

Kant on Intentionality, Magnitude, and the Unity of Perception

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This article addresses a number of closely related questions concerning Kant's model of intentionality, and his conceptions of unity and of magnitude [*Größe*]. These questions are important because they shed light on three issues which are central to the Critical system, and which connect directly to the recent analytic literature on perception: the issues are conceptualism, the status of the imagination, and perceptual atomism. In section 1, I provide a sketch of the exegetical and philosophical problems raised by Kant's views on these issues. I then develop, in section 2, a detailed analysis of Kant's theory of perception as elaborated in both the *Critique of Pure Reason* and the *Critique of Judgment*; I show how this analysis provides a preliminary framework for resolving the difficulties raised in section 1. In section 3, I extend my analysis of Kant's position by considering a specific test case: the Axioms of Intuition. I contend that one way to make sense of Kant's argument is by juxtaposing it with Russell's response to Bradley's regress; I focus in particular on the concept of 'unity'. Finally, I offer, in section 4, a philosophical assessment of the position attributed to Kant in sections 2 and 3. I argue that, whilst Kant's account has significant strengths, a number of key areas remain underdeveloped; I suggest that the phenomenological tradition may be read as attempting to fill precisely those gaps.

1. Conceptualism, Imagination and Atomism

I want to begin by introducing three issues which are central to KrV itself, and which connect directly to the recent analytic literature on perception and intentionality. This section will sketch those issues and provide a brief overview of my ultimate line of argument.

The first issue is the relationship between perception, intuition and the understanding. ‘Perceptions’, for Kant, are conscious representations.¹ My interest is in a subset of perceptions: those which are ‘refer’ [*sich beziehen*] to an ‘object’ [*Gegenstand*] either ‘immediately’, in the case of intuitions, or, in the case of concepts, ‘mediately, by means of a mark...common to several things’.² This subset of conscious representations, be they intuitions or concepts, thus possesses intentionality: Kant accordingly refers to them, in contrast to mere ‘sensations’, as ‘objective [*objective*] perceptions’.³ The question I wish to highlight is this: to what degree does Kant regard these various modes of intentionality as separable? For example, is the representation of spatio-temporal particulars possible in the complete absence of conceptual capacities? Let ‘non-conceptualism’ refer to those positions which answer this question positively and ‘conceptualism’ to those which respond negatively.⁴ Kant’s stance on conceptualism, in the sense just defined, has been the focus of intensive, recent debate.⁵ I agree with Ginsborg, however, that the debate will remain intractable insofar as both sides can adduce, in addition to the familiar catalogue of texts, what appears a compelling *structural* rationale for their position.⁶ On the one hand, non-conceptualism captures the *prima facie* attractive assumption that spatio-temporal perception is, in at least some substantive sense, a more primitive intentional state than conceptualisation: for example because such perceptions, as illustrated by the case of optical illusions, appear to lack the inferential relationships that seem built into Kant’s account of

conceptuality via the latter's link to judgment and to syllogistic inference.⁷ This 'primitiveness' may be dramatised by the example of animal experience: Kant states repeatedly that animals are conscious, that they can represent particulars in outer sense and yet that they lack understanding.⁸ On the other hand, however, the argumentative structure of the Transcendental Analytic seems designed *precisely* to close off the possibility that intuition might represent objects independent of 'the functions of thinking'.⁹ As Allison puts it, the 'spectre' which Kant seeks to exorcise is exactly that of a model of intentionality on which perception is defined prior to the understanding thereby raising the possibility that the contents of perception will fail to include any referent for the categories.¹⁰ This line of thought is bolstered by the structure of the Transcendental Deduction: it seems very plausible, as Longuenesse has recently emphasised, that the second half of the proof is intended to show that the categories are conditions not just on thought but on 'the manner in which things are given to us'.¹¹ As Kant himself puts it, 'all synthesis, through which even perception itself becomes possible, stands under the categories'.¹² It is this claim which frequently leads Kant to analyse the capacity to represent objects in terms of the capacity to represent rules; since he holds that animals lack the latter, it would seem that they must also lack the former.¹³ The ultimate result, given the weight of considerations on both sides, seems to be a standoff with respect to the issue of Kant and conceptualism.

The second, and intimately related, issue concerns the status of imagination and of synthesis within Kant's account of intentionality. Kant initially attributes the capacity for synthesis, 'the action of putting different representations together', to the imagination: 'synthesis is in general the mere effect of the imagination'.¹⁴ But, as has been widely noted, by B130 he seems to reverse course dramatically.

All combination [*Verbindung*], whether we are conscious of it or not, whether it is a combination of the manifold of intuition, empirical or non-empirical, or of various concepts, is an act of the understanding.¹⁵

This apparent reversal, and the attendant question of whether the intentional contribution of imagination is reducible to that of the understanding, is central to the readings of KrV offered by authors from Sellars to Strawson to Heidegger.¹⁶ My interest, in particular, is in what seems the most plausible analysis of Kant's position: the proposal, as Longuenesse put it, is that understanding operates as the 'rule-giver for the syntheses of imagination'.¹⁷ Let me unpack this. Given the results of the Analogies, all of nature is governed by rules: every event thus 'presupposes something on which it follows in accordance with a rule'.¹⁸ However, Kant contends, only rational beings are capable of *representing* rules, i.e. of representing normative requirements within the content of their intentional states.¹⁹ Such representations are made possible by the understanding: as Ginsborg incisively summarises, 'to say that synthesis involves understanding is simply to say that it involves a consciousness of normativity'.²⁰ Given this, the proposal is as follows. The reason Kant initially attributes synthesis to imagination is simply that the basic form which such synthesis takes is associative: animals thus possess imagination and so 'connect representations according to the laws of sensibility'.²¹ In rational agents alone, however, this associative synthesis is governed, or as Longuenesse puts it 'appropriated', by an awareness of normativity.²² To take the simplest case, to conceptualise an object, for example as a body, is to represent certain properties as necessarily attaching to it, for example impenetrability. My recall or 'reproduction' of these properties is thus governed by the normative demands of the understanding.²³ Since Kant believes this capacity for recall or 'reproduction' to be the work of imagination, it follows that the understanding is the 'rule-giver for the syntheses of imagination'. Whilst attractive,

this model of the relationship between understanding and imagination remains, however, underdeveloped. I will outline a number of ways in which Kant's work provides the material for such a development.

The final topic in play is perceptual atomism. Consider the Analogies. Kant's argument there is premised on the claim that 'the apprehension of the manifold of appearance is always successive'.²⁴ This premise is vital to Kant's case: it is this premise which undercuts what one might call the naïve view of time-determination, a view on which I can simply see that an event has taken place, and so legitimates an appeal to the categories in order to re-construct the distinction between successive perception and the perception of succession. The problem, however, is that this initial premise seems less than compelling: why can I not simply see, at a single glance, the simultaneously existing parts of a house just as I seem able to see, at a single glance, both a computer and a pen on my desk? Lewis White Beck provides a clear formulation of the problem:

Kant assumes that the manifold of representations is always successive. This is certainly wrong. When I open my eyes I do not scan the visual field as if my eyes or my attention worked like the electron ejector in a television tube, aiming first at one point and then at an adjacent point. But as a consequence of his sensational atomism, Kant assumes that my apprehension does work in this way.²⁵

The difficulty is not confined to the Analogies. To take another case, Kant states that I 'cannot represent any line, no matter how small, without drawing it in thought, i.e. successively generating all the parts from one point'.²⁶ But as Van Cleve has emphasised this seems simply false: I can surely picture a line instantly.²⁷ Van Cleve reinforces the point with another example:

Imagine a page full of circles. Which circles did you fill in first, those in the top half or the bottom half? If you are like me, you set the whole array down at once. Even if you filled in one half of the page first, I bet you put down the individual circles whole, rather than generating them point by point.²⁸

The risk is that, precisely as Husserl and Heidegger later alleged, Kant has simply distorted the phenomenological evidence in order to provide a platform for the proof of the categories: if this is the case, that proof itself is open to rejection. I will argue that Kant's account contains a powerful response to such concerns, a response that feeds directly into the two issues sketched above.

