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Introduction

This dissertation is about Kant's account of time in the *Critique of Pure Reason*, one of the most fascinating, perplexing, and contentious aspects of that book. At the mention of 'Kant,' 'time,' and the '*Critique of Pure Reason,*' the reader's mind probably jumps to various well-known Kantian doctrines from the Transcendental Aesthetic and Analogies of Experience. From the Aesthetic, for example, there is Kant's revolutionary idea that the representation of time cannot be derived from experience, and is instead an a priori representation which precedes and makes possible the perception of any particular temporal relation. Time, according to Kant in the Aesthetic, is thus nothing absolutely mind-independent and real, but rather a 'form' of sensibility, i.e., a structure grounded in our own receptive faculty which all sensible entities – all 'appearances,' in Kant's language (A20/B34) – bear purely in virtue of being sensed (cf. A30/B46–A36/B53). From the Analogies, similarly, there is Kant's famous argument that since the temporal order of perceptions – i.e., the order in which our own perceptions occur – cannot be identified with the temporal order of the objects of perception, the perception of an objective outer temporal order therefore presupposes special rules, grounded in the categories, which make it possible (cf. A176/B219).

These ideas, however, though certainly an inspiration for this dissertation, are not what I will be primarily concerned with. They have already been discussed ad nauseum in the literature, and yet are still source of such obscurity and contention that it seems unlikely I could add anything new – much less compelling – simply on the basis of another literature review and close reading of Kant's texts. Instead, I want to approach Kant's views on time from a new,

more fundamental angle, namely via an investigation into the basic connection Kant sees between time and finite cognition, i.e., cognition which depends upon an object it does not create.

It is well-known that Kant sees various fundamental aspects of our knowledge as grounded in the finitude of our cognitive capacity. For example, the sensible, rather than intellectual, nature of our intuition follows from our cognitive finitude, for Kant, as does the discursive, rather than intuitive, nature of our understanding.[1] What I believe has yet to be properly appreciated, however, is how Kant takes up and develops the traditional thought – one found in such canonical thinkers as Parmenides, Plato, Aquinas, and Leibniz – that the temporal framework which we know and inhabit is also ultimately traceable to our cognitive finitude, and that an infinite knower would not essentially know a temporal reality. It is obvious, after all, that Kant thinks time is somehow connected with our finitude, since time, as already mentioned, is for Kant a form of sensibility, and sensibility, as Heidegger explains, "for Kant means finite intuition."[2] Only by properly appreciating the fundamental connection between time and finite cognition, I thus submit, will we be in a position to fully understand the details of Kant's account of time, including those of the Aesthetic and Analogies.

How might we bring this connection to light? One obvious way, and the way I will pursue in chapter one of this dissertation, is to compare Kant's account of finite cognition with his account of infinite cognition – i.e., cognition which is not dependent in the various ways in

[1] I explore the relation between finitude and these aspects of our cognitive faculty in chapter one.
[2] Martin Heidegger, *Kant and the Problem of Metaphysics*, trans. James S. Churchill (Bloomington: Indiana University Press, 1965), 96.

which our own is – in order to seek an explanatory connection between the former and time. One of Kant's occasional philosophical methods, after all, is to reflect upon how our own mental faculty would differ from an infinite mental faculty, in order to clarify the former and understand what grounds various aspects of it. In the practical philosophy, for instance, Kant famously observes that since God and angels, qua purely rational beings, would lack sensible inclination altogether, the moral 'ought' would not apply to such beings, since the categorical imperative would be their wills' sole determining ground, and as such would straightforwardly describe how they always and necessarily acted, rather prescribing how they ought to act.[3] Such reflection makes clear that the reason morality presents itself to us humans as something we should, but do not necessarily, conform to is not because of any limitation of the moral law itself, but rather because, qua finite, our wills are necessarily subject to determining forces other than the moral law, namely sensible inclination.[4]

[3] Cf. *CPrR*, 5:32, 5:82, 5:122.

[4] The efficacy of such a comparative procedure, it is also important to be clear, is not dependent upon our fully comprehending the infinite faculty, but merely upon our concept of it having just enough content to form a useful contrast with our own faculty, typically by making clear what the latter is not. Johannes Haag aptly calls such concepts of alien mental faculties 'limit concepts', in order to stress that they are not, for all we know, concepts of really possible faculties, and nor do they serve as the appropriate measure of human rational activity, but that they are purely heuristic, comparative devices. Indeed, given Kant's thesis that the only mental faculty we adequately grasp is our own, since it is the only one we can comprehend 'from within' through transcendental reflection and "self-cognition" (Axi; *Selbsterkenntnis*), it follows that our concepts of alien mental faculties will always be logically dependent upon our grasp of our own cognitive faculty. The concept of an infinite will, for instance, is framed by taking that of our own finite will and subtracting out the sensible element, thereby leaving us with the concept of a purely rational will which would be determined the moral law alone. Such a will may not be really possible, and our grasp of it is dependent upon our grasp of our own will, but it is nonetheless sufficient for clarifying why the moral law presents itself to us as an imperative. Cf. Johannes Haag, "Grenzbegriffe Und Die Antinomie Der Teleologischen Urteilskraft," *Übergänge–Diskursiv Oder Intuitiv*, 2013, 141–72; Johannes Haag, "Faculties in Kant and German Idealism," in *The Faculties: A History*, ed. Dominik Perler, Oxford Philosophical Concepts (Oxford: Oxford University Press, 2015).

Comparison of Kant's accounts of finite and infinite cognition, then, will form the basis of my approach to establishing a connection between finite cognition and time. Apart from that, however, there also happen to be three enduring and overlooked problems from the *Critique of Pure Reason* which may, I believe, be used as something of a 'touchstone' for assessing my account of the connection between time and finite cognition, and also as a means of developing it further. Only if the account can figure in successful resolutions of these problems, in other words, may we be confident of its correctness, and resolving these problems will also serve to spell it out further. These problems are as follows:

(1) Why is time solely the form of inner sense, and not also of outer sense, given it is the universal form of appearances?

(2) How does time come to be a form of outer appearances, given its restriction to the form of inner sense?

(3) Why are transcendental schemata – the rules in virtue of which appearances can be subsumed under the categories – solely determinations of time and not also of space?

Call these the 'three problems about time.' Let us take them in in turn.

The first problem requires some background. Sensibility, for Kant, is "the capacity… to acquire representations through the way in which we are affected by objects" (A19/B33). It is the capacity, in particular, to produce intuitions – or singular, immediate representations (Cf. A320/B377) – on the basis of such affection. And sensibility, in turn, is divided by Kant into two sub-capacities: inner sense, "by means of which the mind intuits its itself, or its inner state" (A22/B37), and outer sense, by means of which "we represent to ourselves objects as outside us" (A22/B37). Inner sense presents such things as perceptions, thoughts, feelings, desires, etc.

– in short, any determination of the mind itself[5] – while outer sense presents such things as tables, cats, mountains, clouds, etc. – in short, physical objects, taken in the broadest possible sense.

Now, as already mentioned, Kant holds that time is a form of sensibility – a structure which sensible entities bear purely in virtue of being sensed – and indeed he holds that it is the universal form of appearances, meaning that all appearances, inner and outer, "are in time, and necessarily stand in relations of time" (A34/B51). Apparently inexplicably, however, Kant argues that time, despite being the universal form of appearances, is solely the form of inner and not also outer sense: "Time is nothing other than the form of inner sense, i.e., of the intuition of our self and our inner state. For time cannot be a determination of outer appearances; it belongs neither to a shape or a position, etc., but on the contrary determines the relation of representations in our inner state" (A33/B50). The form of outer sense, instead, is space and space alone: "space is nothing other than merely the form of all appearances of outer sense, i.e., the subjective condition of sensibility, under which alone outer intuition is possible for us" (A26/B42; my emphasis). The question, then, is why – given that time is the form of inner and outer appearances – does Kant hold that time is the form of inner sense alone? What underlies, in other words, the idea that time is solely the form of the capacity for "the intuition of our self and our inner state" (A22/B37), if objects of outer sense are also, by Kant's own lights, necessarily in time?

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[5] Inner sense, in this way, provides a kind of empirical, a posteriori self-consciousness distinct from the pure, intellectual self-consciousness of transcendental apperception and the representation "I." As Kant puts it in the *Anthropology from a Pragmatic Point of View*, inner sense provides "consciousness of what… [the human being] *undergoes* insofar as he is affected by the play of his own thoughts" (7:161).

The second problem about time falls directly out of the first. If space and time, qua forms of sensibility, are "nothing except our way of perceiving" (A42/B59), and if time is solely the form of inner sense, then how do outer appearances also come to be necessarily given in time? In asserting that "space is… the subjective condition of sensibility, under which alone outer intuition is possible for us" (A26/B42; my emphasis), Kant seems to have deprived himself of the easiest, and perhaps only, explanation of the temporality of outer appearances: namely that time is also a form of outer sense. Kant does, to be sure, address this question in a dense single-sentence argument towards the end of the Transcendental Aesthetic (A34/B50), but, as we shall see, spelling out how the argument works is easier said than done.

The third and final problem about time concerns the Schematism, the short chapter of the *Critique of Pure Reason* in which Kant specifies "the sensible condition under which alone the pure concepts of the understanding can be employed" (A136/B176), or rules for applying the categories to appearances. The categories are in need of such rules – which he calls 'transcendental schemata' – because, as concepts originating in the understanding, they contain no sensible content whatsoever and as such it is unclear how they can have any content in common with, and applicable to, sensible objects. The peculiar interpretive difficulty with the Schematism arises when Kant defines the transcendental schemata in terms of time and not also space, and unequivocally declares that they are "nothing but a priori *time-determinations* in accordance with rules… in regard to all possible objects" (A145/B184). The categories, that is to say, are assigned exclusively temporal significance in the Schematism, which comes as a shock given that space and time have had coequal status qua dual forms of sensibility hitherto this point of the *Critique of Pure Reason*.

These, then, are the three problems about time, the resolution of which will serve as a touchstone for my account of the connection between time and finite cognition, and also as a means of developing it further. Before sketching the general structure of the dissertation, it is worth also noting an approach to Kant that can provide answers, of sorts, to at least the first two problems about time – namely why time is exclusively the form of inner sense, and how time comes to be a form of outer appearances given this restriction. This approach is worth noting firstly because it has been, and still is, very influential, secondly because the solution it facilitates to the first two problems about time is quite elegant, and thirdly because – despite all of this – I think it is clearly wrong as a reading of Kant.

I speak, in particular, of idealist, or what Kant would specifically call 'material' idealist (B274), interpretations of the *Critique of Pure Reason*. This is the reading according to which outer appearances – i.e., the spatiotemporal objects of which we are conscious in outer intuition – are, in one way or another, completely internal to our representations; whether mind-independent objects corresponding to those representations are countenanced as possible yet unknowable (what Kant calls 'problematic' idealism (B274)), or whether such objects are excluded as impossible and reality is conceived of as entirely mental (what Kant calls 'dogmatic' idealism (B274)).[6] Idealist interpretations of Kant thus stand opposed to

[6] Relatively recent idealist interpreters include the likes of James Van Cleve ("any statement about objects is held to be logically equivalent to some statement solely about representations."), Paul Guyer (Kant "degrade[s] ordinary objects to mere representations of themselves, or identif[ies] objects possessing spatial and temporal properties with mere mental entities."), and Richard Aquila ("[t]o exist as an appearance is to exist in what I shall call a 'phenomenalistic' sense; it is to exist… merely 'intentionally.'") Mid-20th century idealist interpreters include P. F. Strawson ("the physical world… only appears to exist, is really nothing apart from our perceptions.") and Jonathan Bennett ("Kant is firmly committed… to a phenomenalist analysis of objectivity which does not postulate objects as noumenal items over and above the data of experience but treats them as logical constructs out of

accounts which afford outer appearances at least some degree of mind-independence, however this may be spelled out.[7]

Idealist interpreters can answer the first two problems about time in the following way. Time is the form of inner sense, the idealist interpreter can say, because time is the form of the 'parade of representations' the mind undergoes. And yet outer appearances are also in time, the idealist continues, because outer appearances are ultimately mere representations – they are completely internal to the mind – and all representations, qua determinations of inner sense, are necessarily in time. P. F. Strawson, in this vein, thus explains that "we can be sure that… spatially ordered items… must be ordered in time as well as space, i.e., must exhibit relations of simultaneous or successive existence. For all particular states of consciousness, including our perceptions of spatially ordered items, are necessarily in time, and hence those spatially ordered items are so too."[8] Note that in order for Strawson's argument to be valid – i.e., in order for it not to be an fallacious inference from the temporality of a representation to the temporality of the object of that representations – it must be the case that outer objects are completely internal to our representations and mind, which is exactly what Strawson

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those data.") While the original idealist interpretation is, of course, the 1782 'Göttingen review' of Christian Garve and Johann Feder ("This idealism… transforms the world and ourselves into representations"). Cf. James Van Cleve, *Problems from Kant* (Oxford: Oxford University Press, 1999), 123; Paul Guyer, *Kant and the Claims of Knowledge* (Cambridge: Cambridge University Press, 1987), 335; Richard E. Aquila, *Representational Mind: A Study of Kant's Theory of Knowledge,* Studies in Phenomenology and Existential Philosophy (Bloomington: Indiana University Press, 1983), 89; P. F. Strawson, *The Bounds of Sense: An Essay on Kant's 'Critique of Pure Reason,'* (New York: Routledge, 2006), 238; Jonathan Bennett, *Kant's Analytic* (Cambridge: Cambridge University Press, 1966), 127; Christian Garve and Johann Feder, "The Feder-Garve Review," in *Kant's Early Critics: The Empiricist Critique of the Theoretical Philosophy*, trans. Brigitte Sassen (Cambridge: Cambridge University Press, 2000), 53.

[7] For a helpful overview of the different ways of spelling out this mind-independence, including her own, see Lucy Allais, "Things in Themselves Without Noumena," in *Manifest Reality: Kant's Idealism and His Realism* (Oxford: Oxford University Press, 2015), 59–76.

[8] Strawson, 55.

affirms he says that "the physical world… only appears to exist, is really nothing apart from our perceptions."[9,10]

There are a variety of reasons, however, to resist idealist readings of Kant.[11] A general interpretive reason is our commonsense understanding of outer spatiotemporal objects as at least somewhat non-mental entities, and that, as a matter of charity, we should not foist such a counterintuitive position upon Kant if we don't have to. Amongst the exegetical reasons,[12] however, probably the simplest and most powerful, and the only one I will mention here, is – unsurprisingly – the Refutation of Idealism, the brief section Kant added to the second edition *Critique of Pure Reason* partly in order to correct against what he saw as material idealist misinterpretations of his philosophy, particularly as contained in the Feder-Garve review.

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[9] Strawson, 238.

