to apply the principle of sufficient reason to all unities, even necessary ones, and to look for an ultimate explanation in terms of the properties of a supreme being.

At the same time, during this period, Kant moves away from the view that space is the result of connections among substances. By the time of the *Inaugural Dissertation*, he thinks that (a) space is a representation that has the structure of a whole, (b) the unity of this representation makes possible the combination of the manifold in it, and (c') this unity ultimately rests on a property of the intuitive understanding.[51]

50 Der oberste Grund der Verbindung ist auch der formale Grund der Moglichkeit des *commercii*. Sinnlich ausgedrückt ist es der Raum. Aber der Raum ist vermuthlich nur die sinnliche Anschauung, der das unmittelbare Bewustseyn (intellectuale Anschauung) zu Grunde liegt, aber darin durch keine Zergliederung gefunden werden kan.

51 With these letters, I am referring back to the points I laid out in the last paragraph of section 3.

5 After the Inaugural Dissertation

In this section, I turn to Kant's account of space during the 'silent decade'. I argue that, notwithstanding the major shifts that his thinking underwent during this period, he continues to endorse (a) and (b), and a close relative of (c'), namely, (c): the unity of space *might well* ultimately be due to an intuitive understanding. The difference is that he now also holds (d): the unity of space rests immediately on a property of the discursive understanding.

As is well-known, Kant's thinking takes a revolutionary new direction after the publication of the *Inaugural Dissertation*. One important change is that Kant no longer takes for granted the legitimacy of our *a priori* concepts – concepts like 'substance,' 'causation,' and 'God'. Whereas at the time of the *Inaugural Dissertation*, Kant had (dogmatically) assumed that such concepts could figure into substantive metaphysical judgments that are knowable *a priori*, sometime after the *Inaugural Dissertation* Kant comes to think that *a priori* concepts are only theoretically justified insofar as they serve as subjective conditions of the possibility of experience. Because the concept of God is not such a concept, or so Kant holds, he is forced to deny the theoretical legitimacy of all non-trivial judgments involving the concept of God, such as the claim that the unity of space is grounded in God's unitary representation. In other words, he cannot claim theoretical knowledge of this judgment anymore. However, as we will see shortly, he continues to *believe* in a modified version of his old explanation.

Closely related to the above is a radical shift in what Kant takes to be the central question of theoretical philosophy. In the *Inaugural Dissertation*, the question is: "what are the conditions of the possibility of a manifold of substances belonging to a single world?" Kant's answer to this question makes essential appeal to properties of God. It is possible for a manifold of *intelligible substances* to stand in reciprocal causal relations, and thus constitute a single world, because all the members of this manifold are represented by one-and-the-same schema of the divine understanding. It is possible for a manifold of *sensible substances* to stand in reciprocal causal relations, and thus constitute a single world, because all the members of this manifold are contained in a unitary spatial representation, which is itself just a sensible expression of the schema of the divine intellect. After the *Inaugural Dissertation*, the question takes on an epistemological dimension: "what are the conditions of the possibility of experiencing a single world?" Though this question is analogous to the other – an analogy that is made stronger by the fact that Kant takes experience to require the *unification* of a given *manifold* – this question and its background assumptions are different enough so that the old answer is no longer sufficient. By Kant's lights, if these conditions are to be conditions of *our* experience, and if they are to be knowable

a priori, we must look for them *in us*, in the constitution of our sensibility and our understanding.

Nevertheless, these changes in Kant's thinking after 1770 do not lead him to abandon his earlier view that the unity of space admits of some deeper explanation. Indeed, in the following fascinating reflection, likely written between 1775 and 1777, we see hints of a *two-level* explanation:

> The understanding itself (a being that has understanding) is simple. It is substance. It is transcendentally free. It is affected with sensibility (space), [it is] in a community with others. All objects of it constitute one (composite), which is called world (unity of space). [...] Everything rests on an original understanding that is the self-sufficient ground of the world. The (necessary) unity of time and space is transformed into the necessary unity of an original being, the immeasurability of the former into the self-sufficiency of the latter. (HN, AA 17: 707.18–28)[52]

The *first* understanding that Kant mentions here is clearly a *discursive* understanding, one for whom, as we've seen, the manifold of intuition must be given. In particular, this discursive understanding is one for whom the given manifold of intuition is *spatial* ("it is affected with sensibility [space]"). As we saw Kant do in the *Inaugural Dissertation*, he characterizes the unity of space as the ground of the possibility of the sort of unitary combination that results in a unitary world of unitary objects. What's new is that there is a close link between the unity of space and the feature of a *discursive understanding* that explains why "all objects of it constitute one." It is apparently this feature that serves as the immediate ground for the unity of space.[53] The feature in question, I would suggest, is the *OSUA*-