I have emphasised the exegetical and philosophical centrality of three topics within Kant's theory of intentionality: the status of conceptualism, of imagination and of atomism. This article obviously makes no pretence to provide a complete treatment of these areas. My aim, rather, is to shed some fresh light on them by focussing on the relationship between Kant's conceptions of perception, of magnitude, and of synthesis. Section 2 will introduce and develop the relevant aspects of his position, drawing in particular on KU. Using this framework, I contrast, in section 3, Kant's argument in the Axioms of Intuition with the response developed by Russell to Bradley's attack on relations. This allows me, in section 4, to pinpoint both the strengths and weaknesses of Kant's position with respect to the three topics I have sketched; I suggest that the phenomenological tradition, in particular Husserl and Heidegger, may plausibly be seen as responding to those weaknesses.

2. Kant on Perception, Apprehension and the 'Basic Measure'

In the A Deduction Kant introduces the 'synthesis of apprehension' by making the following claims:

Every intuition contains a manifold in itself, which however would not be represented as such if the mind did not distinguish the time in the succession of impressions on one another; for as contained in one moment no representation can ever be anything other than absolute unity.²⁹

I want to begin by unpacking the various points made here. 'Every intuition contains a manifold' because Kant holds that space and time, the forms of intuition, are *quanta continua*: i.e. 'no part of them is the smallest (no part is simple)'.³⁰ Any intuition can thus be subdivided into a manifold of parts. This naturally raises the following question: why do my perceptions represent one particular level of decomposition as opposed to another? The core of Kant's answer lies in his conception of a 'basic measure' [*Grundmaß*] which we 'take in directly in one intuition' [*in einer Anschauung unmittelbar fassen*].³¹ To explain this central aspect of Kant's theory of intentionality, I need to address three inter-related points, each of which makes only limited sense when viewed in isolation; I would therefore ask for the reader's patience until all three are in place. The first is the relationship between space and time. The term 'basic measure' refers for Kant to the explanatorily primitive capacity for the representation of a determinate spatial extent: by 'explanatorily primitive' here I mean not that this capacity depends upon no other capacities but that it depends upon no prior ability to represent particular spaces.³² More specifically, the basic measure may be understood as a unit of spatial representation: it consists in the representation of a specific spatial extent, for

example, the height of a man.³³ Now, time, for Kant, is the ‘form of inner sense’, i.e. it is the form in which the subject intuits its own act of spatial representation:

[W]e cannot even represent time itself without, in drawing a straight line (which has to serve as the external figurative representation of time), attending merely to the action of the synthesis of the manifold... Motion, as the action of the subject (not as a determination of an object), consequently the synthesis of the manifold in space... first produces the concept of succession.³⁴

Given that the basic measure is the primitive mechanism by which the spatial determination of the manifold occurs, it follows that it is the iteration of the basic measure which generates the representation of succession; each particular instance of the basic measure correlates to ‘one moment in time’.³⁵ It is for this reason, in part, that Kant describes the basic measure as a ‘*quantum*’ or that which ‘I can cognize immediately’, i.e., as A99 puts it, ‘in one moment’.³⁶ This brings me to the second point, the connection to consciousness. Kant typically distinguishes between representations and representations of which the agent is conscious: the latter, as noted in section 1, constitute perceptions.³⁷ The illustrations he gives of unconscious representations are mereological. To represent a man, for example, is to represent ‘his eyes, nose, mouth, etc’ since ‘the representation of the whole (of the head or of the human being) is composed of these partial ideas’; nevertheless ‘I am not conscious’ of these various parts.³⁸ What determines then that of which we are conscious? Kant’s answer is the synthesis of apprehension. Specifically, we are conscious of those parts which have been distinguished within the manifold by temporal succession: to say that ‘as contained in one moment no representation can ever be anything other than absolute unity’ is just to say that we are not conscious of the component parts of any instantaneous representation. This, of

course, raises a further question: what determines the scope of instantaneous consciousness? Obviously that scope can vary: just as I can see the man's face in an instant without being conscious of its parts, I can see his eye in an instant without being conscious of its parts, and so on in line with the *quanta continua* assumption. The answer is the size of the 'basic measure': as noted in the discussion of the first issue, one 'basic measure' always correlates with one moment and thus, I can now add, with the threshold of consciousness. This leads to the third issue: what determines the basic measure itself? The initial answer Kant gives is the imagination.³⁹ As noted in section 1, Kant holds that non-rational but conscious subjects are, like any other part of nature, governed entirely by laws. In the case of animals, for example, the imagination would thus determine a basic measure entirely as a result of causal factors. These will include the animal's biology — an animal that preys on insects and one that preys on large mammals will typically employ a different basic measure. These factors will also include context: in looking at the pyramids, to use Kant's own example, one tends to employ the ready-made measure provided by 'the stones on top of one another'; similarly, the measure used when standing on top of a hill will obviously differ from that employed when in a small, enclosed room.⁴⁰ In the case of rational agents, however, the understanding is able to determine the nature of the measure employed.

If, for example, a savage [*Wilder*] sees a house from a distance, whose use he does not know, he admittedly has before him in his representation the very same object as someone else who knows it determinately as a dwelling established for humans. But as to form, this cognition of one and the same object is different in the two cases. With one it is mere intuition, with the other it is intuition and concept at the same time.⁴¹

The savage lacks what Kant calls a ‘rule of apprehension’, i.e. an awareness of certain norms, i.e. concepts as defined in section 1, which inform the perceptual process by determining what is to be ‘apprehended’ or, equivalently, what basic measure is used.⁴² To put the point crudely, there is no reason for the savage to employ the basic measure <house> as opposed to, say, a basic measure <landscape> within which the house would be no more significant than any other component part of the terrain such as the rocks to its left or the empty field to its right. No doubt Kant’s educated audience would, likewise, miss many features of the same scene that would be immediately salient to the ‘savage’. Suppose, further, that the ‘savage’ only employs the basic measure <landscape> and no other. In that case, he will intuit the house but he will not be conscious of it, or ‘perceive’ it in Kant’s sense of that term, any more than I ‘perceive’ each timber on the dwelling’s porch. In practice, of course, the savage is likely to perceive the house even whilst lacking the relevant concept: this is because the imagination will recognise it as an unusual or even simply physically striking feature of the scene and thus, at some point, suggest an appropriate ‘basic measure’. Insofar as the savage is rational, he will, unlike an animal, possess the further ability to ‘reflect on’ the features of this new ‘basic measure’ and thus, ultimately, to arrive himself at the concept of a house.⁴³