[10] Even Norman Kemp Smith who tries hard not to read Kant as an idealist, thinks that Kant vacillates between idealist and non-idealist stances, and that his argument for why outer objects are in time presupposes idealism. As he puts it, the argument "is valid only from the standpoint of extreme subjectivism, according to which objects are, in Kant's own phraseology, *blosse Vorstellungen*." Norman Kemp Smith, *A Commentary to Kant's 'Critique of Pure Reason,'* (London: Macmillan, 1918), 294 and 136.

[11] For commentators who have argued against idealist readings of Kant, see Graham Bird, *Kant's Theory of Knowledge*: *An Outline of One Central Argument in the 'Critique of Pure Reason'* (London: Routledge, 1962); Graham Bird, *The Revolutionary Kant: A Commentary on the 'Critique of Pure Reason'* (Chicago: Open Court, 2006); Arthur Melnick, *Kant's Analogies of Experience* (Chicago: University of Chicago Press, 1973); Gerold Prauss, "Zur Problematik Der Dinge an Sich," in Akten Des 4. *Internationalen Kant-Kongresses: Mainz, 6.–10. April 1974, Teil 2: Sektionen 1,2,* ed. Gerhard Funke (De Gruyter, 1974), 222–39; Gerold Prauss, *Erscheinung Bei Kant: Ein Problem Der "Kritik Der Reinen Vernunft"* (De Gruyter, 1971); H. E. Matthews, "Strawson and Transcendental Idealism," in *Kant on Pure Reason*, ed. Ralph C. S. Walker, Oxford Readings in Philosophy (Oxford: Oxford University Press, 1982). Robert B. Pippin, "Kant's Theory of Form: An Essay on the Critique of Pure Reason," *Tijdschrift Voor Filosofie* 47, no. 3 (1982); Henry E. Allison, *Kant's Transcendental Idealism: An Interpretation and Defense* (New Haven: Yale University Press, 1983); Henry E. Allison, *Kant's Transcendental Idealism: An Interpretation and Defense*, Revised and Enlarged Edition (New Haven: Yale University Press, 2004); Rae Langton, *Kantian Humility: Our Ignorance of Things in Themselves* (Oxford: Oxford University Press, 1998); Arthur W. Collins, *Possible Experience: Understanding Kant's Critique of Pure Reason* (Berkeley: University of California Press, 1999); Allais, *Manifest Reality*.

[12] For a good summary of the main arguments against interpretations which understand outer appearances as completely internal to our representations, or what she calls 'phenomenalist' readings, see Allais, *Manifest Reality*, 43–56.

Against such idealism, which Kant glosses as "the theory that declares the existence of objects in space outside us to be either merely doubtful and *indemonstrable* [problematic idealism], or else false and impossible [dogmatic idealism]" (B274), the Refutation argues that "the determination of my existence in time is possible only by means of the existence of actual things that I perceive outside myself" (B275). The consciousness of our own mental states in time, in other words, which is a consciousness the material idealist takes as foundational and indeed indubitable, presupposes the consciousness of non-mental outer objects.

Now, we do not need to go into the details of Kant's argument to see how this implies that idealist interpretations of Kant are ill-founded.[13] In particular, the skeptical doubt involved in material idealism is based upon the distinction between a non-mental thing, namely an outer object, and a mental thing which purports to represent it, namely an outer perception.[14] And Kant attempts to overcome this skepticism by arguing that immediate consciousness of the non-mental thing – i.e., of the object – is a condition on the consciousness of our own inner states in time, i.e., of the mental things which material idealism takes for granted, including outer perceptions. It therefore cannot be the case, for Kant, that outer appearances are completely inner, purely mental entities. They are intended to have at least a measure of mind independence,[15] and a desideratum on a solution to any of the three problems about time is that it does not saddle Kant with idealism about outer objects.

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[13] In chapter four, I give a reading of the Refutation of Idealism, along with the First Analogy.
[14] I take this way of framing things from Allais, *Manifest Reality*, 55–6.
[15] To be sure, whether Kant can succeed in giving such an account is another story, but his intention is clear.

The composition of the dissertation is as follows. **Chapter one** introduces Kant's basic conception of the comparative structures of finite and infinite cognition, and rehearses various well-known implications of this. It then draws on Aristotle's analysis of capacities and acts to argue for a new, unappreciated connection between time and sensible intuition. I argue, in particular, that because sensibility is a capacity for intuition on the basis of affection, its act presupposes being determined by an object to transition between opposing sensory states, which is a kind of transition that can only occur over time. This in turn facilitates a resolution to the first problem about time – the issue of why time is exclusively the form of inner sense – since it is inner sense that must represent such transitions.

Chapter two addresses the second problem about time, or how time comes to be a form of outer appearances, given it is exclusively the form of inner sense. Taking seriously, yet again, Kant's idea that sensibility is a capacity for affection, I first clarify what an episode of affection in general involves, and then map this structure onto an episode of outer sensible affection, in order to better understand the respective contributions of inner and outer sense in an act of outer perception. I argue that because, for the reasons given in chapter one, inner sense presents our inner states in time, and because, according to the general structure of affection, the outer object is the ground of those inner states, so must the outer object itself be posited in time.

Chapter three addresses the third and final problem about time, or the issue of why the transcendental schemata of the categories are time determinations and not also space determinations. After observing that the categories are unique among concepts in making relation to an object possible, I draw on chapter 1 to argue that the pure intuition of time is

distinct from that of space in being of itself insufficient for the presentation of anything distinct from the mind. This implies, I argue, that the pure intuition of time presupposes further categorial determination in order to present an object, which in turn explains why the schemata of the categories are time determinations. I also provide a worked-out example drawing together the account of sensibility, time, and finite cognition that has emerged over the first three chapters.

Chapter four treats some outstanding issues from the first three chapters and provides some general reflections on the dissertation as a whole. I first dissolve, by distinguishing different respects in which time and the consciousness of it is dependent, the apparent tension between, on the one hand, the idea that time originally presents of inner determinations of the mind alone, and, on the other, the Refutation of Idealism's argument that cognition of outer temporal objects has some kind of priority over cognition of mental states in time. I then fill out the account of inner sense that has emerged over the first three chapters by considering how non-cognitive mental states, as well as purely intellectual representation, come to be given in this capacity. I conclude the dissertation with some reflections on the connection between time and finite cognition, on the role the concept of a cognitive capacity played in the account, and on Kant's relation to the philosophical tradition which sees time as essentially related to cognitive finitude.

Chapter One: Finite Knowledge, Sensible Intuition, and Time

This chapter has three related aims. First, to introduce Kant's basic account of the structures of finite and infinite cognition. Second, to derive, on this basis, a connection between the former and time. Third, to resolve, using this connection, the first problem about time, or the issue of why time is exclusively the form of inner sense, and not also a form of outer sense, despite being the universal form of appearances.

The structure of the chapter is as follows. **Section One** outlines the elements that Kant believes all knowledge involves, and explains how these elements, and the associated faculties, vary in finite and infinite knowers. The main takeaway, which is not new to the literature, is that because finite knowledge depends upon an independently existing object, it involves separate faculties of sensible intuition and discursive understanding, while infinite knowledge, as creative, involves a single faculty of intuitive understanding or intellectual intuition. **Section Two** draws on Aristotle to argue for an unappreciated connection, on Kantian grounds, between sensible intuition and time. In particular, because sensibility is a capacity for intuition on the basis of passive affection, its actualization involves being determined, by an object, to transition between opposing sensory states, which is a type of transition that can only occur over time. **Section Three** then uses this account of the connection between time and sensible intuition to offer a novel 'transcendental' account of the doctrine that time is exclusively the form of inner sense and not also of outer sense. In particular, because actualizations of sensibility, qua involving transitions between opposing sensory states, essentially occur over time, and because all states of the mind, for Kant, are ultimately determinations of inner sense,

it follows from the nature of an act of sensibility that inner sense, but not outer sense, requires time as its form.

SECTION ONE: FINITE AND INFINITE KNOWLEDGE

The Elements of Knowledge

When Kant speaks of knowledge – finite or infinite – he speaks of intuition, understanding, and a grounding relation between representation and object. "[A]n *intuition,*" Kant explains, "is a representation that is immediately related to an object and is singular" (A320/B377). Intuitions, in particular, contain a manifold which directly presents a particular object,[1] and they thereby provide the immediate cognitive relation to reality that all knowledge, for Kant, presupposes.[2] Intuition's immediacy and singularity follows from the fact that "[a]n intuition is a representation of the sort which would depend immediately on the presence of an object" (Prol. 4:281). Intuitions, in other words, are grounded in, and made possible by, the existence and direct presence of the object they present.[3] Intuitions thereby

[1] Kant is clear that even infinite intuition would contain a manifold. Cf. B130, B135, B138–9.
[2] Cf. A19/B33: "In whatever way and through whatever means a cognition may relate to objects, that through which it relates immediately to them, and at which all thought is directed as an end, is intuition."
[3] There is debate, however, surrounding how exactly intuitions are supposed to depend upon their object, and how strong the sense of dependence is meant to be. For two recent accounts according to which intuitions are strongly dependent upon their object, and objects are constituents of intuitions, see: Allais, *Manifest Reality,* 105 and 157–58; and Colin McLear, "Intuition and Presence," in *Kant and the Philosophy of Mind: Perception, Reason, and the Self*, ed. Anil Gomes and Andrew Stephenson (Oxford: Oxford University Press, 2017), 86–103. For two recent accounts according to which intuitions are less strongly dependent upon their objects, and objects are not direct constituents of intuitions, see: Andrew Stephenson, "Kant on the Object-Dependence of Intuition and Hallucination," *Philosophical Quarterly* 65, no. 260 (2015): 486–508; and Stephanie Grüne, "Are Kantian Intuitions Object-Dependent?," in *Kant and the Philosophy of Mind: Perception, Reason, and the Self*, ed. Anil Gomes and Andrew Stephenson (Oxford: Oxford University Press, 2017), 67–85.

contrast with concepts, which as reflected representations relate to objects only mediately and by means of general marks (Cf. A320/B377), and which as such do not depend upon the presence – or even existence – of their objects.[4]

Moving on, "[*u*]*nderstanding,*" for Kant, "is… the faculty of *cognitions*. These consist in the determinate relation of given representations to an object" (B137). Understanding, that is to say, is the capacity for referring or relating representations to the object, and thereby producing comprehension and knowledge of that object. The representations related to an object by understanding consist in either a manifold of intuition or of concepts, and understanding so relates these representations by spontaneously combining or unifying them:

> *combination*… of a manifold in general can never come to us through the senses… it is an act of spontaneity of the power of representation, and since one must call the latter understanding… all combination, whether it is a combination of the manifold of intuition or of several concepts, and in the first case either of sensible or non-sensible intuition, is an action of the understanding, which we would designate with the general title *synthesis* in order at the same time to draw attention to the fact that we cannot represent anything as combined in the object without having previously combined it ourselves, and that among all representations *combination* is the only one that is not given through objects but can be executed only by the subject itself, for it is an act of its self-activity. (B129-130)

Understanding relates a manifold of representations to an object by combining that manifold in accordance with a spontaneous representation of unity, and thereby produces comprehension and cognition of that object. The representation of unity must be spontaneous – it must be a product of the understanding's own 'self-activity' – because it concerns the representation of the relation of the manifold, and as such is not something that can be passively received

[4] Cf. *JL*, 9:91: "An intuition is a singular representation (repraesentatio singularis), a concept a universal (repraesentatio per notas communes) or reflected representation (repraesentatio discursiva)."

through the manifold itself, but must instead be actively represented and "added to the representation of the manifold" (B131).

Understanding is also intimately related to self-consciousness or apperception, for Kant, in the following way. First, to be self-conscious and represent the "I," Kant thinks, is simply to be conscious of oneself as the identical thinker of different representations, since the "I" is not itself something perceived, but instead consists in the ere intellectual awareness of the identity of thought throughout a manifold of different representations. As he puts it in the B-deduction, "it is only because I can combine a given manifold of representations *in one consciousness* that it is possible for me to represent the *identity of consciousness in these representations* itself" (B133). Because, however, self-consciousness presupposes a combination of representations in one larger representation or consciousness, it therefore also presupposes understanding, as the faculty of combination. Kant thus holds that the faculty for apperception or self-consciousness ultimately is the understanding: "[T]he synthetic unity of apperception is the highest point to which one must affix all use of the understanding…. indeed this faculty is the understanding itself" (B134n).[5,6]

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[5] For accounts of the reciprocal relationship between self-consciousness and the consciousness of an object, see: Deiter Henrich, "Identity and Objectivity: An Inquiry into Kant's Transcendental Deduction," in *The Unity of Reason*, ed. Richard Velkley, trans. Jeffrey Edwards (Cambridge, Mass: Harvard University Press, 1994), 123–208; and Robert Paul Wolff, *Kant's Theory of Mental Activity: A Commentary on the Transcendental Analytic of the Critique of Pure Reason*, 2. pr (Cambridge, Mass: Harvard University Press, 1969), 164–82.

[6] Spontaneity and self-consciousness are also necessarily related in that knowledge, for Kant, is essentially first-personal, and as such involves determining oneself to represent what is the case, as opposed to being determined from without to some arbitrary representation. For good discussions of this point, see: Robert B. Pippin, "Kant on the Spontaneity of Mind," in *Idealism as Modernism: Hegelian Variations*, Modern European Philosophy (Cambridge: Cambridge University Press, 1997), 29–55; and Henry E. Allison, "On Naturalizing Kant's Transcendental Psychology," in *Idealism and Freedom: Essays on Kant's Theoretical and Practical Philosophy* (Cambridge: Cambridge University Press, 1996), 62.

And lastly, all knowledge, for Kant, also presupposes a grounding relation between representation and object: "[t]here are only two possible cases in which synthetic representation and its objects can come together, necessarily relate to each other, and as it were, meet each other. Either if the object alone makes the representation possible, or if the representation alone makes the object possible" (A92/B124-5).[7] All knowledge – all true synthetic representation – presupposes a grounding relation between representation and object, since only this explains and guarantees their agreement in the way that knowledge requires.[8] As the above quote makes clear, however, the grounding relation at issue can run in two different directions, such that the object may ground the representation or the representation may ground the object. Kant holds, moreover, that the particular grounding relation is a function of the type of knower at issue – finite or infinite – and determines how the other two elements of knowledge, namely intuition and understanding, will be understood in knowers of that kind. Let us therefore consider how Kant conceives of the grounding relations involved in finite and infinite knowledge, and how this shapes his conception of the respective capacities for intuition and understanding.

[7] Cf. also *Lectures on Metaphysics*, 29:797 (Mrongovius): "Each representation must agree with the object, otherwise there is no cognition. The agreement is possible in two ways, either when my representation produces the object, or when the object produces my representation."

