

Jessica Williams

Kant, Metaphysical Space, and the Unity of the Subject

In a famous footnote to section 26 of the Transcendental Deduction, Kant draws a distinction between *forms of intuition*, which merely give the manifold, and *formal intuitions*, which give “unity of representation.”¹ Kant remarks that the unity of representation that belongs to formal intuitions presupposes a synthesis “which does not belong to the senses but through which all concepts of space and time first become possible.”² Non-conceptualist interpreters have been keen to identify the formal intuition of space with geometric space. They maintain that the phenomenal space of perceptual experience does not depend on the understanding for its unity. It is only when we objectively represent space (i.e., in geometry) that we must involve the understanding and its conceptual capacities. Conceptualist interpreters, on the other hand, have maintained that the unity of pure forms of intuition described in the Aesthetic “is not a separate unity, independent of the unity that consists in being informed by the categories.”³ While conceptualists have linked the unity of intuition with categorial unity, Béatrice Longuenesse and Michael Friedman have both claimed that although the understanding is responsible for the unity of intuition (specifically that of space), this unity is not conceptual.

In what follows, I argue that any interpretation of the unity of space requires that we navigate two following seemingly contradictory features of Kant’s account. First, as we will see when we look carefully at comments that Kant wrote in response to a series of essays by the mathematician Abraham Gotthelf Kästner, Kant is committed to the idea of an all-encompassing metaphysical space that is an *actual* infinite given and which is *presupposed by* geometry. If we understand the formal intuition of space discussed in the famous footnote to correspond to metaphysical space, then the unity of metaphysical space depends on the original synthetic unity of apperception, which is the highest prin-

1 Kant: KrV, B160–161 n. References to the *Critique of Pure Reason* are to the *Cambridge Edition of the Works of Immanuel Kant* and will use A and B to refer respectively to page numbers in the first and second editions. Kant, Immanuel: *Critique of Pure Reason*. Transl. and ed. by Paul Guyer and Allen W. Wood. Cambridge 1998.

2 Kant: KrV, B160 (n).

3 McDowell, John: *Having the World in View: Essays on Kant, Hegel, and Sellars*. Cambridge 2009, 74.

ciple of the understanding. At the same time, Kant is equally committed to the claim that we should attribute the unity of intuition to sensibility, and not to any concept of the understanding. Thus, we want to simultaneously explain the role of the understanding in generating the representation of metaphysical space as an all-encompassing, actually infinite whole while at the same time explaining why Kant nevertheless claims that its unity belongs to sensibility, and not to the concept of the understanding.

In the *Transcendental Aesthetic*, Kant argues that space is an a priori intuition that is represented as an infinite given manifold. The parts of space are only limitations of a single “all-encompassing” space, which contains an infinite set of possible spaces *within* it.⁴ Kant appeals to the singularity and infinity of space to argue that space must be an intuitive representation and not a concept, because “no concept can be thought as if it contained an infinite set of representations within itself,” but this is precisely how we think of space (and time).⁵

In the *Transcendental Deduction*, Kant complicates the story from the *Aesthetic*. In section 26, he writes that “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.”⁶ In the footnote to this passage, Kant explains:

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).⁷

Kant distinguishes the form of intuition, which merely gives the manifold, from the formal intuition, which involves a *comprehension* of the manifold and thus unity of representation. What is particularly striking in this passage is that after Kant claims that the formal intuition “presupposes a synthesis” through which “the understanding determines the sensibility” he goes on to claim—coun-

⁴ Kant: KrV, A25/B39.

⁵ Kant: KrV, A25/B40.

⁶ Kant: KrV, B160.

⁷ Kant: KrV, B160–161 n.

ter to expectations that the preceding parts of the footnote naturally elicit—that this unity “belongs to space and time.” In this footnote, we confront a question that is at the heart of Kant’s critical philosophy and which has been at the center of recent debates between non-conceptualist and conceptualist interpretations of Kant, *viz.*: what is the relationship between sensibility and understanding and how should we understand the distinctive contribution of sensibility to cognition?

Non-conceptualists, including Robert Hanna, Lucy Allais, and Colin McLear, construe space *qua* form of intuition as the phenomenal space that affords representations of distinct particulars in a three-dimensional and egocentrically oriented framework. Providing representations of spatio-temporal particulars that are given prior to any conceptualization, on this view, is the independent contribution that the faculty of sensibility makes to cognition. In line with an interpretation first suggested by Heidegger, nonconceptualists identify the formal intuition of space with geometric space.⁸ It is only the latter representation of space that depends on the understanding and, on at least some versions of the view, space as a form of intuition has its own independent, non-conceptual unity that is to be contrasted with the conceptual unity of space as a formal intuition.⁹

Kant’s remarks at the beginning of the footnote, in which he says that space represented as an object “as is really required in geometry,” would seem to support the non-conceptualist identification of the formal intuition of space with geometric space. If we turn to comments that Kant wrote in 1790 in response to a series of essays by the mathematician Abraham Kästner, however, the identification of the formal unity of space with geometrical space becomes harder to maintain. Kästner claimed that the infinity of space should be understood as following from the unlimited nature of geometrical construction. We do not have an

⁸ Heidegger, Martin: *Phenomenological Interpretations of Kant’s Critique of Pure Reason*. Transl. by Parvis Emad and Kenneth Maly. Bloomington 1997.