The sketch of Kant’s theory of perception given here obviously requires further development. Nevertheless, one can see how it relates directly to the issues introduced in section 1. First, the account of the basic measure provides a concrete example of the interaction between imagination and understanding, and of the way in which capacities which function purely causally in animals, in this case the selection of a primitive unit of spatial perception, may be ‘appropriated’ by the normative awareness characteristic of the understanding. Indeed, I agree with Longuenesse and Allison that the ‘rule of apprehension’ is functionally equivalent to KrV’s schema: both are rules ‘for the determination of our intuition in accordance with some universal concept.’⁴⁴ Secondly, this sketch sheds some

light on the issue of atomism. Recall Van Cleve's claim: if asked to imagine a page of circles, 'I bet you put down the individual circles whole, rather than generating them point by point'.⁴⁵ As I noted, this seems phenomenologically indisputable. But it is also perfectly in line with Kant's theory. His theory of inner sense entails that any *iteration* of the basic measure must occur successively; but there is no reason why the basic measure itself cannot be a whole circle. Similarly, in the case of the Second Analogy, Kant need not deny that, suitably positioned, we can intuit a whole section of the river or both the roof and base of a house 'at a single glance' [*in einem Blick*].⁴⁶ His point is that, insofar as I do intuit both the upstream and downstream positions simultaneously, I cannot be conscious of them: the 'basic unit' in such a case would be something like <whole-river>. Thus the premise needed for the Second Analogy is not that simultaneous representation is impossible but simply that 'the representations of the *parts* succeed one another'.⁴⁷

With this preliminary sketch of Kant's position and of its relevance for the issues discussed in section 1 in place, I want to focus on the question of conceptualism and the potential separability of perception and understanding. I argue that Kant's position can best be grasped by contrasting the theory outlined here with what F.H. Bradley called 'my difficulty as to 'unities''.⁴⁸

3. Bradley, Russell and the B Deduction

In its simplest form, Bradley's 'difficulty as to 'unities'' is this:

Is there anything, I ask, in a unity beside its 'constituents' ... and, if there is anything more, in what does this 'more' consist?⁴⁹

Bradley's problem, and in particular its implications for the status of relations, was a key factor in the development of the early Analytic tradition: the young Russell held that its solution would be 'the most valuable contribution which a modern philosopher could possibly make to philosophy'.⁵⁰ Within the early Analytic context, Bradley's challenge was typically treated in connection with the proposition. Thus Russell's 1903 formulation, for instance.

Consider, for example, the proposition 'A differs from B'. The constituents of this proposition, if we analyse it, appear to be only 'A, difference, B'. Yet these constituents, thus placed side by side, do not reconstitute the proposition. It may be said that we ought, in the analysis, to mention the relations which difference has to A and B...These relations consist in the fact that A is referent and B relatum with respect to difference. [But] 'A, referent, difference, relatum, B' is still merely a list of terms, not a proposition.⁵¹

Russell's point is that no set of propositional constituents or 'terms' seems itself sufficient to generate the requisite unity. In particular, the addition of relations to such a list serves, *prima facie*, simply to yield a longer list: 'loves' when added to the names 'Desdemona' and 'Cassio', would itself be only another 'brick in the structure, not the cement'.⁵² The result, Bradley predicted, is that 'we are hurried off into the eddy of a hopeless process, since we are forced to go on finding new relations without end'.⁵³

One can see how the central texts of the early Analytic period line up against this backdrop. Russell's *Theory of Knowledge* manuscript, for example, attempts to avoid the regress by denying that that which supplies the relevant unity, namely 'logical form', is itself part of the 'list' of terms.

[The logical form] cannot be a new constituent, for if it were...we find ourselves embarked on an endless regress. It is obvious, in fact, that when *all* the constituents of a complex have been enumerated, there remains something which may be called the 'form' of the complex, which is the way in which the constituents are combined in the complex.⁵⁴

Bradley's own proposed solution may be treated as a type of semantic holism. Of course, in the case of Bradley, of his respondents Moore and Russell, and indeed of Kant himself the semantic is inseparable from the ontological; but I focus for simplicity's sake on the former dimension alone. Confining myself, further, to the level of propositions as opposed to the entire 'Absolute', Bradley's proposal is that explanatory priority be granted to the proposition as a whole from which the individual components are merely 'false abstractions'.⁵⁵ I agree with Linsky that Frege's appeal to a special class of 'unsaturated' propositional constituents is plausibly seen as an acceptance of the same explanatory primacy of the 'complete thought'.⁵⁶ But how exactly does all this connect to Kant? There are obvious links between Kant's position on the unity of judgment and both the Fregean and the various Russellian stories: with respect to the former, for example, Sluga in particular has argued that Kant's doctrine that concepts are possible predicates should be aligned with the context principle.⁵⁷ My interest, however, is not, at least primarily, in Kant's account of the unity of judgment but in his account of the unity of perception. Specifically, my concern is with the claim, made in the Axioms of Intuition, that the 'unity' of perception depends on 'the concept of a magnitude', the schema of which is 'number'.⁵⁸ I want now to consider the argument of the Axioms: my emphasis will be on its implications for the issues treated above.

I argued in section 2 that Kant's theory of perception should be understood in terms of the concept of a 'basic measure'. The 'basic measure' delineates the spatial extent of individual, empirical perceptions. Suppose now that I have an 'entire series of perceptions'.⁵⁹ A figure may help to illustrate the case.

Figure 1

Perceptual Content:	—	—	—	—	—
Time:	T1	T2	T3	T4	T5

The various perceptual contents here are the various iterations of the 'basic measure'; in line with section 2, this iteration necessarily occurs at successive moments in time. I have, however, simplified matters in two ways. First, I represent only what Kant calls the 'formal' aspects of the basic measure: its extension in space and time. Clearly my perception normally contains more content than this: the basic measure will not be a line segment but a man or a house.⁶⁰ Second, the basic measures in Figure 1 are shown as all being the same size. As stated in section 2, this need not be the case: if I look down at my map and then up at the mountain, the extent of the basic measure has changed radically in those two moments. Granting these simplifications, Kant wishes to raise an important question. As they stand, these perceptions are 'dispersed and separate in the mind'.⁶¹ The question then is how they are to be unified or combined?