52 Der Verstand selber (ein Wesen, das Verstand hat) ist einfach. Es ist substantz. Es ist transcendental frey. Es ist mit der sinnlichkeit afficirt (Raum), mit andern in Gemeinschaft. Alle Gegenstande desselben machen eines aus (Zusammengesetztes), welches Welt heißt (Einheit des Raums). Das All der Erscheinungen ist unermeslich, aber eingeschränkt und schränkt ein. Das Ganze ist zufällig oder abhangend. Alles Gründet sich auf einen ursprünglichen Verstand. welcher der allgnugsame Grund von der Welt ist. Die (g Nothwendige) Einheit der Zeit und Raumes verwandelt sich in die Nothwendige Einheit eines Urwesens, die Unermeslichkeit der ersteren in die Allgnugsamkeit des andern.

53 To be sure, not all of the views expressed in the above reflection are retained in Kant's fully mature philosophy (as expressed in the *Critique of Pure Reason*). For instance, in the Paralogisms, Kant denies the legitimacy of deriving certain *a priori* metaphysical claims about the soul from the unity of apperception – such as simplicity and substantiality. And in the Antinomies, Kant denies that we can know ourselves to be transcendentally free (though he takes himself to have shown that it is at least possible). For the Critical Kant, the unity of a discursive understanding is not to be equated with the unity of a simple, transcendentally free, thinking substance. By contrast, in the above passage, Kant says that a discursive understanding is a simple, transcen-

Property: the possession by a discursive understanding of (what Kant will call in the B-Deduction) a formal intuition.

Such a reading is supported by another reflection, which was likely written slightly before the one quoted above: "Space is unitary, because it is the form of representation (of all possible outer objects) in a single subject" (HN, AA 17: 641.16–17).[54] A few lines earlier, Kant writes: "It [i.e. space] is a singular representation because of the unity of the subject [...] in which all representations of outer objects can be placed (next) to one another" (HN, AA 17: 638.11–14).[55] Kant makes clear here that the unity of space is the unity of a representation, namely, an intuition, and that the unity of this intuition is a result of the "unity of the subject." This is a clear reference to what he will eventually call the "synthetic unity of apperception." As we have now seen, in one of its usages, this term refers to the OSUA-Property, and it is plausible to view Kant as using it in this sense here: every discursive understanding is in possession of a formal intuition that contains any given form of intuition. It is this essential property that explains why an understanding that is given a spatial manifold (space as a form of intuition) has a representation of space that is a "necessary unity", or as Kant says in the Aesthetic "essentially singular" (KrV, B 39). This sort of explanation of the unity of space is closely analogous to the explanation that Kant offers in the *Inaugural Dissertation*. The difference is that, whereas God's divine schema creates the manifold contained in it, this unitary intuition contains a manifold that must be *given*.

However, this is only the *first* stage of Kant's explanation, providing the *immediate* ground of the (metaphysical) unity of space. The second half of the first reflection quoted above makes clear that Kant continues to believe in the explanation that he provided in the *Inaugural Dissertation*, though Kant's Critical strictures require that this belief have a diminished epistemic status. The key sentence here is the following: "The (necessary) unity of time and space is transformed into the necessary unity of an original being." The original being here is clearly God. As in the *Inaugural Dissertation*, it is an essential property of this being – namely, its possession of a unitary (intellectual) intuition – that grounds the necessary

dentally free substance. Significantly, however, none of the latter three properties seem to figure into Kant's explanation of the necessary unity of space. What is important is that the human discursive understanding is a necessary unity. Nothing turns on what other special metaphysical properties are assigned to this unity.

54 Der Raum ist Einig, weil er die Form der Vorstellungen (g aller Moglichen außeren Gegenstande) in einem einigen Subiekt ist.

These remarks are also mentioned in Keller (1998), 253.

55 Er ist eine einzelne Vorstellung wegen der Einheit des Subiekts (g und der Fahigkeit), in welchem alle Vorstellungen außerer obiecte (g neben) ein ander gestellt werden können.

unity of space. What's different is that, in addition to the diminished epistemic status of this claim, Kant apparently now holds that this property of the divine understanding is the *mediate* (rather than immediate) ground of the necessary unity of space. This is the most natural way of rendering this explanation of the unity of space consistent with the explanation of the unity of space that Kant offers in the first half of the reflection. It is the OSUA-Property that serves as the immediate ground of the unity of space, and it might well be the case that God's (necessary) possession of a unitary intuition is the mediate ground of the unity of space, though we cannot have theoretical knowledge of this.

6 Conclusion

It should be clear how this account of Kant's early (that is, pre-1781) views about the unity of space provides additional support for key elements of the Part-Whole reading that I presented in § 3 and also how this account casts further doubt on the two rival interpretations that I presented in § 2. As we have seen, Kant consistently rejected the idea that the unity of space is a brute given, from the time of his earliest publication until well into the silent decade. This is a serious problem for the Brute Given Reading. Indeed, in the absence of textual evidence showing that Kant had philosophical reasons for changing his mind,[56] I think this problem is fatal for the Brute Given Reading.