⁹ According to Hanna, phenomenal space only requires the subjective unity of consciousness. See Hanna, Robert: *Kant and Nonconceptual Content*. In: *European Journal of Philosophy*, 13 (2005), 248–290, 277. McLear draws a distinction between “aesthetic” unity and “discursive” unity and characterizes the difference in terms of the part-whole relationships involved. Space as a form of intuition has an aesthetic unity in which the whole *precedes* the parts, while the discursive unity of space is one that is built up from a synthesis of parts. See McLear, Colin: *Two Kinds of Unity in the Critique of Pure Reason*. In: *Journal of the History of Philosophy*, 53/1 (2015), 79–110. See also Allais, Lucy: *Kant, Non-conceptual Content and the Representation of Space*. In: *European Journal of Philosophy*, 47 (2009), 388–413.

image of an actual infinity, but space is infinite because there is a *potential* infinity of constructions.¹⁰ In the comments that he wrote in response to Kästner, Kant draws a distinction between geometrical and metaphysical space. Kant agrees that there is a potential infinity of geometrical constructions, but denies that this is how we should understand the infinity of space. According to Kant, geometrical constructions depend “on the original representation of a unitary (*einigen*) infinite subjectively given space.”¹¹ As Kant notes, for the geometer to claim that any line can be extended to infinity, she must already presuppose that space is greater than any line that can be described within it. Thus, *pace* Kästner, the infinity of space cannot itself depend on the potential infinity of geometrical constructions, because these constructions already presuppose a given (unitary) infinite space.

Kant’s distinction between metaphysical and geometrical space poses a problem for non-conceptualist identifications of the formal intuition of space with geometrical space precisely because Kant claims that geometrical space itself presupposes metaphysical space. One possible line of response would be to claim that metaphysical space is space as a form of intuition. This, in fact, is how Heidegger reads Kant’s distinction; geometrical space depends on the “original wholeness” of metaphysical space.¹² But the problem with this response is that Kant claims that metaphysical space is a *unitary* infinite space, and in the footnote, Kant locates unity of representation on the side of space as a formal intuition, while space as a form of intuition “merely gives the manifold.”¹³ The more general problem with non-conceptualist treatments of space is that they want to isolate the space of phenomenal experience from the unified-objective space discussed in the Deduction. But phenomenal space, for Kant, is just as dependent on metaphysical space as geometric space. As Kant explains in an earlier footnote, because space and time are individual representations that contain a manifold, “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.”¹⁴ The

10 A partial translation of Kant’s comments can be found in Allison, Henry: *The Kant Eberhard Controversy*. Baltimore/London 1973. For more detailed discussion of Kästner’s essays and Kant’s response, see Onof and Schulting (2014).

11 Allison: *The Kant Eberhard Controversy*, 175–176.

12 Heidegger: *Phenomenological Interpretations of Kant’s Critique of Pure Reason*, 93.

13 Kant: KrV, B160 n.

14 Kant: KrV, B136 n.

unity of space and time depends on the original synthetic unity of consciousness, which is the source of *all* unity.¹⁵

These concerns might lead one to adopt a conceptualist interpretation, according to which the unity of formal intuition is a product of a synthesis of the understanding. One reason for adopting this view is that, as we have just seen, Kant explicitly states that the unity of intuition “presupposes a synthesis that does not belong to the senses,” and at the end of the footnote, he draws the reader’s attention back to section 24 of the Deduction. In section 24, Kant discusses the transcendental synthesis of the imagination, a synthesis “in accordance with the categories” “which is an effect of the understanding on sensibility and its first application (and at the same time the ground of all others).”¹⁶ As McDowell puts it, the unity of the pure forms of intuition “is not a separate unity, independent of the unity that consists in being informed by the categories.”¹⁷

The identification of the unity of intuition with categorial unity, however, is not without its problems. First, as Pierre Keller points out, it is not clear how the unity of space and time, as “infinite wholes existing prior to their parts” can be given through a process of synthesis.¹⁸ Any process of synthesis will be *indefinite*, with infinity serving at most as a regulative ideal. But Kant insists in his response to Kästner that metaphysical space is given as an *actual* infinity that is presupposed by any geometrical constructions within it. Furthermore, Kant claims that the unity of intuition *precedes* all concepts including, it would seem, the categories. So while the unity of formal intuition presupposes a synthesis, it doesn’t look like it presupposes any synthesis in accordance with concepts. This has led one recent interpreter to make the seemingly paradoxical

15 Longuenesse accuses Heidegger of “prying apart” the pure intuition of space in the Aesthetic from space as a formal intuition, and I think the real worry here is that to the extent that space and time have their own unity, which is not dependent on the understanding, it is not at all clear why all objects must stand under the understanding and its rules of synthesis (the categories). Longuenesse, Béatrice: *Kant and the Capacity to Judge*. Transl. by Charles T. Wolfe. Princeton 1998, 255.