Why is this question important — why does it matter if these perceptions remain as illustrated in Figure 1? In answering, it is important to stress that Kant does *not* hold that such unification is a necessary condition on the occurrence or identity of the individual

perceptions; in the language of the early Analytic period, Kant does not hold that the relations between the various perceptions are internal or constitutive. Thus the combination in question is an instance of ‘composition’ [*Zusammenhang*] precisely because it concerns the ‘synthesis of a manifold of what does not necessarily belong to each other’.⁶² The potential for confusion stems from the complexity of Kant’s mereology. Kant frequently distinguishes between aggregates, in which the parts have explanatory priority over the whole, and systems, in which the whole has explanatory priority over the parts.⁶³ In the *Transcendental Aesthetic* Kant argues that the relationship between the forms of intuition, on the one hand, and individual spaces and times, on the other, is of the latter type: this conclusion is designed to refute models, such as Locke’s or, ironically, Leibniz’s, on which the representations of space and time are pieced together by an experience of multiple individual places or durations.⁶⁴ In the case of *determinate* space and times, however, the mereology is reversed: the parts which make up any particular spatio-temporal extent have explanatory priority over it. Thus Kant holds that insofar as we are conscious of appearances they are necessarily ‘extensive magnitudes’.⁶⁵

I call an extensive magnitude that in which the representation of the parts makes possible the representation of the whole (and therefore necessarily precedes the latter).⁶⁶

So, the unity of the perceptual series is not a necessary condition on the occurrence of its individual members. Nevertheless, one can see that some form of combination is necessary if intentionality is not to be radically impoverished: without such combination, each perception figures only at its own moment of occurrence, with the result that earlier perceptions are unable to inform later ones. The minimal required form of combination is thus what Kant

claim is problematic. On the one hand, as an aggregate, there is no mode of determinate combination such that it is a necessary condition on the existence of the individual perceptions that they enter into it: the situation shown in Figure 1 thus cannot be dependent on the understanding since Kant defines the latter precisely as a capacity for certain forms of combination.⁷⁰ On the other hand, the picture given in Figure 2 is intended, at least in part, to capture the way in which animals are able to associate, say, the sound of a bell with a feeling of hunger; but since animals lack understanding for Kant, Figure 2 cannot be dependent on the understanding either.

I want now to present Kant's solution to this dilemma. The key is to recognise that, in virtue of the aggregative mereology of determinate spatial representations, the problem Kant faces in explaining the unity of perception is analogous to that facing Russell given the atomism of the *Principles*: in both cases the aim is to explain a unification which is not a necessary condition on the identity of the relevant perceptions or terms.⁷¹ Now, as with more familiar proofs such as the Second Analogy, the Axioms are intended to establish a transcendental condition on a particular intentional achievement. In the case of the Axioms, the relevant intentional achievement, I suggest, is this: the mereological integration of multiple perceptions. Let me explain. Suppose I walk closer to a particular patch of ground, seeing first the grass, then a snake, before coming close enough to perceive its fangs. On Kant's model of perception, what is changing here is the 'basic measure': I am initially conscious of a whole, the patch of ground, and then progressively conscious, in line with the results of section 2, of its constituent parts. But what I lack, in the absence of conceptuality, is any way to represent the parts *as* parts of the whole. Even if I reproduce the parts, as in Figure 2, all I have, to use Russell's term, is a 'list' of perceptions, one after another. Note also, exactly as in Russell's case, that *no* additional perception can resolve the problem — any more than adding another relation to the set of propositional constituents will resolve

Bradley's regress. The bluntest way to put the point is this. Suppose the line segments in Figure 2 are the parts of one vast line. Figure 2, however, does not represent them as such; it represents a mere 'heap' [*Haufen*] of line segments just as Russell's 'lists' were bricks without cement.⁷² Furthermore, it is clear that adding additional components will not suffice to represent the vast line but simply yields an expanded list. The problem, in short, is how one gets from Figure 2 to Figure 3.

Figure 3

Perceptual Content: [—————]

Time: T6

This brings me to Kant's solution: the only way to represent 'the synthetic unity of this manifold' is via an appeal to a distinct semantic capability: namely, a second-order capacity to form 'representations of our representations' based on their shared properties.⁷³ Kant holds that this second order capacity has certain innate forms. The relevant one here is the schema of magnitude:

[T]he pure schema of magnitude (*quantitatis*), as a concept of the understanding, is number, a representation which compounds [*zusammenbefaßt*] the successive addition of homogeneous units. Number is therefore simply the unity of the synthesis of the manifold of a homogeneous intuition in general, a unity due to my generating time itself in the apprehension of the intuition.⁷⁴

Kant expands on the point in the 1793 Prize essay:

For we can represent a determinate space to ourselves in no other way than by drawing it, i.e., by adding one space to the other, and so also with time.

Now the representation of a composite, as such, is not a mere intuition, but requires the concept of a composition [*Zusammensetzung*], so far as it is applied to intuition in space and time. So this concept (along with that of its opposite, the simple), is one that is not abstracted from intuitions, as a partial representation contained in them, but is a basic concept, and a priori at that.⁷⁵

To possess the pure schema ‘number’ is simply to possess an awareness of the line segments illustrated in Figure 2 as homogenous units, an awareness which is in turn both necessary and sufficient, at least for Kant, to allow the representation of their combination or composition through summing them.⁷⁶ Their composition thus occurs by means of the representation of number, which itself ‘consists solely in the consciousness of the unity...of the successive synthesis of units [*Einheiten*]’.⁷⁷ As Longuenesse neatly puts it:

When we measure a line by adding units of measurement, what we do in effect is recognize in the line a plurality of elements thought under the same concept: line segment equal to segment *s*.⁷⁸

‘Segment *s*’ here corresponds to the ‘basic measure’. Kant’s claim is, in short, that the capacity to integrate determinate spatio-temporal parts and wholes, the capacity to represent those parts as units, and the capacity to employ the concept of number are inter-defined and inter-dependent. This conceptual awareness need not, as Kant himself makes clear, yield an explicit or ‘reflected’ act of judgment: it rather consists, at least primarily, in the possession

of a 'rule for apprehension'.⁷⁹ Of course, the categories are not intended to solve all mereological problems: to understand how the fangs and tongue are both part of one entity I require not just a pure concept but an empirical one, <snake>. But it is the schema of magnitude which makes possible the composition of the spatio-temporal manifold and thus the representation of the segments of Figure 2 as 'one intuition'.⁸⁰ Kant summarises the point in a 1792 letter to Beck.

Composition [Zusammensetzung] itself cannot be given by means of mere intuition and its apprehension, but only through the self-active combination of the manifold in intuition...this combination and its function must be subject to rules a priori in the mind, which constitute the pure thought of an object in general (the pure concept of the understanding), by which the apprehension of the manifold must be governed, insofar as it amounts to one intuition; furthermore, these a priori rules constitute the condition of all possible empirical cognition of the composite (or that which belongs to it).⁸¹

4. An Assessment of Kant's Position

I want now to assess, philosophically and textually, the account which I have attributed to Kant in sections 1-3; for convenience's sake I label this account 'X'. Recall, first, what I called the question of conceptualism: can perception represent empirical particulars in the absence of conceptual capacities? It seems that X strikes a plausible balance here. On the one hand, it allows an affirmative answer: an owl's consciousness, for example, will be biologically determined such that the 'basic measure' which it uses will automatically pick out entities of a certain size. Animals can thus possess conscious and immediate spatio-

temporal representations of particulars whilst lacking the various intentional achievements which Kant holds depend on a consciousness of normativity: animal intentionality would not contain, for example, any distinction between successive perception and the perception of succession.⁸² Kant himself makes exactly this point:

To make a concept, by means of an intuition, into a cognition of an object, is indeed the work of judgment; but the reference [*Beziehung*] of an intuition to an object generally is not.⁸³