[8] Kant thus categorically rejects any account of knowledge according to which the agreement of object and representation is secured not through real interaction, but merely through luck or, as Leibniz would have it, God's harmonious design (Cf. B167-8).

Intuition and Understanding – One Capacity or Two?

Kant holds, unsurprisingly, that God's knowledge – infinite knowledge – would completely ground its object. This is so because God is that knower "through whose representation the objects of this representation would at the same time exist" (B139).[9] God's knowledge, that is to say, would create its object. We just saw, however, that all knowledge presupposes both intuition and understanding, i.e., an intuitive manifold which immediately presents an object, and a spontaneous, self-conscious representation of the unity of that manifold. And this raises a question: how are intuition and understanding to be conceived of in the context of such a one-way grounding relation?

Kant's answer is that infinite knowledge – God's knowledge – would involve a single spontaneous faculty which supplies both the manifold of intuition and the representation of unity that all knowledge presupposes. An infinite cognitive faculty, that is to say, would spontaneously produce a unified manifold of intuition. Kant variously calls such an infinite faculty 'intuitive understanding' (Cf. B136, *CPJ* 5:402, *CPJ* 5:406), 'intellectual intuition' (Cf. B72, B307), 'original intuition' (Cf. B72), 'synthetic universal understanding' (Cf. *CPJ* 5:407), and 'divine intuition' (*ID* 2:397), and says that it "seems to pertain only to the primordial being, never to one that is dependent as regards both its existence and its intuition" (B72).[10] Only God,

[9] Or as Kant is recorded as saying in the *Lectures on Metaphysics* (Mrongovius), God's cognitive power "would be the productive cause of things so that the object arises concurrently with the representation." 29:797.

[10] I will refer to such a faculty as either an 'intuitive understanding' or 'intellectual intuition,' depending upon whether I want to emphasize its spontaneous or intuitive dimension. For an account on which these phrases refer to different kinds of capacity, and on which each in turn is divided into two further subtypes, see Eckart Förster, *The Twenty-Five Years of Philosophy: A Systematic Reconstruction,* trans. Brady Bowman (Cambridge, Mass: Harvard University Press, 2012), 144–45 and 150–52.

in other words, would possess such a spontaneous faculty of intuition. Because, moreover, understanding is also ultimately the faculty of self-consciousness, Kant also says that it would be "[a]n understanding, in which through self-consciousness all of the manifold would at the same time be given" (B135; cf. also B68, B138-9, B145). Through the mere act of representing "I," in other words, an infinite understanding would produce a unified manifold of intuition, and thereby cognition of an object.

We have said that infinite knowledge completely grounds its object, and for this reason involves a single faculty of intuitive understanding or intellectual intuition. What kind of a grounding relation does finite knowledge involve, if it does not create its object? The British empiricists' answer to this question – and one which greatly influenced Kant – was that human knowledge is the polar opposite of infinite knowledge, in that it is completely grounded in the object, and in particular is the sensible effect of it.[11] Hume, however, had shown that not only does such a picture leave no room for traditional metaphysical concepts – like that of God and the soul – whose 'objects' clearly never impress themselves upon the senses, but that it also undermines some fundamental concepts of empirical science. In particular, concepts such as substance and causation – foundational to the thriving natural sciences – go beyond all possible experience qua make claims about what always and necessarily happens, and as such can never be derived from sense impressions. Such concepts, according to Hume, are instead mere

[11] The kinds of examples motivating such accounts typically involve objects 'impressing' themselves upon our senses to cause 'matching' sensory impressions, such as when a round, red apple causes us to have a round, red visual impression. For Hume's account of this picture, see David Hume, "Of the Origin of Ideas," in *An Enquiry Concerning Human Understanding*, ed. Tom L. Beauchamp (Oxford: Oxford University Press, 1999), 96–100.

expressions of mental association and expectation, and represent nothing in the empirical world.[12]

Finding Hume's skeptical results unacceptable, while still acknowledging that finite knowledge must be somehow grounded in its object, Kant made his 'Copernican turn' (cf. Bxvi-xvii; Bxxiin) to argue that finite knowledge instead stands in a two-way grounding relation with its object. In particular, where the matter or determinate content of our knowledge depends upon independently existing objects, and specifically upon sensible affection by them, the general sensible and intellectual form of those same objects depends upon our representation of them.[13] Such formal features of objects are valid, moreover, since they are conditions on our senses presenting us with objects in the first place.[14] The empiricists' notion of a mode of representation completely grounded in its object, meanwhile, is relegated with Kant to that of non-rational animals, who completely lack the spontaneity of mind required for their representations to be at all a priori determinative of the object, i.e., for the object to depend upon their representations in any respect.[15]

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[12] On Hume's account, these concepts are instead expressions of mere mental association and expectation. Cf. David Hume, "Of the Idea of Necessary Connection," in *An Enquiry Concerning Human Understanding*, ed. Tom L. Beauchamp (Oxford: Oxford University Press, 1999), 134–47.

[13] Hence Kant also sometimes refers to his view as "formal idealism" (B519; *Prol.* 4:337): the matter of finite knowledge depends upon the object, while that same object's formal features depend upon the finite knower, and hence are ideal.

[14] The way I have put this is controversial. For the canonical opposing interpretations according to which only the forms of intuition, and not the categories, are conditions on sensibility presenting us with objects, see: Lucy Allais, "Kant, Non-Conceptual Content and the Representation of Space," *Journal of the History of Philosophy* 47, no. 3 (2009): 383–413; and Robert Hanna, "Kant and Non-Conceptual Content," *European Journal of Philosophy* 13, no. 2 (2005): 247–90.

[15] Thus although Kant thinks that animals must be afforded representations in some sense, since they "act in accordance with *representations*" (*CPJ*, 5:464n), he holds "they do not cognize" objects through their representations (*JL*, 9:65).

Just as the creative, one-way grounding relation characteristic of infinite knowledge shapes Kant's conception of an infinite cognitive faculty, the two-way grounding relation characteristic of finite knowledge shapes his conception of our own cognitive faculty. In particular, it is the basis of Kant's famous 'two-stem' doctrine (A15/B29): finite cognition presupposes both a receptive faculty for producing intuitions on the basis of affection by independently existing objects – sensibility – and a separate, spontaneous faculty for producing, not intuitive, but general representations of unity – namely discursive understanding.[16] Kant thus explains that "[i]t comes along with our nature that intuition can never be other than sensible" (A51/B75), since our intuition is not creative but rather "[t]he capacity… to acquire representations through the way in which we are affected by objects" (A19/B33). It can likewise be said to 'come along with our nature' that finite understanding is discursive rather than intuitive, since, as non-creative, its spontaneity must be restricted to producing general representations of possible objects, rather than singular representations of actual objects. Kant thus explains that "[t]he understanding is… not a faculty of intuition. But besides intuition there is no other kind of cognition than through concepts. Thus the cognition of every, at least human, understanding is a cognition through concepts, not intuitive but discursive" (A68/B92-3).

To summarize, then, finite knowers have in two capacities what God would have in one capacity, and this difference is ultimately traceable to the distinctive grounding relation each

[16] Cf. A15/B29: "[T]here are two stems of human cognition… namely *sensibility* and *understanding*, through the first of which objects are given to us, but through the second of which they are thought."

kind of knowledge bears to its object. In particular, because infinite knowledge completely grounds its object, it presupposes a single spontaneous faculty which supplies both the intuitive manifold and representation of unity that all knowledge presupposes, namely intuitive understanding or intellectual intuition. Finite knowledge, in contrast, because it stands in a two-way grounding relation with its object such that the object grounds the matter of our knowledge, while our knowledge grounds the object's form, instead involves separate faculties of sensible intuition and discursive understanding.

The Representations, Objects, and Acts of Finite and Infinite Cognition

Whether a knower has separate faculties of sensible intuition and discursive understanding, or just a single faculty of intuitive understanding, naturally enough determines the nature of the acts, representations, and objects at issue. Beginning with sensible intuition, Kant holds in-principle reasons for thinking that its object – an 'appearance' (A20/B34) – cannot have absolute, unconditional existence, but only relative existence whereby some of its features are grounded in our own sensible faculty. Kant's basic argument here is that because sensation – the matter of sensible intuition resulting from affection – does not intrinsically represent objects,[17] it must be structured in certain relations if it is to do so, and that this structure is therefore not something itself sensed, but rather an antecedent condition on

[17] Cf. A165/B208: "Now since sensation in itself is not an objective representation, and in it neither the intuition of space nor of time is to be encountered…"

sensing anything at all, one grounded in our own sensible capacity.[18] In our case, the relevant structure is spatiotemporal, and Kant thereby concludes that space, time, and everything within them cannot have absolute existence, and that "if we remove… the subjective constitution of the senses in general, then… all relations of objects in space and time, indeed space and time themselves would entirely disappear" (A42/B59; Cf. also *Prol*. 4:283).[19]

To put these conclusions about the relative existence of spatiotemporal appearances into perspective, Kant contrasts sensible with intellectual intuition at the end of the Transcendental Aesthetic as follows:

> [i]t is also not necessary for us to limit the kind of intuition in space and time to the sensibility of human beings; it may well be that all finite thinking beings must necessarily agree with human beings in this regard (though we cannot decide this), yet even given such universal validity this kind of intuition would not cease to be sensibility, for the reason that it is derived (*intuitus derivatus*), not original (*intuitus originarus*), thus not an intellectual intuition. (B72)

The relative existence of spatiotemporal appearances, Kant is saying, follows not, fundamentally, from anything peculiar to space and time themselves, but rather from the truth that <u>all</u> sensible intuition – spatiotemporal or otherwise – presupposes an antecedent, subjective form of receptivity for structuring sensation such as to present an object.[20] There will always be a gap, that is to say, between how an object appears under

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[18] Cf. A20/B34: "Since that within which sensation can alone be ordered and placed in a certain form cannot itself be sensation, the matter of all appearance is given a posteriori, but its form must all lie ready for it in the mind a priori."

[19] This account of space and time is also the only way, Kant thinks, to make sense of the synthetic a priori sciences of space and time that objects must conform to. In particular, geometry and the axioms of time describe the structures in virtue of which of our sensibility is able to present us with objects in the first place, and hence it applies to those objects a priori and necessarily. Cf. B40-1.

[20] Kant does hold that the idea of absolutely existing space and time is absurd (Cf. A39-40/B56), but I take it he thinks this incoherence is ultimately grounded in the fact that space and time are subjective forms of sensibility, and that <u>any</u> form of sensible intuition would entail such absurdities when posited as unconditional. Cf. B70-2.

the subjective condition of sensible intuition, and how it would exist outside of this condition or 'in itself.' For intellectual intuition, in contrast, no such gap would exist since such intuition would create its object, and as such the object would exist 'in itself' exactly as it is represented.[21]

And part of what it comes to, finally, for objects of intellectual intuition, but not sensible intuition, to exist unconditionally is that only the former would be cognized according to absolutely inner, explanatorily complete grounds, and Kant thus gives the following, separate argument for the relative existence of spatiotemporal appearances:

> For confirmation of this theory of the ideality of outer as well as inner sense, thus of all objects of the senses, as mere appearances, this comment is especially useful: that everything in our cognition that belongs to intuition… contains nothing but mere relations… Now through mere relations, no thing in itself is cognized; it is therefore right to judge that since nothing is given to us through outer sense except mere representations of relation, outer sense can contain in its representation only the relation of an object to the subject, and not that which is internal to the object in itself. It is exactly the same in the case of inner sense. (B66-7)

[21] Student notes from the metaphysics lectures record Kant making this point about the difference between sensible and intellectual intuition from the 1770s onwards as follows: "[W]e can think of an understanding which cognizes things as they are, but through intuition. Such an understanding is intuitive. *There can be such an understanding, but the human understanding is not it*…." (L1, mid 1770s, 28:241); "We never see things as they are, but rather as they are presented to our senses – if a being had intellectual intuition, as we think of God, it would intuit beings as they are, not as they appear. Our intuitive representations are only representations *about* appearances of things. We are thus acquainted only with the appearances of things" (Mrongovius, 1782-3, 29:800); "God cognizes things in themselves, for his cognitive power produces the things. We cognize only the appearances, i.e., the manner in which we are affected, and things must affect us, otherwise we know nothing at all of them. – Space and time are nothing but representations of things" (Mrongovius, 1782-3, 29:833-4); "[A]ll objects of the senses are mere appearances… Everything that we represent to ourselves comes from the senses. For only through them can we intuit things. If we had intellectual intuitions, then our understanding would have to be creative and produce the things themselves. Since that is not so, the things must produce the representations in us, and this through sensible intuition" (Mrongovius, 1782-3, 29:880); "Only the understanding of God is called intuition: as inexplicable as this kind of understanding is to us human beings, it is still supposed to indicate that God would have the faculty for cognizing things as they are in themselves, which is wholly lacking in human beings" (Vigilantius, 1794-5, 29:978).

Because the pure intuitions of space and time consist of 'nothing but mere relations,' appearances themselves, qua given within space and time, are also purely relational. This means, to quote the Amphiboly, that "nothing absolutely but only comparatively internal" (A277/B333) can be cognized in appearances, since "every condition to which we can attain in the exposition of given appearances is in turn conditioned" (A508/B537), i.e., every explanatory ground will in turn depend upon another ground in space and time. Cognition of what exists absolutely, however, would presuppose just such an absolutely inner, unconditional ground, since "the proper principle for reason in general… is to find the unconditioned for conditioned cognitions of the understanding, with which its unity will be completed" (A307/B365).[22] Reason demands, in other words, a ground which would constitute a rational 'stopping point' in the explanation of an object. Hence only intellectual intuition, which would cognize the absolutely inner, first principle of an object – rather than sensibly conditioned, purely relational properties – would know the absolute.[23,24]

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[22] *BL*, 24:106 (early 1770s): "All grounds of cognition are either internal or external. The former are determinations in the thing itself, by which it can be cognized without comparison with other things. Through the latter, however, I only acquire a cognition of a thing insofar as I compare it with other things. And these external grounds of cognition are called marks or characteristics."

[23] Kant thus contrasts sensible and intellectual intuition in the *Inaugural Dissertation* as follows: "[A]ll our intuition is bound to a certain principle of form [space and time], and it is only under this form that anything can be *apprehended* by the mind immediately or as *singular*… The *intuition*, namely, of our mind is always *passive*. Divine intuition, however, which is the principle of objects, and not something governed by a principle, since it is independent, is an archetype, and for that reason perfectly intellectual" (2: 396-7; Translation from Cambridge edition: *Kant, Theoretical Philosophy 1755-70*, 389). Sensible and intellectual intuition both involve a form or 'principle.' But where sensible intuition's principle – space and time – governs the apprehension of the object, the principle of intellectual intuition, qua creative, unconditionally governs the object itself, and not merely the apprehension of it.