16 Kant: KrV, B 152.

17 McDowell, John: *Having the World in View: Essays on Kant, Hegel, and Sellars*. Cambridge 2009, 74.

18 Keller, Pierre: *Kant and the Demands of Self-Consciousness*. Cambridge 1998, 110. Keller, it should be noted, tries to resolve this puzzle by viewing the unification of space and time as an “ongoing process.” But as we saw above when discussing the non-conceptualist interpretation, Kant takes the infinity of metaphysical space to be an actual infinity that is given and not to product of an ongoing synthesis) so this solution will not work.

claim that the *synthetic* unity of space “is not the result of any act of synthesis.”¹⁹ Second, Kant insists at the end of the footnote that the unity of space (and time) belongs to sensibility and not to the understanding. Likewise, in his comments on Kästner, Kant connects the original representation of metaphysical space with sensibility: the representation of space that is given metaphysically “consists in the pure form of the sensible mode of representation of the subject as intuition a priori.”²⁰

What we need is an interpretation of the unity of space as a formal intuition that explains the role of the understanding while still explaining why Kant attributes this unity to sensibility, and not to any concept of the understanding. I think the right line of interpretation is one that connects the unity of intuition with the original synthetic unity of apperception but acknowledges that this unity does not depend on the application of any particular concepts, although it does depend on the general *ability* to apply concepts that goes along with being a discursive understanding. We must recognize that the conceptual capacities that belong to a unified subject fundamentally affect the forms of sensibility –although these forms do not themselves depend on the understanding, the unity of the subject makes possible certain kinds of intuitive representation that would not otherwise belong to sensibility.

We can imagine, as Kant does at the beginning of the Deduction, that if we subtracted out the role of the understanding in cognition, appearances would still be given to us spatially and temporally.²¹ But, in this case, they would *not* be given as parts of a single all-encompassing whole. The single all-encompassing wholeness of metaphysical space is quasi-*conceptual* in that it is part and parcel of being a conceptual creature that we generate this kind of representation of space, but it is only *quasi*-conceptual, because it is not a product of the application of any *particular* category or concept, although it goes along with being a unified subject that we apply the categories. At the same time, the representation of space as a formal intuition would not be possible for us if space were not a form of our sensibility. It is only a product of the unity of consciousness *in combination with* the form of our sensibility. This is why Kant attributes this unity to sensibility and not to the understanding.

It is worth locating this view in contrast to those of Longuenesse and Friedman, as they have both argued that the unity of space as a formal intuition depends on the understanding but is not conceptual. According to Longuenesse,

¹⁹ Messina, James: *Kant on the Unity of Space and the Synthetic Unity of Apperception*. In: *Kant Studien*, 105/1 (2014), 5–40, 23.

²⁰ Allison: *The Kant Eberhard Controversy*, 175–176.

²¹ Kant: KrV, A89/B122.

the figurative synthesis of imagination, prior to the application of any concepts (including the categories), generates the pure forms of intuition. The difference between forms of intuition and formal intuitions, on her account, is that forms of intuition are merely the potentiality of form, a potentiality that must be actualized by the understanding; formal intuitions are simply the actualized forms of intuition.²² The problem with this view is that – at the end of the day – it reduces sensibility to understanding. Although Longuenesse attempts to forestall this objection by claiming that the pure forms of intuition must already possess the potentiality of form, her account does not capture the right dynamic between sensibility and understanding. On my view, space is a form of our intuition apart from the understanding, and if there were no faculty of understanding, it would still “give” appearances; it is only that in combination with the understanding, a unity of representation that sensibility would not possess on its own is generated.

Friedman argues that space as the mere form of intuition provides “a manifold of possible spatial perspectives,” which are transformed by the unity of apperception into a single unitary space (space as a formal intuition). A subject at a given point is in principle able to translate her perspective to another point through the drawing of a straight line, and from there, change her orientation by rotating around the point in a given plane. In this way, a manifold of possible perspectives is unified by the “requirement that any such local perspective can be accessible to the same perceiving subject via (continuous) motion – via a (continuous) sequence of translations and rotations”²³ – a requirement that stems directly from the transcendental unity of apperception. There are two points on which I agree with Friedman: (1) the unity of space as a formal intuition depends on the transcendental unity of understanding; and (2) space as a form of intuition does not reduce to the understanding, rather, it provides a manifold of intuition with features that constrain the way in which the understanding applies the categories. Unlike Friedman, however, I deny that any idealized procedure of translations and rotations is responsible for the unity of metaphysical space. This procedure, like any procedure of spatial construction, would itself presuppose metaphysical space. In short, metaphysical space must be *given*, but it can only be given to a unified subject.

²² Longuenesse: *Kant and the Capacity to Judge*, 221.

²³ Friedman, Michael: *Space and Geometry in the B-Deduction*. In: *Kant's Philosophy of Mathematics, Vol. 1: The Critical Philosophy and its Background*. Ed. Carl Posy and Ofra Rechter. Cambridge, forthcoming. See also Friedman, Michael: *Kant on Geometry and Spatial Intuition*. In: *Synthese*, 186 (2012), 231–255, 247.