Admittedly, matters here are complicated by Kant's tendency to shift between weaker and stronger definitions of 'object' and related terms such as 'cognition'.⁸⁴ Nevertheless, the final clause of Kant's remark is clear enough and it fits precisely with my analysis: the reference of intuitions does not depend on conceptuality or judgment just as, within the Russellian example used above, the reference of 'Desdemona' and 'Cassio' is not dependent upon their satisfactory unification within a proposition.⁸⁵ On the other hand, however, X constitutes one portion of an extended transcendental argument for the legitimate application of the categories to intuition. This argument is directed primarily against Humean scepticism about the semantics of concepts not drawn from experience and the justification of propositions which are neither empirical nor definitional.⁸⁶ It is therefore vital that X shows that the relevant category, in this case magnitude, is a necessary condition for some comparatively basic perceptual achievement, an achievement which either Kant's opponents accept or to which he can plausibly argue from premises that they do accept. More specifically, Kant's argument is designed to establish the necessity of the categories with respect to:

[W]hatever objects may come before our senses, not as far as the form of their intuition, but rather as far as the laws of their combination [*Verbindung*] are concerned.⁸⁷

‘*Verbindung*’ is Kant’s umbrella term for both the mode of composition [*Zusammensetzung*] characteristic of the mathematical categories and the connection [*Verknüpfung*] characteristic of the dynamical categories.⁸⁸ In both cases, therefore, his claim is that ‘the unity of the synthesis of the manifold’ is dependent on the understanding: it is because of this basic similarity that Kant groups together the Axioms and the Analogies at B162-4.⁸⁹ With respect to X, specifically, Kant’s transcendental argument is this. The synthesis of apprehension is the process by which the ‘basic measure’ is iterated or, equivalently, the process through which representations become conscious or, equivalently, the process through which I make an intuition into a perception.⁹⁰ Kant’s claim is that ‘the synthetic unity’ of this process depends upon the ‘category of quantity’. And the reason for this is that illustrated in section 3: only the shift in semantic register, from intuition to concepts, allows the integration of the various ‘basic measures’. This is, from Kant’s dialectical perspective, a suitable transcendental argument precisely because the premise from which it begins, the ability needed to represent parts as parts of a whole, is one which his opponents regard as comparatively unproblematic. Whilst the issue of Hume’s mereology is a complex one, consider these remarks from the perspective of the argument outlined above.

That table, which just now appears to me, is only a perception, and all its qualities are qualities of a perception. Now the most obvious of all its qualities is extension. The perception consists of parts. These parts are so situated, as to afford us the notion of distance and contiguity; of length, breadth, and thickness.⁹¹

There is another very decisive argument, which establishes the present doctrine concerning our ideas of space and time, and is founded only on that simple principle, that our ideas of them are compounded of parts, which are indivisible.⁹²

The reference to ‘compounding’ here is precisely the operation which Kant identifies as ‘composition’ [*Zusammensetzung*]; the argument above, if valid, would show, *contra* Hume, that this capacity is dependent upon certain a priori conceptual abilities. As Falkenstein neatly put it in a recent paper, the problem for Hume, in its most basic form, is that he cannot explain how one might move from multiple simple impressions to the representation of their unity.

Suppose that four impressions, A, B, C, D, are arranged in the configuration of a square. According to Hume, each of these impressions is distinct and distinguishable and separable from all the others and constitutes, in effect, a distinct “substance” in its own right, unrelated to any of the others (*Treatise* 1.4.5.5). Accordingly, no one of these impressions could be considered to be the impression of a square, or indeed of anything extended...But what, on Hume’s account, makes a collection of four simple impressions disposed in the configuration of a square a compound impression of a square?...It cannot be just the bare fact of the contiguity of the impressions in space, for there can be a contiguity of impressions even where there is no compound impression of contiguity...If we say that a compound impression does not just consist of the four simple impressions disposed in the configuration of a square, but of an awareness of each of the four impressions and of

their spatial relations to one another, then we need to explain what it means to be aware of a *relation* between a group of impressions.⁹³

Kant's claim is that nothing other than a second order capacity to represent our own representations, i.e. self-consciousness in the Critical sense of that phrase, can provide the answer. I have focussed on perception but here, with the reference to self-consciousness, it is worth highlighting the full implications of the type of argument I have sketched. One familiar objection to the Humean model of consciousness is that it covertly assumes some thicker self responsible for the various operations, association for example, performed on the bundled perceptions. The natural Humean response is to argue that all such operations can be 'reduced', as Beauchamp put it, to facts about the perceptions themselves: for example, about the causal chains connecting them.⁹⁴ Consider, for example, Pike's influential suggestion that self-consciousness can be captured within a Humean context simply by allowing impression A to be of itself (i.e. of A) standing in relation to representations B, C, and D just as a picture P might be of P itself and hanging next to three other pictures.⁹⁵ As Allison has recently emphasised, the difficulty with this move is that there remains no explanation as to how this would allow A to represent the *unity* of itself with the other impressions: it is no better, to return to Russell's example, than if I carefully inscribed the word 'Cassio' in such a way that one could, with a magnifying glass, detect minute versions of the words 'Cassio', 'loves', 'Desdemona' in the individual pen strokes.⁹⁶ The problem is that whilst Pike's model allows a superficial ascent to the second order in the sense that A is an impression of various other impressions, the basic type of content remains, from a Kantian perspective, at the level of consciousness not self-consciousness. Switching again to a linguistic context, precisely the same problem occurs in accounts such as Russell's *Principles* which attempts to explain unity by arguing that certain members of the 'list' are somehow *both* pieces of first order content

and yet explain the unification of such content.⁹⁷ To adapt an example from Linsky, Russell's claim would be that the individual impressions, A,B,C,D of the four sides of the square add up to a representation of the square as a whole precisely because at least one of the impressions, A perhaps, plays a special 'double role' as a constituent to be unified, on the one hand, and as a unifier of constituents on the other.⁹⁸ The problem, as Linsky observes, is that Russell is unable to explain how one type of content can perform both tasks. Kant's response would be that it cannot: thus the need for a fundamental distinction between intuition and apperception.

Kant, of course, deploys multiple arguments against multiple forms of empiricism. The benefit of emphasising mereology, as I have done in presenting X, is that Kant is able to begin, exactly as he tries to do in the Second Analogy, from a premise which Hume thought unproblematic: the capacity to 'compound' parts or the capacity to represent events. In contrast, those arguments which begin from, say, the capacity to conceptualise or to judge and move from there to the categories risk simply begging the question since Hume does not believe that we need to posit judgments in Kant's distinctive sense of the term.⁹⁹ Here I agree with Ginsborg that readings on which the categories are necessary only for modes of experience more sophisticated than those recognised by the empiricists risk trivialising Kant's project by leaving the empiricist account of *perception* untouched.¹⁰⁰ What my approach offers is a careful balance. On the one hand, it shows the understanding to be necessary for perceptual representation as Hume himself understood it. Chang, in a recent article, has defended an account of certain a priori metaphysical principles based their analytic connection to various epistemic activities: for example, 'if we want to engage in the activity of counting, then we have to presume that the things we are trying to count are discrete'.¹⁰¹ Kant's claim, in contrast, is that *because* we represent things as discrete (section 2) it follows that we must engage in the activity of counting if we wish to unify them (section

3). X thus provides what is, *prima facie* at least, a viable transcendental argument. On the other hand, however, X also offers a satisfactory solution to the textual problem of animal cognition: it entails that individual intuitions can occur, as in Figures 1 and 2, in beings, such as animals, which lack all conceptual capacities. More broadly, X resolves the problem of perceptual atomism: as noted in section 2, Kant is simply not committed to the claim that, in representing a circle, I necessarily represent one part after another. X also sheds some light on the relationship between the imagination and understanding. It highlights, for example, why Kant is insistent on keeping the two faculties separate — the transition from Figure 1 to Figure 2 which is explained by imagination can occur in agents lacking conceptual capacities. Finally, it illustrates how the understanding may be said to ‘appropriate’ or govern the imagination: as seen in the case of the ‘savage’, the choice of basic measure, i.e. the choice of the unit of apprehension may or may not be determined by an agent’s conceptual capacities, which thus may or may not function as a ‘rule for apprehension’.¹⁰²

There are, of course, texts in which Kant appears to defend a less plausible set of claims than those which I have attributed to him. Consider this.