[24] Houston Smit, in his 'Intuition' entry to the Cambridge *Kant Lexicon*, argues that while sensible intuition involves intuitive marks, intellectual intuition would not involve marks, since marks are external grounds of cognition – i.e., grounds based, at least in part, on the comparison of objects – and intellectual intuition would be the cognition of an object's absolutely inner, non-relational grounds. Julian Wuerth, ed. *The Cambridge Kant Lexicon* (Cambridge:

Let us now turn to understanding, and the implications of the discursivity of our own. One consequence of this, Kant explains in the *Critique of the Power of Judgment*, is the possible/actual distinction:

> It is absolutely necessary for the human understanding to distinguish between the possibility and the actuality of things. The reason for this lies in the subject and the nature of its cognitive faculties. For if two entirely heterogeneous elements were not required for the exercise of these faculties, understanding for concepts and sensible intuition for objects corresponding to them, then there would be no such distinction (between the possible and the actual). That is, if our understanding were intuitive, it would have no objects except what is actual… Thus the distinction of possible from actual things is one that is merely subjectively valid for the human understanding (*CPJ,* 5:401-2)

The possible/actual distinction is grounded in, and valid only for, discursive understanding, since only such an understanding traffics in a kind of representation – concepts – which does not entail the existence of its object. Infinite understanding, in contrast, qua intuitive, would transcend the possible/actual distinction since everything it represented would be actual.

The discursivity of our understanding also holds the key, Kant argues in the *Critique of the Power of Judgment*, to making sense of our puzzling reliance on teleological explanations of organisms. Very briefly, organisms are distinct from inanimate matter in having a 'whole-explains-the-parts' structure, such that the object as a whole explains the nature of its particular parts (*CPJ* 5:372-6). The specific structure of a human heart, for example, is to be explained in terms of its role in oxygenating and nourishing the whole body. In order to represent such a whole-explains-the-parts structure, however, we must employ concepts of

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Cambridge University Press, 2021), 258. Cf. also Houston Smit, "Kant on Marks and the Immediacy of Intuition," *The Philosophical Review* 109, no. 2 (April 2000), 235–66.

rational purposiveness, such as when we say that the heart exists for the sake, or purpose, of oxygenating and nourishing the body. And this seems very odd, since organisms are clearly not artefacts – they are not products of human activity in the way that chairs, cars, and so on, are – but instead are simply 'there' in nature.

The explanation of this strange state of affairs, Kant explains, lies in the truth that discursive understanding determines the form, but not the matter, of nature, i.e., "in cognition by means of it the particular is not determined by the universal, and the former therefore cannot be derived from the latter alone" (*CPJ*, 5:406-7). Discursive understanding thus leaves room for variation and contingency within nature, and specifically for a kind of object – organisms – with a 'whole-explains-the-parts' structure that we can only represent by means of concepts of rational purposiveness. If, however, we had an infinite, "synthetic universal" understanding (*CPJ*, 5:407), i.e., an intuitive understanding, our understanding would determine the matter as well as the form of nature a priori, and there would thus be no room for any variation within nature that could not be explained through constitutive, a priori principles. Hence the fact that we must represent organisms through concepts of rational purposiveness does not imply that organisms are miraculous or somehow stand outside of nature, but instead merely points to the peculiar nature of our own finite, discursive understanding.[25]

And a final consequence of the discursivity of finite understanding concerns the status of its basic a priori representations of objective unity, the categories. In particular, the

[25] For Kant's full treatment of this issue, see §76-77 of the *Critique of the Power of Judgment*.

dependence of finite understanding upon an external condition – sensibility – for its manifold of intuition has profound implications for the categories' cognitive significance and function, which Kant brings out through a series of remarks contrasting discursive and intuitive understanding in the B-deduction.

Beginning in §16, Kant appeals to intuitive understanding to reiterate our understanding's essential dependence on sensibility for its manifold of intuition. He explains that:

> through the 'I,' as simple representation, nothing manifold is given; it can only be given in the intuition, which is distinct from it, and thought through *combination* in a consciousness. An understanding, in which through self-consciousness all of the manifold would at the same time be given, would be *intuit*; ours can only *think* and must seek the intuition in the senses. (B135)

An infinite understanding would produce a manifold of intuition through the mere act of representing "I," and as such would depend upon no other condition than itself. Finite understanding, in contrast, because its spontaneity is merely discursive, is completely dependent upon sensibility for its manifold of intuition.

In §17, having argued that finite cognition presupposes a 'special act of synthesis' in which our understanding combines the sensible manifold in one consciousness or representation, Kant appeals to intuitive understanding to make clear that the need for this special synthesis stems not from the requirements of understanding as such, but merely from the requirements of discursive understanding:

> This principle [that all manifold of sensible intuition is subject to a special act of apperceptive synthesis], however, is not a principle for every possible understanding, but only for one through whose pure apperception in the representation *I am* nothing manifold is given at all. 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 the synthesis of the manifold for the unity of consciousness, which the human understanding, which merely thinks, but does not intuit, does require. (B138-9)

Because an intuitive understanding would spontaneously produce a manifold of intuition, it would not presuppose a special act of synthesis for its combination in one consciousness, for the reason that it would already be so combined in virtue of having been produced through its own self-conscious act. This makes clear that our understanding's need for such a synthesis stems not from the general requirements of understanding as such, but rather from the peculiar requirements on finite, discursive understanding, and specifically its dependence upon an external condition – sensibility – for its manifold of intuition.

In §21, having concluded in §20 that the categories just are the rules of synthetic unity by means of which a finite understanding, in its special act of synthesis, combines the sensible manifold in one consciousness and object, Kant again invokes the concept of intuitive understanding to clarify the categories' cognitive function:

> In the above proof… I still could not abstract from one point, namely, from the fact that the manifold of intuition must already be *given* prior to the synthesis of understanding and independently from it… For if I wanted to think of an understanding that itself intuited (as, say, a divine understanding, which would not represent given objects, but through whose representation the objects would themselves at the same time be given, or produced), then the categories would have no significance at all with regard to such a cognition. They are only rules for an understanding whose entire capacity consists in thinking, consists, i.e., in the action of bringing the synthesis of the manifold that is given to it in intuition from elsewhere to the unity of apperception, which therefore *cognizes* nothing at all by itself, but only combines and orders the material for cognition, the intuition, which must be given to it through the object. (B145)

Since the categories – our fundamental concepts of objective unity – are essentially rules for combining passively received, sensible manifolds in one consciousness and object through the

special act of synthesis, they would play no role at all in the cognition of an infinite, intuitive understanding. The latter understanding's manifold would, as just mentioned, be combined in one consciousness purely in virtue of having been produced through its own act of self-consciousness, and as such it would not involve the 'special act of synthesis' that is the categories' ground.

And this, finally, clarifies the categories' ontological significance, a point which Kant again illustrates through the concept of intuitive understanding in §23:

> The pure concepts of the understanding… extend to objects of intuition in general, whether the latter be similar to our own or not, as long as it is sensible and not intellectual… Thus if one assumes an object of *non-sensible* intuition as given, one can certainly represent it through all the predicates that already lie in the presupposition that *nothing belonging to sensible intuition pertains to it*: thus it is not extended, or in space, that its duration is not a time... But there is not yet a genuine cognition if I merely indicate what the intuition of the object is *not*, without being able to say what is then contained in it.. [W]hat is most important here is that not a single category could apply to such a thing. (B149)

Because the categories are essentially rules for combining sensible manifolds in one consciousness and object, they have no positive significance with respect to objects of intellectual, non-sensible intuition, contrary to what the rationalists and even the pre-critical Kant thought.[26] This point follows simply by noting that intellectual intuition, which would know the supersensible, would not require the special act of synthesis which is the categories' ground. Finite understanding is thus essentially an aspect of a capacity for sensible cognition.

[26] Cf. *ID*, 2: 392: "things which are thought sensitively are representations of things as they appear, while things which are intellectual are representations of things as they are."

* * *

Let us summarize the account of finite and infinite cognition so far. All knowledge, for Kant, presupposes intuition, understanding, and a grounding relation between object and representation. Infinite knowledge, qua creative, would completely ground its object, and as such would involve a single faculty of intuitive understanding or intellectual intuition. The object of such a capacity would exist unconditionally both because, qua created, it would exist 'in itself' exactly as it was represented as being, and also because it would be cognized according to absolutely inner, explanatorily complete intellectual grounds (these are ultimately two sides of the one coin).

Finite knowledge, meanwhile, stands in a two-way grounding relation with its object, such that our knowledge grounds the object's form, while the object grounds our knowledge's matter. Finite knowledge thus involves separate faculties of receptive, sensible intuition and discursive understanding, and "[o]nly from their unification can cognition arise" (A51/B75-6). The object of sensible intuition has essentially relative existence, since sensible intuition presupposes an antecedent, purely relational form for structuring sensation – the effect of affection – such as to present an object. Discursive understanding, meanwhile, must introduce its spontaneous representation of unity into the sensible manifold through a 'special act of synthesis,' and this synthesis, in turn, is the ground of the categories – the finite understanding's fundamental a priori concepts of objective unity. The categories would therefore play no role in intuitive understanding, and have no cognitive significance with

respect to its object, since such an understanding, qua intuitive, would not presuppose the special act of sensible synthesis that is the categories' ground.

SECTION TWO: SENSIBLE INTUITION AND TIME

Transitions from Inactivity to Activity

We have rehearsed various well-known features of our knowledge that Kant sees as following from the finitude of our cognitive capacity, most essentially our possession of separate faculties of sensible intuition and discursive understanding. Drawing on Aristotle, I will now attempt to establish, on Kantian grounds, a novel connection between time and acts of sensible intuition, i.e., intuition which depends upon affection by an object it does not create.

Aristotle draws a distinction, which I think Kant also accepts, between two kinds of verbs, and two corresponding kinds of activity or actualization. For one kind of verb, which expresses those actions Aristotle calls 'pure activities,' the truth of the present tense implies the truth of the past perfective. For the other kind of verb, which expresses those actions Aristotle sometimes calls 'motions,' the truth of the present tense does not imply that of the past perfective.[27] Aristotle explains this distinction in the *Metaphysics* as follows:

> Since among actions that have a limit, none is a completion, but is rather a thing relative to a completion… this sort of thing is not an action or at least not a complete one (just because it is not a completion). But that sort of action to which its completion belongs is a real action. So for example at the same time one is seeing and has seen, is understanding and has understood, is thinking and has thought. But if you are learning, you have not at the same time learned, and if you are being cured you

[27] For an extended discussion of Aristotle's view of the relation between tense and different kinds of acts, see Stephen Makin, trans., *Aristotle: Metaphysics Theta*, Clarendon Aristotle Series (Oxford: Clarendon Press; Oxford University Press, 2006), 134–50.

> have not at the same time been cured… Of these actions, then, we should call one group motions, and the other activities. For every motion is incomplete: slimming, learning, walking, building; these are motions and are indeed incomplete. But at the same time one has seen and sees; these are the same thing, as are thinking and having thought. So the latter of these I call an activity.[28]

Pure activities are necessarily complete, Aristotle explains here, in that they do not involve a progressive advance towards completion, and as such cannot be commenced without also being completed. Aristotle's most intuitive examples of pure activities – and the type which Kant also certainly accepts – are acts of intellect and knowledge, e.g., understanding, thinking, and seeing that something is the case. If one is understanding who the president is, for instance, then necessarily one also has understood this fact. Similarly, if one is seeing that the cat is on the mat, then necessarily one also has seen that the cat is on the mat. It makes no sense to be 'in the process' of such acts – e.g., to be halfway done with them – which is why the truth of the present tense implies the truth of the past perfective.

Motions – for which Aristotle gives the examples of slimming, learning, healing, walking, and building – do, meanwhile, involve such a progression towards completion over time, and as such are not necessarily complete actions since they can be interrupted prior to their completion. As long as one is walking to one's destination, for instance, it is not the case that one has walked there; similarly, as long as one is learning to speak German fluently, it is not the case that one has learnt to so speak German. The truth of the present tense of motion verbs thus does not entail the truth of the past perfective – and indeed excludes it – and motions are

[28] *Metaphysics* 9.6 (Theta), 1048b18–34. Translation taken from Louis Aryeh Kosman, *The Activity of Being: An Essay on Aristotle's Ontology* (Cambridge, Mass: Harvard University Press, 2013), 40.

therefore distinct from pure activities in being essentially temporal acts: they necessarily involve an advance towards completion over time.

Why exactly do motions, however, but not pure activities, involve such a temporal advance towards completion? Motions are distinct from pure activities in the following way: they not only, like pure activities, culminate in a determinate state, but they also begin from a determinate state, and as such involve a transition between states which are not merely different but contrary or opposite. Such a transition between determinate, contrary states, however, is only possible – according to both Aristotle and Kant – by means of a continuous advance through intermediate determinate states over time, and in particular, over time's dense order of moments such that between every moment there is always a further moment.[29] As Kant explains in the Second Analogy,

> neither time nor appearance in time consists of smallest parts, and… nevertheless in its alteration the state of a thing passes through all these parts, as elements, to its second state. *No difference* of the real in appearance is *the smallest*, just as no difference in the magnitude of times is, and thus the new state of reality grows out of the first, in which it did not exist, through all the infinite degrees of reality, the differences between which are all smaller than that between 0 and *a*. (A208-9/B253-4)

When an ice cube melts, for example, an initial determination of water – being frozen – is replaced by a contrary determination – being liquid. Such a transition between contrary states of being, however, is only possible by means of the water's continuous advance through

[29] Aristotle thinks that change – a transition between contraries – is continuous because magnitude, or the measure of what changes, is continuous, and indeed that the continuity of change ultimately explains time's continuity or density: "Since what moves from something to something, however, and since every magnitude is continuous, the movement follows along with the magnitude. For because the magnitude is continuous the movement is continuous too, and because the movement is the time is." Cf. Aristotle, *Physics* IV 11, 219a10–13, trans. C. D. C. Reeve, The New Hackett Aristotle (Indianapolis: Hackett Publishing Company, Inc, 2018).

intermediate stages of frozenness/liquidity over the dense order of time. Only such a mode of transition avoids the need for an incoherent 'jump' between contraries, and explains how the alteration is really possible. Hence Kant concludes that "alteration… is only possible through and in the representation of time… Only in time can both contradictorily opposed determinations in one thing be encountered, namely *successively*" (B48-9).[30]

Pure activities, meanwhile, do not involve a transition between determinate, contrary states, but merely from a state of indeterminacy to one of determinacy, and specifically, as Aristotle explains in *De Anima*, "from having but not exercising, to actively exercising"[31] a certain capacity. In coming to understand who the current president is, for instance, one's capacity for understanding goes from a state of inactivity, indeterminacy, and ignorance, to one of activity, determinacy, and knowledge. Such a transition between states which are different, but not determinate contraries, however, takes place not via any sort of advance through intermediate states over time – indeed there are no such states between complete inactivity and activity – but rather immediately or 'all at once.'[32] It is a transition more akin to going from

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[30] To be sure, Aristotle and Kant see the relation between change and time somewhat differently, in that Aristotle sees change as explanatorily prior to time (e.g., *Physics*, IV 11, 219a10–13), while Kant thinks the opposite is the case (cf. B48), but they at least agree that change must be continuous. For an excellent analysis of Aristotle's view of time's dependence on change, see Ursula Coope, *Time for Aristotle: Physics IV.10-14* (Oxford: Clarendon Press; Oxford University Press, 2005), especially part II, 'Time's Dependence on Change.'