56 At this point, it might be objected that a philosophical reason did intervene in the years between the reflections quoted above and the publication of the first edition of the *Critique of Pure Reason*: namely, Kant came to regard the claim that space is a unity as an analytic truth. Since analytic truths do not require any (extra-linguistic or -conceptual) grounds, the objection runs, Kant no longer had any reason for thinking that the unity of space has a deeper metaphysical ground of the sort I am suggesting (namely, a ground in properties of a discursive and intuitive understanding). However, this objection rests on a number of dubious assumptions. First, it is not completely obvious that Kant's position in the *Critique of Pure Reason* is that the claim that space is a unity is analytically true. Second, if this is in fact Kant's view in the *Critique*, it's far from clear that he only came to this view in the years immediately before the publication of the *Critique*. Finally, even if these first two assumptions are true, it does not follow from the fact that a proposition is analytically true that there is no need to seek for an (extra-linguistic or -conceptual) ground for why an object falls under the proposition's subject and predicate concepts (I am assuming, for convenience sake, that all analytic truths are of subject-predicate form). It might be true that any object to which the concept of space applies is such that the concept of unity necessarily applies to it. But this does not preclude there being some deeper ground for why a given object is such that the concept of space (and, in turn, the concept of unity) applies to it; this is so even if the concept of space (and with it, the concept of unity) applies essentially to what-

The details of Kant's development also militate against the Synthesis Reading. According to proponents of this reading, Kant maintains that the unity of space is the product of an act of synthesis. But at no point in Kant's development do we find Kant claiming that the unity of space is produced by synthesis. Instead, we find him claiming, both in the *Inaugural Dissertation* and during the silence decade, that the unity of space is something that makes possible combination; it is not something brought about by combination. Moreover, in Kant's two-stage explanation of the unity of space, the explanation invoking the OSUA-Property is clearly meant to be analogous to the explanation invoking a property of the intuitive understanding. The intuitive understanding, as we have seen, does not generate the unity of space through synthesis because it does not synthesize. The discursive understanding of course does, but its synthesis is not what brings about the unity of space. Instead, its synthesis is a form of combination (the "figurative synthesis") made possible by the unity of space. This cuts against the Synthesis Reading, but it supports the Part-Whole Reading. Since, as I showed in § 2 and § 3, the Part-Whole reading is also supported by Kant's remarks about space in the *Critique* and avoids the problems faced by the other readings, it is to be preferred to its rivals.

Though I can only touch on this point, the Part-Whole reading is also superior to its rivals in another respect: it puts us in a better position to appreciate what is really unique in Kant's Critical theory of space vis-à-vis that of the German Idealists. The Part-Whole reading implies that Kant agrees with the German Idealists about there being a necessary conformity between sensibility and understanding – it is not a merely fortuitous circumstance that the *a priori* forms of our understanding and our sensibility happen to fit together in a manner that allows for cognition. As we have seen, any discursive understanding will have (at least one) unitary formal intuition, in virtue of the OSUA-property, which is itself an essential property of the discursive understanding. Yet, Kant departs from the German Idealists in at least two key respects. First, Kant leaves room for sensibility to make a distinctive and irreducible *a priori* contribution to cognition and is able to

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ever it applies to. Consider, for example, the claim that all humans are mammals. This is arguably an analytic truth, and arguably the subject and predicate concepts here apply essentially to the objects in their extension, such that those objects fall in the extension of those concepts in every possible world in which those objects exist. Nevertheless, it still makes sense to ask: what is the ground of a given object's being a human (and thus, of its being a mammal)? A plausible answer to this question would appeal to the object's parentage. Likewise, we can seek a ground for why a given object is essentially a space, where this entails (we are assuming) that the object is also essentially a unity. I am indebted to Robert Pippin for forcing me to consider an objection along these lines.

give a principled reason for why this contribution could not come from the understanding. This contribution is what Kant calls a form of intuition at KrV, B 160–161. Space as a form of intuition is the cause of the existence and the numerical distinctness of the spatial parts that are contained within space as a formal intuition. This form of intuition is assigned to sensibility, in contrast to the understanding, because the latter operates in accordance with the Principle of the Identity of Indiscernibles and the former does not.

Second, for Kant, the relation between the unity of space and the OSUA is not a relation mediated by various acts of synthesis, as it seems to be for the German Idealists. Instead, the "essential" unity of space arises immediately from the OSUA-Property, as a specific instantiation (or "expression") of this essential property. That the OSUA-Property is instantiated in specific ways is simply due to the fact that a discursive understanding is one for which the manifold must be given, where the specific manner in which the manifold is given is determined by the forms of sensibility.[57]

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