I cannot represent to myself any line, no matter how small it may be, without drawing it in thought, i.e. gradually generating all its parts from one point [*von einem Punkte alle Theile nach und nach zu erzeugen*] and thereby first sketching this intuition. It is exactly the same with even the smallest time. I think therein only the successive progress from one moment to another [*den successiven Fortgang von einem Augenblick zum andern*], where through all parts of time and their addition a determinate magnitude of time is finally generated.¹⁰³

Call this passage ‘Y’. I have argued that the categories are necessary for the unification of the various moments of consciousness or ‘basic measures’. In Y, however, Kant claims that to represent any spatial extent, ‘no matter how small it may be’, I must first represent its parts. This is problematic since, in virtue of the *quanta continua* assumption, such subdivision may be extended indefinitely, so implying an endless regress. I want to explain why I believe Y is confused. Kant has a tendency to treat *any* determinate spatial perception on the model of the ‘vast line’ example in section 3: that is, as the perception of an object whose size exceeds the ‘basic measure’ being used and thus where conceptual unification is necessary simply for perception of that object. In the *Prolegomena* for example, he maintains that that ‘which determines space to assume the form of a circle...is the understanding, so far as it contains the ground of the unity of [its] construction’.¹⁰⁴ What Kant is effectively doing here is retaining the idea of the ‘basic measure’, as he must do if he is to avoid an endless decompositional regress, but assuming that the measure is necessarily smaller than the object to be represented, namely the circle: as a result the categories are required even to perceive that object.¹⁰⁵ In texts such as Y, this assumption about the relative size of the ‘basic measure’ vis-à-vis the object is smuggled in via the reference to ‘drawing’ or ‘gradually generating’: insofar as time arises from the iteration of the basic measure, any object ‘gradually generated’ over time will necessarily be one represented by multiple basic measures. The unification of these basic measures will then, in line with X, depend on the category of magnitude. But there is simply no reason to accept the claim that most perception fits this ‘vast line’ model: if it did, an animal could not perceive the circle. Moving beyond Y, there are other texts in which Kant seems to make a stronger claim that the ones defended in X. The famous footnote at B160-1, for example, can plausibly be read as arguing that the unity of the pure forms of intuition themselves, as distinct from and prior to the unity of determinate spatio-temporal magnitudes, depends on the understanding.¹⁰⁶ Call this footnote

‘Z’. Both the acceptance and the rejection of the claims made in Z will be compatible with X, provided simply that Z’s acceptance does not rule out the possibility of animals possessing intuition. This provision will almost certainly be met since the obvious way to motivate Z is to argue that apperception is necessary for some comparatively sophisticated awareness of spatio-temporal unity, one which an animal might lack whilst still being able to see a rock, say, in front of it: apperception would, for example, plausibly be necessary to distinguish between successive perception and the perception of succession.

I want to close by looking directly at four aspects of X itself which demand substantive, further development; I suggest that the natural place to look for such developments is the phenomenological tradition. First, Kant’s argument against the possibility of the simultaneous perception of, say, two ships in the absence of the categories rests on a trilemma: either (i) the basic measure is smaller than a single ship in which case one cannot even represent one ship in a single moment, or (ii) it is the same size as a single ship in which case one cannot represent both ships at a single moment, or (iii) it is large enough to encompass both ships in which case whilst they are represented, one is not conscious of them since ‘as contained in one moment no representation can ever be anything other than absolute unity’.¹⁰⁷ The question is whether a more developed phenomenological mereology might challenge (iii). Could I, for example, be conscious of the spatial subcomponent of the basic measure in virtue of their distinctive colours? Kant is unable to address this question adequately in part because of a fundamental difficulty regarding the status of colour within his theory, one which has been widely discussed in relation to KU’s ‘formalist aesthetics’: simply put, is colour an aspect of the form of perception or merely of its matter? The issue is further complicated by the notorious textual difficulties surrounding the remarks on Euler and ‘pure colour’ at KU 224.¹⁰⁸ I cannot address those issues here; my point is that the obvious place to start to do so would be with a phenomenological mereology

such as that set out in the third of Husserl's *Logische Untersuchungen*. The second issue concerns the status of reproduction. Kant, in line with authors such as Wolff and Baumgarten, defines the imagination as the capacity to represent objects in their absence.¹⁰⁹ One can see why memory might then be treated as a subset of such a capacity. But can this supposed connection between memory and the imagination be further developed? The phenomenological tradition's notion of a 'horizon' [*Horizont*] offers one potential avenue. Heidegger's Kant commentary, for example, analyses memory in terms of 'a horizon of the past' and 'horizon' in terms of an 'image anticipated in imagination'; Heidegger thus explains memory's connection to the imagination by reference to the latter's other traditional role as the faculty of images.¹¹⁰ Third, what are the implications, if any, for Kant's notion of explanatory priority given the fact that both Figures 1 and 2 can occur independently of conceptual intentionality and are necessary conditions on it? Husserl's *Erfahrung und Urteil*, for example, seeks to provide a 'genealogy of logic', demonstrating how conceptual and predicative intentionality emerges from, and so depends upon, a pre-predicative and typically associative base: for Husserl the Analytic is thus 'founded on' the Aesthetic.¹¹¹ But what should be Kant's view of such projects, and of their attendant notion of explanatory priority? Fourth, I have argued that Kant explains the unity of perception by appeal to concepts. This raises the obvious question: what explains concepts? Kant's answer is, at least *prima facie*, the capacity to form judgments: thus 'we can...trace all actions of the understanding back to judgments'.¹¹² One striking feature of the recent analytic literature has been an attempt, however, to separate conceptualization from judgmental or propositional intentionality: to take one prominent example, McDowell has recently retracted his earlier model of human experience in favour of the view that such experience contains concepts but not judgments.¹¹³ The obvious difficulty in assessing such a proposal is to work out what exactly the difference between conceptual and judgmental or propositional intentionality amounts to. In particular,