[31] Aristotle, *De Anima* 2.5, 417a32–34, translation taken from Kosman, 63.

[32] Even the terms 'immediately' and 'all at once' are out of place here, since they have temporal connotations. A difficulty in the philosophy of mind concerns how to express acts of mind that are, in terms of the unity of their elements, essentially non-temporal. When one utters "The cat sat on the mat," for example, the word 'mat' necessarily comes after the word 'cat.' Yet with respect to the judgment thereby expressed, the constituent words essentially involve a logical or grammatical unity, and not a temporal one. In this way, the sensible expression of a judgment obscures the essentially non-temporal nature of its unity. In the *Metaphysics of Morals*, Kant highlights this problem with respect to contract, and points out the symbolic role that the handshake has in overcoming it. A contract, for Kant, is a "purely intellectual" (6:273) relation which involves the "*united will* of both" participants (6: 272). When contracts are agreed upon in speech or writing, however, consent is only offered successively by the contracting parties, as in when they sign a contract one after the other. Such a successive mode of agreement

nothing to something than, as is the case with motions, going from something to something else, and it is for this reason that Aristotle says pure activities do not involve alterations proper – i.e., transitions between contraries – but merely "a change… towards positive states and a thing's nature," or a transition from mere potentiality and lack of being, to actuality and positive being.[33,34]

All well and good, but how does this bear on the idea that there is an intimate connection between time and acts of finite, sensible intuition? Aristotle holds, crucially, and I think Kant agrees, that while acts of intellect involve the structure of pure activity, acts of sensibility involve the structure of motion, and as such are essentially temporal acts. In *De Anima*, for instance, Aristotle explains that "[p]erception arises in both being moved and being affected… for it seems to be a kind of alteration."[35] Perception, for Aristotle, specifically involves affection in the sense of "a kind of destruction by a contrary,"[36] and an alteration in the quality of sensation. The reason perception presupposes this kind affection, Aristotle thinks,

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means, however, that by the time the second person consents, the first person may have withdrawn their consent, and as such it fails to adequately express the 'united will of both' contractors (assuming it still exists at all). Kant thinks that the handshake, qua simultaneous physical act, is a symbolic attempt to avoid this difficulty and give sensible expression to the 'purely intellectual' agreement being undertaken. Cf. *Metaphysics of Morals*, 6: 272-3.

[33] *De Anima,* 2.5, 417b15-16 in Aristotle, *De Anima*, trans. Christopher John Shields, First edition, Clarendon Aristotle Series (Oxford: Clarendon Press; Oxford University Press, 2016), 32.

[34] For Kant, likewise, acts of intellect and knowledge involve a transition from a state of indeterminacy and ignorance to one of determinacy and knowledge, as our intellect's various representations of formal unity are provided with matter and deployed in acts of synthesis. For example, the categories, forms of judgment, and syllogistic forms are all intellectual representations of formal unity, and when the appropriate matter is available (manifolds of intuition, concepts, or judgments, respectively) they are deployed in acts of sensible, judgmental, and inferential synthesis. Ignorance, for Kant, is thus the intellect's lack of appropriate matter for its formal representations of unity, rather than a determinate positive state from which it proceeds. Stephen Engstrom points out that if acts of judgment were true alterations, then they would always involve transitioning from one judgment to a contrary judgment, and therefore a 'change of mind,' which is clearly not the case. Stephen Engstrom, "Understanding and Sensibility," *Inquiry* 49, No. 1, 2–25, February 2006, 16.

[35] Aristotle, *De Anima*, 2.5, 416b33-35.

[36] Aristotle, *De Anima,* 2.5, 417b2-3.

is because "the perceptual faculty is not actual, but only in potentiality; for this reason it does not perceive, just as what is combustible does not burn by itself without something capable of burning it."[37] Sensibility, that is to say, is not a self-sufficient, intrinsically active capacity, but rather one whose actualization depends upon material affection by an external object, and a corresponding alteration in sensation. The transition between sensory states must be an alteration – it must involve a transition between opposing, determinate states – since otherwise the new sensory state could not be understood as the effect of an external object, and hence could not play its role in sense perception. Actualizations of sensibility, for Aristotle, thus have the structure of motion and essentially occur over time.

For Kant, likewise, sensibility is "the capacity (receptivity) to acquire representations through the way in which we are affected by objects" (A19/B33), and "the *receptivity* of our mind to receive representations insofar as it is affected in some way" (A51/B75). Sensibility, that is to say, is for Kant the capacity to be affected by objects in such a way as to produce intuition*s*, and, like Aristotle, he holds that "the effect of an object on the faculty of representation... is *sensation*" (A20/B34). It thus seems that insofar as Kant is committed to sensibility being a capacity for intuition of the basis of affection and therefore alteration, and insofar as he is committed to the continuity of alteration, he is thereby committed to actualizations of sensibility essentially occurring over time.

[37] Aristotle, *De Anima,* 2.5, 417a7-10. It is for this same reason, Aristotle explains in the same passage, that sensibility does "not produce perception without external objects." Aristotle, *De Anima*, 2.5, 417a3-4.

That this is Kant's view of sensibility is all but confirmed in the Anticipations of Perception when Kant makes clear in two important ways exactly why sensory consciousness – i.e., both positive sensation as well as negative or 'empty' sensory states such as visual darkness – is uniquely suited to playing its role in sensible intuition. First, Kant there explains that sensory consciousness is determinate qua having a degree or intensive magnitude:

> [S]ensation… has, to be sure, no extensive magnitude, but yet it still has a magnitude (and indeed through its apprehension, in which the empirical consciousness can grow in a certain time from nothing = 0 to its given measure), thus it has an *intensive magnitude*, corresponding to which all objects of the perception, insofar as they contain sensation, must be ascribed an *intensive magnitude*, i.e., a degree of influence on the sense. (A166/B208)[38]

Because sensation is always located along a particular sensory dimension of intensity – Kant typically gives the examples of color and taste – it is always determinate qua having a specific degree or intensity. Even the lack of sensation, which Kant equates with the merely formal representation of space and time (Cf. A165/B208), is determinate qua constituting the lower limit on any given sensory dimension, and thereby having a determinate degree of zero. Because sensory consciousness is in this way always determinate, it is a possible subject of affection and alteration in that any particular sensory state brought about by affection will stand opposed to a prior determinate sensory state, and as such can be related to a perceptual object as its cause or ground, i.e., to an object which exercises "a degree of influence on the sense" (A166/B208).[39]

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[38] Cf. also A165/B207-8.

[39] To repeat a point made earlier, if the sensory state from which an actualization of sensibility began was indeterminate, the new state could not be understood as opposing the previous state, and thus could not be understood as the result of affection in Aristotle's sense of 'a kind of destruction of something by its contrary.'

Second, Kant argues in the Anticipations that sensory consciousness is continuous, which is a condition, we saw, on the possibility of transitioning between contrary states. He explains,

> every sensation, thus also every reality in appearance, however small it may be, has a degree, i.e., an intensive magnitude, which can always be diminished, and between reality and negation there is a continuous nexus of possible realities, and of possible smaller perceptions. Every color, e.g., red, has a degree, which, however small it may be, is never the smallest, and it is the same with warmth, the moment of gravity, etc. (A169/B211)[40]

Between any two sensations along a given sensory dimension, there is always an intermediate sensation. As such, sensory consciousness is continuous, therefore capable of alteration over time, and thus able to play its role in acts of sensibility: namely being the subjective effect of external affection.[41,42]

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[40] Cf. also A168/B209-10.

[41] To be sure, Kant also makes clear in the Anticipations of Perception that the synthesis of sensation, qua intensive magnitude, "takes place by means of the mere sensation in an instant and not through successive synthesis of many sensations, and thus does not proceed from the parts to the whole" (A168/B210). The apprehension of a single sensory state, that is to say, does not occur over time, and as such it may seem that actualizations of sensible intuition also do not occur over time. In saying that sensory states qua intensive magnitudes are not synthesized successively, however, Kant is explaining how it is possible to represent a single intensive magnitude in the first place: such magnitudes rest on an instantaneous qualitative synthesis of degree, rather than a quantitative synthesis of extensive parts into an aggregate over time. Kant is not addressing, however, how it is possible to come to be in a particular sensory state; such as one resulting from external affection. For that, I submit, he would appeal to a continuous alteration over time.

[42] And indeed the schema of the category of reality just is the rule for representing sensory alterations, by means of the unification of a succession of infinitesimally different sensations over time. Cf. A143/B183: "[E]very sensation has a degree or magnitude, through which it can more or less fill the same time, i.e., the inner sense in regard to the same representation of an object, until it ceases in nothingness (= *0* = *negatio*). Hence there is a relation and connection between, or rather a transition from reality to negation, that makes every reality representable as a quantum, and the schema of reality, as the quantity of something insofar as it fills time, is just this continuous and uniform generation of that quantity in time, as one descends in time from the sensation that has a certain degree to its disappearance, or gradually ascends from negation to its magnitude."

We thus have a connection, on Kantian grounds, between finite knowledge, sensible intuition, and time, which can be summarized as follows. Because finite knowledge does not create its object, its capacity for intuition is sensible, i.e., it is capacity for intuition on the basis of affection by independently existing objects. As a capacity for affection, however, sensibility's actualizations presuppose being determined, by the object, to transition between opposing sensory states, since only then may the new state instantiate an alteration, and hence be related to the object as its ground. Transitions between opposing determinate states, however, are only possible by means of a continuous alteration over time, since only such a structure avoids the need for an unintelligible 'jump' between contraries, and explains how the alteration is really possible. As such, actualizations of sensible intuition essentially occur over time.

Infinite cognition, in contrast, qua resting completely on intellectual spontaneity, rather than passive affection, would have the structure of pure activity, and as such would not actualize itself over time. One may, to be sure, adhere to a Leibnizian theology and say that infinite cognition still presupposes time qua involving an initial moment at which all of the possible worlds were surveyed, and a subsequent moment at which one of those worlds was actualized.[43] Even then, however, the act itself would not occur over time, since it would not involve a transition between determinate, contrary states, but merely from a state of intellectual inactivity and 'mere entertaining,' to one of activity and actualization. For Kant, moreover, infinite cognition would not even involve an initial surveying of possible worlds

[43] See: Leibniz, *Monadology*, §53-8 from Gottfried Wilhelm Leibniz, "Monadology," in *Discourse on Metaphysics, Correspondence with Arnauld, and Monadology*, trans. George R. Montgomery (La Salle: The Open Court Publishing Company, 1957). And see also Gottfried Wilhelm Leibniz, *Theodicy: Essays on the Goodness of God, the Freedom of Man, and the Origin of Evil*, trans. E.M. Huggard (La Salle: Open Court, 1985).

since, as discussed earlier, he holds that the modality of possibility is essentially related to discursive understanding, and that intuitive understanding "would have no objects except what is actual" (*CPJ,* 5:401-2). Kant's view of infinite cognition is thus likely closer to that of Aristotle and Aquinas, who hold that God would possess an intrinsically active, self-sufficient intellect that transcends the capacity/act distinction.[44] Infinite cognition, on such a picture, would never involve a transition from inactivity to activity at all, since the conditions of its actualization would always be fulfilled, and instead would be, as Aquinas puts it, "pure actuality."[45]

SECTION THREE: TIME AS THE FORM OF INNER SENSE

I have said that acts of sensible intuition, for Kant, are essentially temporal insofar as they involve a continuous transition, on the basis of affection by an object, between opposing sensory states over time. This account also facilitates, I believe, a novel, 'transcendental' solution to the question of why time is exclusively the form of inner sense and not also a form of outer sense, i.e., a resolution to the first problem about time. This is a surprising claim of Kant's, recall, because time is also "the a priori formal condition of all appearances in general" (A34/B50) – the form of inner and outer appearances – and as such it seems that time should also be a form of outer sense. Yet Kant makes abundantly clear throughout the Aesthetic that this is strictly not the case:

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[44] For Aristotle's discussion of the divine mind as pure act, see Aristotle, *Metaphysics Lambda*, trans. Lindsay Judson, First edition, Clarendon Aristotle Series (Oxford: Clarendon Press; Oxford University Press, 2019), chapters 7-9. For a similar discussion in Aquinas, see Thomas Aquinas, *Compendium of Theology*, trans. Richard J. Regan (Oxford: Oxford University Press, 2009), chapters 10-11.

[45] Thomas Aquinas, *Compendium of Theology*, trans. Richard J. Regan (Oxford: Oxford University Press, 2009), 23.

> Time can no more be intuited externally than space can be intuited as something in us. (A23/B37)
>
> Time is nothing other than the form of inner sense, i.e., of the intuition of our self and our inner state. (A33/B49)
>
> [T]ime cannot be a determination of outer appearances; it belongs neither to a shape or a position, but on the contrary determines the relation of representations in our inner state. (A33/B49-50)

Time, for Kant, is thus unequivocally the form of inner sense alone, and is not contributed to outer appearances by outer sense.