one needs to avoid trivialising the debate by equating judgmental intentionality with, say, an explicit awareness either of the act of judgment or of the content of the predicates used. This trivialises the issue because Kant, and surely all other parties to the debate, are well aware that such awareness is unusual and derivative.¹¹⁴ What I want to suggest is that if this debate is to be well-formed one needs to understand *why* Kant thinks that conceptuality must be explained via judgment. As noted in section 1, Kant analyses concepts in terms of the consciousness of normativity. Crucially, he then analyses the ability to represent norms in terms of the table of judgments or, in modern language, in terms of the logical constants. Unlike in Frege, say, the Kantian quantifiers, for example, are not themselves concepts, second order or otherwise: that would make the putative explanation of conceptuality circular. Rather, the logical constants define the range of normative relations which we can establish *between* pieces of semantic content; the universal, affirmative, categorical form, for example, is a ‘rule’ which relates two concepts, *F* and *G*, by requiring that I, and presumptively all other rational, sensible agents, must apply *G* to anything to which *F* is applied.¹¹⁵ The forms of judgment thus define the basic structure of the understanding, i.e. of the capacity to represent ‘rules’: as such, they constitute ‘pure, general logic’ for Kant.¹¹⁶ Furthermore, since they are themselves defined in abstraction from all semantic content, this logic is, as MacFarlane has recently emphasised, ‘without all content and merely formal’ [*bloß formalen*].¹¹⁷ This is not a trivial thesis as one can see by noting that, unsurprisingly given his treatment of quantification, Frege in contrast accepts that logic ‘has its own concepts’ and so ‘is not at all formal’.¹¹⁸ Kant’s theory of judgment is thus, simultaneously, a theory of intentionality, a theory of syntax, a theory of logic, a theory of form, and his explanation of the rational agent’s unique capacity to represent normativity: it is, as Kant puts it, the ‘universal grammar’ for understanding.¹¹⁹ The result of this is as follows. If one is to engage with Kant’s argument for the dependence of concepts on judgment, one needs to

unpick the connections he postulates between the concepts of logic, of formality, of grammar and, fundamentally, of the capacity for what Heidegger calls ‘free, self-binding’, the ability to self-prescribe normative connections among my representations.¹²⁰ When *Sein und Zeit* talks of ‘liberating grammar from logic’, it is, I would suggest, precisely this project on which it is embarked.¹²¹

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NOTES

¹ KrV: A320/B376. Similarly Log: 64.

² KrV: A320/B376-7.

³ KrV: A320/B376-7.

⁴ Both ‘non-conceptualism’ and ‘conceptualism’ are used across the literature for a wide variety of distinct positions: I define them as I do to bring out the fact that there are structural

pressures pushing Kant towards both positions. With respect to the recent literature (for example Heck 2000), I assume that Kant is addressing a state, as opposed to content, model of non-conceptualism but nothing in what I say here turns on the difference. Similarly, with regards to Speaks 2005, I present Kant as considering only a ‘relative’, as opposed to an ‘absolute’, non-conceptualism: I believe that there are arguments in Kant’s work for the latter, stronger view, notably the argument from incongruent counterparts, but they are beyond this piece. Similar simplifying assumptions concerning the relationship between Kant and Speaks are employed by Allais 2009: 386.

⁵ Allais 2009, Hanna 2005 and Hanna 2008, Ginsborg 2008. For a stronger version of conceptualism than that defended by Ginsborg see Falkenstein 2006. Much of the recent discussion was sparked by McDowell 1994 but the debate is not, of course, a new one: consider, for example, Natorp 1910: 276-7 or Cassirer 1907: 35.

⁶ Any adequate textual survey would need to consider, at the bare minimum, the following texts within the *Transcendental Analytic* alone: KrV: A50-1/B74-6, A69/B94, A77-78/B103, A79/B104-05, A89-90/B122-3, A93/B126, A112, A118-120, B129-30, B137-8, B145, B160-4. There are, in addition, numerous relevant passages in works from the logic lectures to the third *Critique*: I draw on several of these in what follows. As stated, however, I do not believe that any purely textual survey, no matter how extensive, will resolve the matter until the underlying structural question is addressed.

⁷ On optical illusions see, for example, Crane 1992. For a superb treatment of the connection between concepts and the syllogistic structure in Kant see Longuenesse 1998: 90-3. I return to the broader issue of the connection between conceptual and judgmental or propositional intentionality in section 4.

⁸ For example Log: 33, 64; SvF: 59; KU: 464n; V-Lo/Dohna: 702; V-MP/Heinze: 275-7; V-MP/Mron: 878-85; V-MP/Volckmann: 449-50; V-MP-L1/Pölitz: 275-7. My claim is not that texts such as these are entirely unambiguous: many are obscured by the lack of a clear distinction between inner sense, consciousness and apperception (compare V-Lo/Wiener: 845-6 with KrV: A320/B376-7 or Log: 64). But it seems that the general position is clear: ultimately, once it is conceded that animals perceive it is hard to see what the content of those perceptions could be other than objects of outer sense.

⁹ Compare the apparent threat at KrV: A89-90/B122-3 with the proposed solution to that threat at A79/B104-5.

¹⁰ Allison 2004: 162.

¹¹ Longuenesse 1998: 213.

¹² KrV: B161.

¹³ See, for example, KrV: A104 or A197/B242. The representational capacities of animals are, of course, as part of nature, governed by rules; but Kant holds that only rational agents may *represent* rules (GMS: 412).

¹⁴ KrV: A77/B103.

¹⁵ KrV: B130.

¹⁶ See, in particular, Sellars 1978, Strawson 1982, Heidegger 1997a.

¹⁷ Longuenesse 1998: 63.

¹⁸ KrV: A189.

¹⁹ GMS: 413.

²⁰ Ginsborg 2008: 71.

²¹ V-MP-L1/Pölitz: 275-7.

²² Longuenesse 1998: 207.

²³ KrV: A106.

²⁴ KrV: A189/B234.

²⁵ Beck 1978: 144.

²⁶ KrV: A162/B203.

²⁷ Van Cleve 1999: 86.

²⁸ Van Cleve 1999: 279n41.

²⁹ KrV: A99.

³⁰ KrV: A169/B211.

³¹ KU: 251.

³² It does depend, for example, on the capacity, analysed in the Transcendental Aesthetic, to represent the pure form of space as a whole: this is the ‘infinite, given magnitude’ within which individual spaces are delineated (see, for example, KrV: A25/B40-1). I return to the relationship between determinate spatio-temporal perceptions and the pure forms of space and time in sections 3 and 4.

³³ KU: 256.

³⁴ KrV: B154-5. Compare A22/B37.

³⁵ It should be stressed that both the manifold and the ‘basic measure’ here may be ‘pure’; thus, for example, the construction of geometric figures such as the ‘line’ referred to at KrV: B154-5.

³⁶ V-MP/Dohna: 630. I am indebted here to the textual treatment of Kant’s various remarks on magnitude given by Longuenesse 1998: 264-7. Immediacy is not, of course, the only reason for referring to the basic measure as a *quantum*: in virtue of the assumption of continuity it necessarily contains a multiplicity of parts (see V-MP/Herder: 21).

³⁷ KrV: A320/B376-7.

³⁸ Anth: 135.

³⁹ KU: 251-2.

⁴⁰ The pyramid case, and the cited remark about the stones, is taken from KU: 252.

⁴¹ Log: 33.

⁴² Refl: 2880 (Refl Ak. XVI 557).

⁴³ On 'reflection' as the basis for Kant's account of concept formation, see Log 93-6.

⁴⁴ KrV: A141/B180. See Longuenesse 1998: 116-8 and Allison 2001: 20-30.

⁴⁵ Van Cleve 1999: 279n41.

⁴⁶ KU: 254.

⁴⁷ KrV: A189/B234 (emphasis added).

⁴⁸ Bradley 1911: 74.

⁴⁹ Bradley 1911: 74.

⁵⁰ Russell 1990: 145. I owe the reference to Stevens 2005: 15.