To the extent that commentators have actually tried to explain the doctrine that time is exclusively the form of inner sense – rather than just puzzle over it – they have tended to say one of two things, neither of which, I will argue before giving my own account, are satisfactory. The first, which takes the form of an ontological explanation, involves claiming that outer appearances are not 'fully' or 'intrinsically' in time in the same way as inner appearances. Henry Allison, for instance, in the first edition of *Kant's Transcendental Idealism*,[46] claims that time is not a form of outer sense because outer appearances are non-temporal substances which are only temporal in virtue of their states. While the states of outer substances, that is to say, indeed stand in relations of succession and simultaneity – and hence are intrinsically temporal – Allison explains that the substances themselves, qua bearers of those states, "are spatial but not temporal."[47] Inner appearances, meanwhile, qua consisting exclusively of transitory mental

[46] Allison, *Kant's Transcendental Idealism,* 255–58.
[47] Allison, *Kant's Transcendental Idealism,* 256.

states, and not persistent substances, are intrinsically temporal, and hence time is, properly speaking, exclusively the form of inner sense.[48]

Apart from lacking any positive textual evidence,[49] Allison's account is problematic on at least the following two grounds. First, it seems highly dubious as an interpretation of Kant to say that just because outer substances, qua bearers of states, are not simultaneous and successive, those substances are therefore themselves intrinsically non-temporal. In the First Analogy, for instance, after noting that time itself is imperceptible, Kant argues that it is precisely because of substance's permanent, unchanging nature that it can instantiate "time in general" (A181/B225) in the appearances, i.e., it can represent the permanent, perceptible backdrop "in which all change or simultaneity can be perceived in apprehension through the relation of appearances to it" (A181/B225). It thus seems that even if outer substances, qua bearers of states, are not themselves successive or simultaneous, they are nonetheless essentially temporal phenomena, and that time should thus still be a form of outer sense. Second, even if we grant Allison that outer substances, qua bearers of states, are non-temporal, it nonetheless remains true that those substances are only given to us through their states, and that these states are intrinsically temporal, i.e., the states themselves stand in relations of simultaneity and succession. As such, it would again seem that time should be a form of outer

[48] Markos Valaris flirts with a similar line in his article "Inner Sense, Self-Affection, and Temporal Consciousness," but ultimately eschews it for lack of textual evidence. Markos Valaris, "Inner Sense, Self-Affection, and Temporal Consciousness in Kant's *Critique of Pure Reason*," *Philosopher's Imprint* 8, no. 4 (May 2008), 12–13.
[49] Allison, *Kant's Transcendental Idealism,* 256.

sense, and the putative ontological distinction which Allison attempts to exploit seems unable to explain time's restriction to inner sense.[50]

The other strategy commentators have employed to explain time's restriction to inner sense is epistemological, since it appeals to the notion that knowledge of outer temporal relations is somehow posterior to, or constrained by knowledge of inner temporal relations.[51] H. J. Paton, for instance, claims that time is exclusively the form of inner sense because "[a]ll that is immediately given to us in time is the stream of our ideas or states of mind," and that "[o]ur awareness of a changing spatial world would seem to be dependent on our awareness of outer intuitions as succeeding one another in our minds."[52] Consciousness of outer temporal relations is thus always derived, for Paton, from a more fundamental consciousness of inner temporal relations, and hence time is the form of inner sense alone.

Paton's account is also problematic, however, on at least two grounds. First, it does nothing to explain why time consciousness is more fundamentally connected with inner than outer appearances, and hence why Kant restricts time to inner sense in the first place. It is simply a brute fact, on Paton's account, that "[a]ll that is immediately given to us in time is the stream of our ideas or states of mind." Second, and more serious, Paton's account runs afoul of the Refutation of Idealism (B274-9), where Kant draws on the First Analogy to argue that

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[50] And Allison indeed omits this argument from the second edition of *Kant's Transcendental Idealism*. Allison, *Kant's Transcendental Idealism*, Revised and Enlarged Edition.

[51] A third type of explanation, of course, is the idealist approach I outlined in the introduction, according to which because outer appearances are completely mental entities, and because all mental entities are determinations of inner sense, so outer appearances are in time. Such an account, however, came at the cost of defying Kant's realism about outer objects, especially as expressed in the Refutation of Idealism.

[52] H. J. Paton, *Kant's Metaphysic of Experience*, vol. I (London: Allen and Unwin Ltd, 1936), 149–50.

consciousness of outer temporal relations is not logically posterior to consciousness of inner temporal relations, but rather a condition of it. The fundamental premise of Paton's account – that "[a]ll that is immediately given to us in time is the stream of our ideas or states of mind" – is therefore false, and Paton himself laments that Kant's doctrine of inner sense and time consciousness "remains full of difficulties."[53]

Béatrice Longuenesse attempts a slightly different and more sophisticated epistemological explanation. Drawing a connection with Locke's thesis that there are upper and lower limits on the pace at which successions can be perceived as successions,[54] Longuenesse argues that "[t]ime is to be related to inner sense, not outer sense" for Kant, because "[i]n order to be perceived, the succession of states of things must in some way or other be in tune with the succession of our ideas or, in Kantian terms, of our representations."[55] Outer successions which occur too quickly – Locke gives the example of a cannonball shooting through a room[56] – or else occur too slowly – Locke cites the sun's movement across the sky[57] – are not perceived as successive alterations, since they transpire at a pace too far removed from that of the succession of representations in inner sense. From this it follows, Longuenesse

[53] Paton, *Kant's Metaphysic of Experience*, 150.
[54] In Locke's words: "There seem to be *certain Bounds to the Quickness and Slowness of the Succession* of… *Ideas*." Locke, *An Enquiry Concerning Human Understanding*, 184.
[55] Béatrice Longuenesse, *Kant and the Capacity to Judge: Sensibility and Discursivity in the Transcendental Analytic of the* Critique of Pure Reason, trans. Charles T. Wolfe, (Princeton: Princeton University Press, 1998), 236.
[56] Locke, *An Enquiry Concerning Human Understanding*, 185.
[57] Locke, *An Enquiry Concerning Human Understanding*, 183. In the case of sun's movement across the sky, the idea is that we perceive its being in different locations without immediately perceiving any actual movement in it.

thinks, that "all perception of time is primarily perception of the succession of our representations in inner sense," and that time is therefore exclusively the form of inner sense.[58]

There are, however, also problems with Longuenesse's account. One question is whether it can be squared with the Refutation of Idealism; the claim that "all perception of time is primarily perception of the succession of our representations in inner sense,"[59] seems, on the face of it, to contradict the Refutation's argument that cognition of outer substances in time is a condition on that of inner states in time. And even if it can be squared with the Refutation, Longuenesse's account is still problematic insofar as it is overly focused on the temporality of outer appearances qua our consciousness of them undergoing particular successions – e.g., the cannonball's movement – when what needs to be explained is why Kant restricts the pure intuition of time to inner sense alone. Even if we grant, for instance, that outer successions must transpire at a certain pace, dictated by inner sense, in order to be perceived as successive, this does not explain why the pure intuition of time, which precedes and makes possible the perception of the particular succession, is restricted to inner sense alone. Longuenesse's account would only make sense if outer objects' being in time was dependent upon their being immediately perceived as undergoing particular successions, whereas it is one of Kant's core tenets in the Transcendental Aesthetic that the perception of particular temporal relations is only possible in virtue of the logically prior pure intuition of time (Cf. A30/B46).[60]

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[58] Longuenesse, 237.
[59] Longuenesse, 237.
[60] I also do not see why Kant would want to exclude that there may be inner successions which occur too slowly or quickly to be perceived as successive.

Time as the Form of Inner Sense – The Transcendental Account

Neither ontological nor epistemological accounts seem able to explain Kant's doctrine that time is exclusively the form of inner sense. My account of sensibility, meanwhile, as a capacity whose act involves transitioning over time between opposing sensory states, furnishes, with the addition of one final premise, an alternative explanation of this doctrine. The final premise, which should be non-controversial, is that all states of the mind – including sensory states – are ultimately determinations of inner sense. As Kant puts it in the A-deduction, "[w]herever our representations may arise, whether through the influence of external things or as the effect of inner causes, whether they have originated a priori or empirically as appearances – as modifications of the mind they nevertheless belong to inner sense" (A98-9; Cf. also A22-3/B37; A34/B50; A155/B194; A197/B242; A210/B255-6).

With this premise on the table, we can now say the following. Given that actualizations of sensible intuition involve transitioning, on the basis of affection by an object, between opposing sensory states over time, and given that all states of the mind are ultimately determinations of inner sense, it follows from the very nature of inner sense's contribution to an act of sensibility that it must have the form of time, in order for such transitions to be possible. Inner sense having the form of time, in other words, is a condition on sensibility being a capacity for intuition on the basis of affection, and is therefore a transcendental condition on experience.

It does not similarly follow, meanwhile, from the mere concept of outer sense, taken in conjunction with the observation that actualizations of sensible intuition necessarily involve a

transition between opposing sensory states over time, that what is given through outer sense – the object – must bear opposing states, and therefore it does not follow that time is a form of outer sense. It does follow, to be sure, that any sensory state presenting an outer object must stand opposed to a prior sensory state – since only then may it be understood as arising from affection by an object – but there is nothing to say that the prior state must present an outer object, let alone the same object in an opposed state. It may be, for instance, that one simply goes from a negative sensory state (e.g., darkness) to the perception of an outer object, such as when a light is turned on in a completely dark room, and one goes from seeing nothing to seeing the room's contents. As such, it is not a transcendental condition on experience that time is a form of outer sense.

And before dealing with some possible objections to this explanation of why time is exclusively the form of inner sense, it is worth citing two pieces of textual evidence for it. First, regarding the possibility of outer motion and alteration, Kant explains in the Aesthetic that:

> [i]n space considered in itself there is nothing moveable; hence the moveable must be something that is found *in space only through experience*, thus an empirical datum. In the same way the transcendental aesthetic cannot count the concept of alteration among it a priori data… For this there is required the perception of some existence and the succession of its determinations, thus experience. (A41/B58)

It does not follow, we can understand Kant as here saying, from the mere concept of a presentation of outer sense that its object will move or alter. All that follows is that it will be in space, since space is necessary "for certain sensations to be related to something outside me" (A23/B38). As such, space alone, and not also time, is the form of outer sense, since only the former is dictated by the bare requirements of an outer sense.

Second, Kant seems to acknowledge the connection between time being the form of inner sense, and the temporally progressive nature of acts of sensibility, in the Second Analogy, specifically in the context of explaining the ground of the continuity of alteration. He writes:

> [E]very advance in perception is nothing but an amplification of the determination of inner sense, i.e., a progress in time, whatever the objects may be, either appearances or pure intuitions. This progress in time determines everything, and is not itself determined by anything further: i.e., its parts are only in time, and given through the synthesis of it, but they are not given before it… We anticipate only our own apprehension, the formal condition of which, since it is present in us prior to all given appearance, must surely be able to be cognized a priori" (A210/B255-6)

Every 'advance in perception,' Kant explains here, involves a 'progress in time' whereby the 'parts' of the advance in perception – sensory states, presumably – are given in inner sense in accordance with the 'formal condition of our own apprehension,' namely time. The reason perception involves such a temporal advance, and the reason time is thus the 'formal condition of our own apprehension' in inner sense, is clear on my account. As a capacity for intuition on the basis of affection, sensibility's act involves transitioning between opposing sensory states – a transition only possible over time – since only then may the final state be understood as the result of external affection, and hence related to a perceptual object as its cause.

Two Objections

Let us now turn to the objections. Let us now turn to the objections. I have said that time is exclusively the form of inner sense because the necessity of inner transitions, but not outer transitions, follows from the bare concept of an act of sensibility. The fact remains, however, that "[t]ime is the a priori formal condition of all appearances in general" (A34/B50), i.e., time is the form of both inner and outer appearances. Part of what it means for time to so

be a formal condition of all appearances, moreover, is that purely in virtue of being intuited, all appearances are in time, i.e., time is "our way of perceiving" (A42/B59). It therefore is the case – the first objection posits – that outer appearances are in time purely in virtue of an actualization of sensibility, and as such my explanation of why time is exclusively the form of inner sense fails.

In order to navigate this objection, we need to distinguish between, on the one hand, the ultimate ground of time and its representation, and, on the other hand, the ultimate ground of outer objects being in time. And pursuant of this, it is useful to distinguish between the following three levels of transcendental reflection upon our cognitive faculty, especially our faculty of intuition. This division is not intended to be exhaustive, nor to imply that levels of transcendental reflection are always clearly demarcated, but merely to show that, when assessing about what grounds outer objects being in time, we must be clear about the level of abstraction at which we are considering our cognitive faculty.

First, we can distinguish an extremely abstract level of transcendental reflection upon the conditions of finite intuition in general. This leads to the idea of a capacity for intuition on the basis of passive affection by an independently existing object, and specifically to the concept of sensibility. At this level of abstraction, sensibility is considered as a faculty common to both rational and non-rational animals, since it is analyzed merely qua capacity for receptive intuition, without regard to how intuitions may differ in rational and non-rational animals. Now, I take it that already at this extremely abstract level of transcendental reflection, it follows that actualizations of sensible intuition essentially occur over time, since as a capacity for affection, its act presupposes being determined to transition between opposing sensory states. The

explanatory ground of time, that is to say, is finite, sensible intuition in general, i.e., regardless of whether it is that of a rational or non-rational being.

Second, we can distinguish a less abstract level of transcendental reflection, this time upon the conditions of sensibility in a rational being, i.e., in a self-conscious being who represents the distinction between subject and object. At this level of reflection, sensibility is divided into two sub-capacities – inner sense and outer sense – in order to explain the possibility of intuition of the subject, and object, respectively.[61] Since, moreover, we already know from the prior, more abstract level of transcendental reflection that actualizations of sensible intuition, qua involving transitions between opposing sensory states, essentially occur over time, it also already follows at this level of transcendental reflection, I take it, that inner sense must have the form of time, in order to be capable of representing such transitions. The explanatory ground of inner sense having the form of time, in other words, is the truth that all actualizations of sensible intuition involve a transition between opposing sensory states over

[61] In the *Prolegomena*, for instance, Kant explains that "all the predicates of inner sense are referred to the *I* as subject, and this *I* cannot again be thought as the predicate of some other subject." (4:334) Pure apperception, which non-rational animals lack, thus constitutes the topic or subject which inner sense presupposes and determines. Kant does, to be sure, sometimes ascribe an outer sense to animals in various places (e.g., *Lectures on Metaphysics*, *L1* (mid-1770s), 28:276-7), and some commentators thereby take animals to have a capacity for outer representation identical to our own (Cf. Allais, "Kant, Non-Conceptual Content and the Representation of Space," 2009; Hanna, "Kant and Non-Conceptual Content," 2005; Colin McLear, "Kant on Animal Consciousness," in *Philosophers' Imprint* 11, no. 15 (2011), 1–16; Sacha Golob, "What Do Animals See? Intentionality, Objects and Kantian Nonconceptualism," in *Kant and Animals*, ed. John J. Callanan and Lucy Allais (Oxford: Oxford University Press, 2020), 66–88. However, it is important that Kant thinks animals can only be ascribed representations on the basis of the analogy of their behavior with our own (Cf., *Critique of Judgment*, 5:464), and that their 'representations' are likely something extremely divergent from ours (*Anthr.*, 7: 141). Indeed, given that animals lack understanding – the faculty of objective unity – it would seem that what is given through an animal's 'outer sense' must have something of the character of what is given, for a human being, through inner sense, i.e., it must have merely subjective unity, and not involve a combination of representations in an object. The issue of animals' representational capacities, and their similarity and difference from our own, will be taken up again in the next chapter.

time, and that, in a rational being, sensibility involves an inner aspect which must be capable of representing such transitions. It does not similarly follow, however, from the bare distinction between inner and outer sense, in conjunction with the observation that acts of sensibility involve a transition between opposing sensory states over time, that time is a form of outer sense, since there is nothing to say – at this level of reflection – that what is given through outer sense will bear opposing determinations. It only follows that because outer sense presents something distinct from ourselves, i.e., presents the object, it requires a form, such as space, which allows "for certain sensations to be related to something outside me" (A23/B38).

Third, we can distinguish a less-abstract-again level of transcendental reflection, at which we consider a unified act of sensibility in a rational being, specifically with respect to how the contributions of inner and outer sense are related in such an act. This, I take it, is the level of transcendental reflection which explains why time is also a formal condition of outer appearances, despite being solely the form of inner sense. In the Transcendental Aesthetic, in particular, Kant gives the following argument – which I mentioned in the introduction – for why outer appearances are in time:

> [S]ince… all representations, … nevertheless as determinations of the mind themselves belong to the inner state, while this inner state belongs under the formal condition of inner intuition, and thus of time, so time is an a priori condition of all appearances in general, and indeed the immediate condition of inner intuition (of our souls), and thereby also the mediate condition of outer appearances. (A34/B50)

Time is a formal condition on outer appearances, Kant here explains, because the outer intuitions which present those appearances are, qua determinations of inner sense, themselves in time. Exactly how this 'mediation' between inner and outer sense is supposed to work will be the main topic of the next chapter, but for now just note that it would clearly be a mistake to

say that outer appearances are in time purely in virtue of outer sense's contribution to an act of sensibility. Instead, while outer appearances are in time, this is only because of how outer sense relates to inner sense in a unified act of sensibility; inner sense being the faculty which, for the reasons explained at the second level of transcendental reflection, is the ultimate ground of the representation of time. By thus distinguishing carefully between the different levels of abstraction at which we are assessing our sensibility, and thereby being clear about what grounds various aspects of it, we can hold onto the idea that outer appearances are temporal purely in virtue of being intuited – i.e., purely in virtue of an actualization of sensibility – while also respecting the thought that time is, properly speaking, the form of inner sense alone.

The second objection concerns the fact that Kant seems to admit the logical possibility of forms of sensible intuition other than space and time. In a passage quoted earlier, for instance, he remarks that "[i]t is also not necessary for us to limit the kind intuition in space and time to the sensibility of human beings; it may well be that all finite thinking beings must necessarily agree with human beings in this regard (though we cannot decide this)" (B72; my emphasis).[62] Taking this passage at face value – and I see no reason not to – Kant thinks that space and time, qua forms of human sensibility, cannot be derived from the bare concept of a capacity for sensible, receptive intuition, and hence that there is no logical contradiction in the concept of a non-spatiotemporal sensibility, i.e., we can at least consistently form the concept

[62] For another passage where Kant seems to entertain that space and time may be contingent forms of sensibility, see B145-6, B150.

such a faculty.[63] Such a concept is, to be sure, purely negative – we form it simply by negating the spatiotemporal character of our own sensibility – and so it may well be that it does not represent anything really possible.[64] Nonetheless, our own epistemic position means that 'we cannot decide' this matter.

The logical possibility of non-spatiotemporal forms of sensibility might seem at odds with my account of the connection between time, sensible intuition, and inner sense, since I did, in effect, generate it simply through reflection on the concept of sensible intuition. I said that as a capacity for intuition on the basis of affection, sensible intuition presupposes being determined, by an object, to transition between opposing sensory states, which is a kind of transition that presupposes time, and that inner sense as the seat of all mental determinations, also presupposes time as its representational form. Strictly speaking, however, I take it that all I have shown is that an act of sensibility, and inner sense's representational form, presupposes a dense, linear order – i.e., a one-dimensional structure such that between any two positions on it there is always a further position – over which sensory alterations can intelligibly occur and be represented. It is logically possible, though perhaps not really possible, that there could be a sensible form other than time with these properties – i.e., we can consistently form the concept

[63] Robert Pippin and John McDowell, following Hegel, think that even the mere logical possibility of other forms of sensibility than space and time would destroy our pretensions to knowledge, and take this is an invitation to move beyond Kant. Cf. Robert B. Pippin, "Postscript: On McDowell's Response to 'Leaving Nature Behind,'" in *The Persistence of Subjectivity: On the Kantian Aftermath* (Cambridge: Cambridge University Press, 2005), 206–20; John Henry McDowell, *Having the World in View: Essays on Kant, Hegel, and Sellars* (Cambridge, Mass: Harvard University Press, 2009), 68–89. For a recent helpful discussion of this topic, which attempts to resist the Hegelian diagnosis and response to it, see Simon R. Gurofsky, "On the Putative Possibility of Non-spatio-temporal Forms of Sensibility in Kant" *European Journal of Philosophy* 28, no. 4 (December 2020): 841–56.

[64] In the same way that, for example, the concept of something moving faster than the speed of light does not represent anything really possible despite it being logically consistent.

of a dense, linear, non-temporally successive sensible order – even though we have no idea what such a sensible form would come to, or whether it is even really possible.[65] So I take my account to be consistent with Kant's agnosticism about the possibility of other forms of sensible intuition.

* * *

Section One of this chapter introduced Kant's basic account of the structures of finite and infinite knowledge. Most basically, because finite cognition depends upon an independently existing object, it involves separate faculties of sensible intuition and discursive understanding; infinite cognition, meanwhile, as creative, involves a single faculty of intuitive understanding or intellectual intuition. **Section Two** argued for a fundamental but unappreciated connection between time and acts of finite, sensible intuition. In particular, because sensible intuition is a capacity for intuition on the basis of affection, its actualization involves transitioning between opposing sensory states, which is a kind of transition that can only occur via a continuous transition over time, or at least over a dense, linear order. **Section Three** then leveraged this idea to resolve the first problem about time, or the question of why time is exclusively the form of inner sense, despite being the universal form of appearances. I

[65] Likewise, I take it that while we can know, simply by reflecting on the concept of sensible intuition, that outer sense requires a form which allows "for certain sensations to be related to something outside me" (A23/B38), it does not analytically follow that space is the only form capable of achieving this. We can consistently form the concept, in other words, of a non-spatial form of outer sense, even though such a faculty also may not be really possible.

argued that because all states of the mind, including sensory states, are ultimately determinations of inner sense, it follows from the very nature of an actualization of sensibility that inner sense must have the form of time, in order to be able to represent the transitions between opposing sensory states that such acts involve. Time is not a form of outer sense, meanwhile, because it does not follow from the mere concept of outer sense, taken in conjunction with the observation that actualizations of sensibility essentially involve a transition between opposing sensory states over time, that what outer sense presents will bear opposing states and hence be in time. Instead, while outer objects <u>are</u> necessarily in time, this only follows once the specific relation of outer sense and inner sense in a unified act of sensibility is taken into account. How exactly this work, however, is the topic of the next chapter.

Chapter Two: Inner Sense and Outer Time

The previous chapter introduced a fundamental connection, on Kantian grounds, between time and acts of finite, sensible intuition. It then used this connection to resolve the first problem about time, or the question of why, for Kant, time is exclusively the form of inner sense and not also a form of outer sense, despite being the universal form of appearances. The next issue concerns the second problem about time, or the issue of how exactly it is that time comes to be a form of outer appearances, given this restriction to the form of inner sense.

Now, as already mentioned, Kant does address this issue towards the end of the Transcendental Aesthetic, and specifically gives an argument according to which inner sense 'mediates' outer intuitions in such a way that the objects of those intuitions are also in time. The argument, however, is extremely perfunctory and admits of no straightforward reading. Here is the passage again in full:

> Space, as the pure form of all outer intuitions, is limited as an a priori condition merely to outer intuitions. But since, on the contrary, all representations, whether or not they have outer things as their object, nevertheless as determinations of the mind themselves belong to the inner state, while this state belongs under the formal condition of inner intuition, and thus of time, so time is an a priori condition of all appearances in general, and indeed the immediate condition of inner intuition (of our souls), and thereby also the mediate condition of outer appearances…. [F]rom the principle of inner sense I can say entirely generally: all appearances in general, i.e., all objects of the senses, are in time, and necessarily stand in relations of time. (A34/B50-1)

On a first reading, Kant seems be saying that because outer intuitions, qua determinations of inner sense, are in time, so the objects of outer intuitions are also in time. It cannot be this simple, however, since if a representation's being in time were a sufficient condition for its

object being in time, then everything we represented would be in time, which is clearly not the case. For instance, purely judgmental objects, such as God and morality, are clearly not in time, despite our judgments about them being – qua determinations of inner sense – in time.

Perhaps, then, Kant means that intuitions stand in some unique relation to inner sense such that everything intuitive is given in time. This however would also be problematic. First, it would entail that pure geometrical objects are in time, which seems neither philosophically correct nor accurate as an interpretation of Kant, who maintains that "[t]ime… belongs neither to a shape nor a position" (A33/B50), and as such not to pure geometrical objects. Second, as an explanation of why outer appearances are in time – i.e., why outer material objects are in time – it would presuppose exactly the kind of idealism which it is a chief goal of this dissertation to resist. In particular, it would require that outer appearances are nothing but inner states of consciousness – that they have no mind-independence whatsoever – and that the temporality of our representation of an outer appearance therefore transfers directly to the appearance itself.

There is, then, no straightforward reading of this passage that explains how time comes to be the 'mediate condition' of outer appearances. Offering a solution to this problem – i.e., resolving the second problem about time, or what I will here call the 'mediation problem' – is the central goal of this chapter. In doing so, however, the account of inner sense that began to emerge in chapter one will also be expanded upon, though always only in the context of the mediation problem, and as such always with a focus on inner sense's relation to outer sense. The full account of inner sense, and an answer to the question of what inner sense can achieve

outside of its relation to outer sense, will only be addressed in the final chapter via a discussion of the Refutation of Idealism.

The structure of the chapter is as follows. **Section One** reviews some recent prominent accounts of inner sense's contribution to outer perception, argues that none provide satisfactory solutions to the mediation problem, and establishes some criteria of adequacy for any acceptable account. **Section Two** offers a new solution to the mediation problem, by taking seriously, yet again, Kant's claim that sensibility is a capacity for affection. I argue, in particular, that human outer perception not only involves consciousness, through outer intuition, of the outer object, but also parallel consciousness, through inner intuition, of the outer intuition qua subjective effect of that object, and that this entails the temporality of the outer object itself. **Section Three** addresses an objection to the account, provides further textual evidence, and develops some implications regarding the Kantian conceptualism/non-conceptualism debate.

SECTION ONE: THE MEDIATION PROBLEM IN RECENT LITERATURE

Henry Allison is a good example of someone who gives an explicit account of how inner sense contributes to outer perception such that outer objects come to be given in time, but who fails to fully register the constraints of the mediation problem. Key to Allison's account is distinguishing between two separate syntheses or acts of inner sense: one necessary, one optional. The first, necessary synthesis of inner sense is the transcendental synthesis of imagination in the constitution of an outer intuition and appearance. In this first synthesis, inner sense is affected by the understanding as the latter determines the manifold of outer intuition, and inner sense thereby generates, in Allison's words, "the representation of a single

universal time in which all appearances have a determinate location"[1], including the outer appearance which is the object of this first synthesis. The second, optional synthesis of inner sense, meanwhile, takes the product of the first synthesis – namely an outer intuition of a spatiotemporal object – and forms a second-order representation of it, thereby construing it as a subjective state of one's mind and producing empirical self-knowledge.[2]

There are at least two problems with such an account. First, Allison simply takes for granted that outer objects must be represented as temporal, and only offers an account of how this is to be achieved, one that fails to explain the necessity of so representing outer objects in the first place. Even if we grant, for instance, that inner sense's first actualization produces no inner intuition and self-knowledge at all, and instead only produces a representation of time as a dimension of the act of determining an outer object, it is unclear why the outer object itself must be represented as located within this time. One might wonder, for example, why the outer object is not merely juxtaposed in consciousness with the representation of time, rather than actually represented as within it, in much the same way that we can, when doing geometry, be conscious of both pure geometrical objects and time in a single act, yet without representing the former as within the latter. A solution to the mediation problem must thus explain why the specific relation between inner and outer sense necessitates, or dictates, that

[1] Allison, *Kant's Transcendental Idealism,* Revised and Enlarged Edition, 284. For Allison's full account of the transcendental synthesis of imagination, see 189–93.

[2] As Allison explains, "inner experience involves a kind of reflective reappropriation of the contents of outer experience. Its content consists of the very representations through which we cognize external objects; but rather than cognizing objects *through* these representations by bringing them under categories, it makes these representations themselves into objects, which it cognizes as the contents of mental states." Allison, *Kant's Transcendental Idealism*, Revised and Enlarged Edition, 278.

outer objects are given to us in time – i.e., why time is "the mediate condition of outer appearances" (A34/B50) – rather than simply taking this for granted. [3]

A second difficulty with Allison's account is how uncomfortably it sits with Kant's description of inner sense as the faculty "by means of which the mind intuits itself, or its inner state" (A22/B38). In particular, Allison's account rests upon the denial that inner sense produces any inner intuition or sensible self-knowledge in its first actualization or synthesis, and instead only produces the initial representation of time in which the outer object is located. While it is perhaps possible that Kant distinguishes between such first and second actualizations of inner sense, and holds that only the latter produces inner intuition and self-knowledge, it would be somewhat surprising if he based his canonical description of inner sense upon an optional, albeit unique, function of this faculty, rather than on what is essential to it.

Arthur Collins gives an alternative account of inner sense's contribution to outer perception and the constitution of outer appearances, one that better respects its standing as the capacity "by means of which the mind intuits itself, or its inner state" (A22/B38). He explains that:

> In order that the original representations of outer sense be accessible to our combinatory powers, they must themselves be apprehended, and this is the fundamental business of inner sense… Inner sense is a matter of apprehending mental realities that are, in the first instance, none other than the representations of outer things that the stimulation of outer sense engenders… Therefore, in so far as there is

[3] To be sure, Allison might – as Nick Stang also does – appeal to the Refutation of Idealism to argue that we must represent outer objects in time, as a condition on representing our own inner states in time. This, however, would only explain the subjective necessity of representing outer objects in time and not its objectivity necessity, i.e., it would only explain why we must represent outer objects as in time, but not why time is a condition on the outer objects themselves. Cf. Nicholas F. Stang, "Kant's Schematism of the Categories: An Interpretation and Defense," *European Journal of Philosophy* (forthcoming).