⁵¹ Russell 1903: §54. I follow Russell's punctuation.

⁵² Russell 1912: 74.

⁵³ Bradley 1893: 27-8.

⁵⁴ Russell 1992: 98.

⁵⁵ Bradley 1893: 32. I should stress that the presentation of Bradley here is obviously a highly simplified one: my aim is to highlight one central aspect of the Bradley-Russell debate in order to make sense of Kant's position.

⁵⁶ Linsky 1992: 268.

⁵⁷ Sluga 1980: 90-5.

⁵⁸ KrV: A142/B182, A161/B202-3.

⁵⁹ KrV: A121.

⁶⁰ One may read ‘necessarily’ for ‘normally’ here depending on how one understands Kant’s stance on empty space and time (see, for example, KrV: A188-92/B231-7).

⁶¹ KrV: A120.

⁶² KrV: B202n.

⁶³ For example PG: 158 and V-Lo/Wiener: 891.

⁶⁴ KrV: A25/B39, A438/B466.

⁶⁵ KrV: A161/B202.

⁶⁶ KrV: A162/B203.

⁶⁷ KrV: A102.

⁶⁸ KrV: A100.

⁶⁹ Van Cleve 1999: 86.

⁷⁰ KrV: B202n and KrV: A68/B93.

⁷¹ Of course, Kant differs from Russell and Moore in allowing, in other contexts, an irreducible role for what Kant calls ‘systems’: Moore’s view that ‘this doctrine...that a part can have no meaning or significance apart from its whole must be utterly rejected’ would be alien to Kant (Moore 1903: §22).

⁷² KrV: A121; Russell 1912: 74.

⁷³ KrV: A68/B94. I address the relationship between concepts and judgment in section 4.

⁷⁴ KrV: A142-3/B182.

⁷⁵ FM: 271.

⁷⁶ KrV: A164/B205.

⁷⁷ KrV: A103. I have inverted Kant’s word order.

⁷⁸ Longuenesse 2005: 44.

⁷⁹ KrV: A103-4.

⁸⁰ Letter to J. S. Beck, 16th October, 1792 (Br Ak. XI 376).

⁸¹ Letter to J. S. Beck, 16th October, 1792 (Br Ak. XI 376).

⁸² On the connection between objects and normativity see, for example, KrV: A198/B242.

⁸³ Letter to J. S. Beck, 11th November 1791 (Br Ak. XI 311).

⁸⁴ Compare, for example, KrV: A50/B74 and A320/B376.

⁸⁵ Russell 1912: 74.

⁸⁶ The role of Cartesian scepticism within KrV is, outside of the Refutation, extremely limited in my view; I cannot, however, treat this here.

⁸⁷ KrV: B159.

⁸⁸ KrV: B202n.

⁸⁹ Clearly, Kant also believes that there are certain fundamental differences between the Axioms and the Analogies: that issue, in particular its textual dimension, is beyond this piece.

⁹⁰ KrV: B162.

⁹¹ Hume 1978: 1.4.5.15.

⁹² Hume 1978: 1.2.3.12.

⁹³ Falkenstein 2005: 432 (emphasis added).

⁹⁴ Beauchamp 1979: 50.

⁹⁵ Pike 1967: 162.

⁹⁶ Allison 2008: 303.

⁹⁷ Russell 1903: §§52-55.

⁹⁸ Linsky 1992: 273.

⁹⁹ For an example of the inference from conceptualisation or judgment to the categories see KrV: A93/B126.

¹⁰⁰ Ginsborg 2006: 62.

¹⁰¹ Chang 2008: 122.

¹⁰² Refl: 2880 (Refl Ak. XVI 557).

¹⁰³ KrV: A162-3/B203.

¹⁰⁴ Prol: 321-2.

¹⁰⁵ This is not the only explanation for the *Prolegomena* text. Another strong possibility, given the context, is that Kant is thinking not just of the ability to represent a circle but to recognise it as a circle and thus as governed by certain geometric laws: as I emphasised such consciousness of normativity is, by definition, conceptual for Kant. This reading would fit equally with my interpretation: it would entail that understanding was not required simply to perceive circles.

¹⁰⁶ Z is defended in detail by Longuenesse 1998: 214-25.

¹⁰⁷ KrV: A99.

¹⁰⁸ For an excellent, recent treatment of this issue see Allison 2001:133-5.

¹⁰⁹ KrV: B151. Compare, for example, Wolff 1962: II-5 §92.

¹¹⁰ Heidegger 1997a: 128 and 90-2.

¹¹¹ Husserl 1978: 291-2.

¹¹² KrV: A69/B94.

¹¹³ McDowell 2009: 260-8.

¹¹⁴ See, for example, KrV: A43/B61.

¹¹⁵ Log: 111; KrV: A55/B79; Refl: 3051 (Refl Ak.XVI 633).

¹¹⁶ KrV: A55/B79, A70/B95.

¹¹⁷ KrV: A152/B191, A55/B79. For MacFarlane's influential treatment of the Kant-Frege relationship see MacFarlane 2002.

¹¹⁸ Frege 1906: 428.

¹¹⁹ Log: 13.

¹²⁰ Heidegger 1997b: 255.

¹²¹ Heidegger 2000: 209. I am greatly indebted to Tim Crane, Raymond Geuss, Robert Hanna, Nick Jardine, and Fraser MacBride for discussion of these issues. I would also like to thank an anonymous referee for this journal.

REFERENCES

Abbreviations used:

In citing Kant's texts the following abbreviations are used.

Anth.	<i>Anthropologie in pragmatischer Hinsicht</i> (Ak., vol.7)
Br.	<i>Briefe</i> (Ak., vols.10-13)
FM	<i>Welches sind die wirklichen Fortschritte...</i> (Ak., vol.20)
GMS	<i>Grundlegung zur Metaphysik der Sitten</i> (Ak., vol.4)
KrV	<i>Kritik der reinen Vernunft</i> (Ak., vol.4)
KU	<i>Kritik der Urteilskraft</i> (Ak., vol.5)
Log.	<i>Logik</i> (Ak., vol.9)
PG	<i>Physische Geographie</i> (Ak., vol.9)
Refl.	<i>Reflexion</i> (Ak., vols.14-19)
SvF	<i>Die falsche Spitzfindigkeit der vier syllogistischen Figuren</i> (Ak., vol.2)
V-Lo/Dohna	<i>Logik Dohna-Wundlacken</i> (Ak., vol.24)

V-Lo/Wiener	<i>Wiener Logik</i> (Ak., vol.24)
V-MP/Heinze	<i>Metaphysik Heinze</i> (Ak., vol.28)
V-MP/Mron	<i>Metaphysik Mron</i> (Ak., vol.29)
V-MP-L1/Pölitz	<i>Metaphysik L1 Pölitz</i> (Ak., vol.28)
V-MP/Volckmann	<i>Metaphysik Volckmann</i> (Ak., vol 28)

All references are to *Kants gesammelte Schriften: herausgegeben von der Deutschen Akademie der Wissenschaften* [formerly *Königlichen Preussischen Akademie der Wissenschaften*], 29 vols., (Berlin: de Gruyter, 1902-). Where necessary, for example with Kant's letters, I also provide an *Akademie* volume number. In referring to KrV, however, I employ the standard A/B pagination.

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