> an empirical manifold of inner sense, it will contain representations *of the representations* that make up the manifold of outer sense.[4]

Collins thinks that outer intuitions, qua passively received representations, are distinct from spontaneous representations, such as judgments, in that they are only available to consciousness through inner sense, which in turn explains why the objects of outer intuition, but not purely judgmental objects (God, morality, etc.), are necessarily in time. Collins is thus able to respect, unlike Allison, inner sense's standing as a faculty of inner intuition, since outer intuitions are themselves inner states which must be inwardly intuited if they are to contribute to cognition. He is also apparently able to explain, unlike Allison, why the relation between inner and outer sense necessitates that outer appearances are given to us in time: namely because outer intuitions "enter into the sphere of mental activity only because inner sense takes the representations of outer sense for its objects."[5]

There are, however, several problems with Collins' account. First and most serious, it seems to result in the wrong object ending up in time. In particular, if inner sense only produces "representations *of the representations* that make up the manifold of outer sense,"[6] then this only explains why outer intuitions qua vehicle are in time, and not why the objects of outer intuitions are in time.[7] Thus, whereas Allison was able (if we read him charitably) to explain the possibility of representing outer objects in time, but could not respect inner sense's standing as a faculty of inner intuition, Collins has the opposite problem: he can respect inner sense's

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[4] Collins, 109.
[5] Collins, 115.
[6] Collins, 109.
[7] Unless, of course, Collins wanted to say that a representation being in time was a sufficient condition on its object being in time, in which case, again, all representational objects, including abstract objects, would be in time.

standing as a faculty of inner intuition, but only at the cost of being unable to explain why outer objects are given in time. There thus seems to be something of a trade-off between getting the outer object into time, on the one hand, and respecting inner sense's status as a faculty of inner intuition, on the other.

A second problem for Collins is the Refutation of Idealism, since insofar as he holds that consciousness of outer objects is possible only through inner sense's "representations *of the representations* that make up the manifold of outer sense,"[8] this is precisely the problematic idealism that Kant criticizes and rejects in the Refutation. Problematic idealism, recall, holds that "the only immediate experience is inner experience, and that from that outer things [can] only be inferred" (B276), against which Kant argues that "outer experience is really immediate, that only by its means is possible… inner experience." (B277)[9] Consciousness of outer objects is thus immediate for Kant, and not derived from an antecedent apprehension of inner representations such as Collins describes. Collin's account must therefore also be rejected on textual grounds.

Finally, even supposing that Collins can explain how outer objects, and not just the intuition of them, end up in time, his account raises a doubt about time's legitimacy that should be avoided if at all possible. The issue is that in holding that outer intuitions "enter into the sphere of mental activity only because inner sense takes the representations of outer sense for its objects"[10], Collins risks making the temporality of outer objects a regrettable artifact of the

[8] Collins, 109.
[9] I give a reading of the Refutation of Idealism in chapter four.
[10] Collins, 115.

human mind, and not a genuine requirement on the outer objects themselves.[11] It is only once outer intuitions are intuited in inner sense, after all, that their objects take on a temporal aspect, and Collins' account thus risks rendering time a subjective projection. In §27 of the B-deduction, by way of comparison, Kant explains that a successful transcendental deduction of the categories requires showing that they are conditions on the objects themselves, and not merely on our thinking about those objects, since in the latter case "all insight through the supposed objective validity of our judgments would be nothing but sheer illusion" (B168). If it likewise turned out, as a matter of subjective fact, merely that we humans must represent outer objects as temporal, since outer intuitions are only available to us through inner sense, then this would create a similar doubt about the legitimacy of time with respect to outer objects. A successful solution to the mediation problem must therefore explain not only why outer objects appear to us in time, but why, as a matter of what is demanded by the nature of sensible objecthood as such, outer objects themselves are in time. A successful solution to the mediation problem must therefore explain not only why the relation between inner and outer sense necessitates that outer objects are given to us in time, but also why, as a matter of what is demanded by the nature of sensible objecthood as such, outer objects themselves are in time.

[11] Sebastian Gardner, in his brief treatment of the mediation problem, risks a similar result when he says that "outer objects are in time because, and only because, they are represented by our mental states, which are in time: the temporality of outer objects derives from that of our mental states." Sebastian Gardner, *Routledge Philosophy Guidebook to Kant and the Critique of Pure Reason*, Routledge Philosophy Guidebooks (London: Routledge, 1999), 74–5.

More recently, Friederike Schmitz and Ralf Bader have offered independent, yet importantly similar, solutions to the mediation problem.[12] Schmitz and Bader, like Collins, argue that upon being affected by an object, outer sense generates an outer intuition of the object that is only available to consciousness through inner sense. They diverge from Collins, however, in holding that rather than becoming conscious, through inner sense, of the outer intuition qua vehicle, we instead become conscious of its manifold or content, and thereby become conscious of the object in time. Schmitz hence explains that because outer objects "are given only in the inner sense whose form is time, so we must think of them as exhibiting the form of time or as being temporally ordered,"[13] while Bader echoes that "reflecting on one's mental states results in awareness of the temporalized contents of those states."[14] Schmitz and Bader can thus ostensibly explain both why outer objects, and not just outer intuitions, are necessarily given in time, while also respecting inner sense's standing as a faculty of inner intuition, since

[12] Friederike Schmitz, "On Kant's Conception of Inner Sense: Self-Affection by the Understanding," *European Journal of Philosophy* 23, no. 4 (2013), 1044–63. Ralph Bader, "Inner Sense and Time," in *Kant and the Philosophy of Mind: Perception, Reason, and the Self*, ed. Anil Gomes and Andrew Stephenson, (Oxford: Oxford University Press, 2017), 124–37. For a positive reception of Schmitz and Bader's articles, see Tobias Rosefeldt, "Kant on Imagination and the Intuition of Time," in *The Imagination in German Idealism and Romanticism*, ed. Gerad Gentry and Konstantin Pollok (Cambridge: Cambridge University Press, 2019), 60–2.

[13] Schmitz, 1052. And later: "The model I am suggesting… splits sensibility up into one inner and one outer sense and assigns to each a position on different levels of the process of perception. The understanding as imagination takes its place between the two: it is needed to synthesize sensations and form them into intuitions which are then given to inner sense and thereby receive a temporal order. Therefore the model has not only two stages—sensibility and understanding—but at least three—outer sense, understanding, and inner sense." Schmitz, 1054.

[14] Bader, 127. And again: "Noumenal affection… brings about a mental state (a noumenal representation) that represents an outer object that is in space… In order to become aware of this object, the subject needs to reflect on its mental state, i.e., the mind needs to look inward… By reflecting on its mental state, the subject becomes conscious of the object, not of the representation itself." Bader, 126–27.

outer intuitions are themselves states of the mind which must be intuited through inner sense in order to reach consciousness.[15,16]

There are, however, also problems with Schmitz and Bader's accounts. An initial difficulty is that, perhaps even more so than Allison's account, they sit uncomfortably with Kant's description of inner sense as the faculty "by means of which the mind intuits itself, or its inner state" (A23/B37). In particular, what we become conscious of through inner sense's paradigmatic act, for Schmitz and Bader, is, at least at the level of appearances, something completely outer and non-mental: namely a physical object in space and time. Is it really the case that the 'self and inner state' given in inner sense can consist in a spatiotemporal objects? This seems deeply unintuitive, to say the least. Schmitz, for her part, bites the bullet completely and "recommend[s] attributing the position to Kant that there are no inner intuitions," that is, no "intuitions referring to inner phenomena… (e.g., inner states)."[17] Anticipating the obvious

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[15] Schmitz does the better job of tying her account to Kant's larger framework, and in particular to the figurative synthesis. For Schmitz, outer sense is sensibility's capacity to be affected by external objects, while inner sense is sensibility's capacity to be affected from within by the understanding's spontaneity, and so it is only by determining sensibility from within through inner sense that the understanding can determine the outer manifold. Cf. Schmitz, 1050–52. For Bader, in contrast, inner sense seems to be more of a purely introspective capacity, one through which we 'look inward' to find the contents of the mind. Cf. Bader, 126–27.

[16] Stephen Engstrom, in his article "The category of substance," puts forward a similar view to Schmitz and Bader. He seems to think that although consciousness of outer intuitions does not depend upon their being intuited in inner sense, inner sense nonetheless necessarily produces parallel consciousness of outer intuitions and their objects in time. I do not pretend to fully understand how this account is supposed to work, however. He writes that "the self-affecting synthesis of the imagination generates, on the occasion of affections of consciousness from without, perceptions of appearances in outer intuition, that is, in space, and that self-affection yields inwardly-directed consciousness of those same perceptions—or, what comes to the same, their immediate objects, the appearances—in inner intuition, as successively ordered in time. Time is therefore a condition to which all material of experience is subject." Stephen Engstrom, "The Category of Substance," in *History of Philosophy and Logical Analysis* 21, no. 1 (2018): 255.

[17] Schmitz, 1056–57. Bader allows that inner sense can produce more standard self-knowledge as well, e.g., second-order representations of first-order perceptions of outer objects, but only in an optional, secondary act. Inner sense's first act just produces consciousness of outer objects. Cf. Bader, 132—34.

objection that Kant regularly speaks of 'inner intuitions' (e.g., A22/B37), Schmitz appeals to Kant's remarks that inner sense provides "no intuition of the soul itself, as an object" (A22/B37), and exploits the intuiting/intuited distinction to argue that an inner intuition, for Kant, is exclusively an inner intuiting of the kind she describes: namely, an inner intuiting of an outer intuition's manifold and object, as part of an act of outer perception. I take it, however, that such a reading is unsustainable. In the first place, that the mind is not given in inner sense 'as an object' by no means entails that it is not given in inner sense at all; far more likely is that Kant means the same thing he does in the First Paralogism – namely that the mind is not given as a substance or thing (Cf. A348-51). Second, Kant's talk of 'inner experience' in the Refutation of Idealism surely refers to inner intuitions of the kind which Schmitz deems impossible – perceptions, desires, feelings, thoughts, and so on – since Kant wants to concede such a subjective strata of experience to the material idealist in order to argue that it presupposes the reality of outer experience.

The Refutation of Idealism is also a problem for Schmitz and Bader in that while they can – unlike Collins – explain the phenomenology of being immediately conscious of outer objects,[18] they are still committed to outer experience resting upon a prior inner apprehension of outer intuitions, and as such cannot allow for the "immediate consciousness of the existence of other things outside me" (B276) that Kant speaks of in the Refutation. Schmitz and Bader might, to be sure, appeal to Kant's various remarks that appearances are "mere

[18] Since inner sense produces, on Schmitz and Bader's accounts, consciousness of the manifold or content of outer intuitions, rather than of outer intuitions qua vehicle.

representations" and "nothing but representations" (Cf. A42/B59; A250; A491-2/B519-20), in order to argue that outer appearances are ultimately completely inner determinations of the mind of which we are immediately consciousness through inner sense.[19] But to so read these passages would be to saddle Kant with an idealism that we have already seen there is good reason to reject.

And the final problem with Schmitz and Bader's accounts is that – as with Collins' – they generate a doubt about the objectivity of time with respect to outer appearances. In particular, because outer intuitions are only available to consciousness through inner sense, there is room to wonder what outer objects may be like outside of this condition, and whether they are 'truly' temporal. As discussed earlier, Kant's disdain for merely subjective necessity means that such a result should be avoided if at all possible.[20]

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[19] Schmitz explicitly takes it as a virtue of her account that it is consistent with the Refutation of Idealism, but I take it that all she has in mind is the phenomenology of immediate consciousness of outer objects. Cf. Schmitz, 1049.

[20] I want to stress, however, that despite my criticisms of Schmitz and Bader, there is something deeply right about the spirit of their accounts. In particular, they are attentive to a fundamental teaching of the Refutation of Idealism: namely, that inner sense is not a self-standing introspective capacity, but rather an aspect of the larger capacity for outer sensible cognition. Schmitz and Bader respect this thought in the following way: inner sense has no manifold of its own, and its essential function rather consists in providing consciousness of the manifold of outer sense. While this picture respects the idea that inner sense is an aspect of the capacity for outer cognition, it does so, however, at the cost of rendering unintelligible how inner and outer sense can produce their characteristic intuitions. First, it makes unintelligible how inner sense could provide consciousness of the mind's inner, subjective condition in its first exercise. Second, it makes unintelligible how outer sense could provide immediate consciousness of objects, since outer intuitions must themselves be inwardly intuited in order to reach consciousness. A satisfactory solution to the mediation problem must therefore respect the Refutation's teaching that inner sense is an aspect of the larger capacity for outer sensible cognition, but in such a way that does not preclude inner and outer sense from producing their characteristic representations.

Having examined several insufficient accounts of inner sense's contribution to outer perception, we are now in a position to state some criteria of adequacy on any satisfactory solution to the mediation problem. They can be divided into three groups as follows:

1. Outer-object-in-time criteria
    a. Inner sense must be implied in the constitution of outer appearances in such a way that explains how the outer appearance itself, and not just the intuition of it (qua representational vehicle), comes to be in time.
    b. The account must explain the necessity of representing outer objects in time. It cannot simply take for granted, as Allison does, that outer objects are to be represented in time, but must also explain why the specific relation between inner and outer sense necessitates this.
    c. The necessity of outer objects being given in time, however, cannot be merely subjective, i.e., it cannot be a mere artifact of our peculiar cognitive constitution. Rather, time must be objectively valid in the sense of being a condition of the possibility of outer objects themselves, and not just of our consciousness of them.
2. Refutation of Idealism criterion
    a. Outer sense itself must provide immediate consciousness of outer objects. It cannot be – as per Collins, Schmitz, and Bader – that in order for outer intuitions to reach consciousness and contribute to cognition, they must first be intuited through inner sense.
3. Inner intuition criteria

a. Inner sense's standing as the faculty "by means of which the mind intuits itself, or its inner state" (A22/B37) must be respected. The account must leave room for the possibility of genuinely inner intuitions.
b. Nonetheless, as per Kant's remarks in the Aesthetic and First Paralogism, inner sense must not present the mind as an object or substance.

SECTION TWO: INNER SENSE AS AN ASPECT OF THE CAPACITY FOR INTUITION ON THE BASIS OF AFFECTION

We are looking for a solution to the mediation problem that meets the above criteria, criteria which seem increasingly difficult to collectively satisfy. In order to better understand how inner and outer sense are related in an act of outer perception, I want to proceed, yet again, by taking seriously Kant's idea that sensibility is a capacity for affection, i.e., "the capacity… to acquire representations through the way in which we are affected by objects" (A19/B33). We saw in chapter one, for instance, how this notion held the key to establishing a fundamental connection between time and acts of sensibility, since as a capacity for passive affection its act presupposes being determined, by an object, to transition between opposing sensory states – a kind of transition that can only occur over time. What we are now interested in, however, is how exactly the contributions of inner and outer sense are related in such an act, and specifically why the form of inner sense – time – comes to be a form of outer appearances. And in pursuit of this, I want to first clarify the structure of an episode of affection in general – i.e., the structure implied by any case of affection, sensible or non-sensible – in

order to provide a framework for understanding the contributions of inner and outer sense in an act of outer perception.

An episode of affection in general involves at least the following three things: (1) an affecting or determining entity; (2) an affected or a determined entity (i.e., the thing with the capacity for passive affection); and (3) an effect or determination in the affected entity. When fire affects wood by burning it, for example, the fire is the affecting entity, the wood is the affected entity (the thing with the capacity for affection), and the charred wood is the effect in the affected entity.

We can begin to map the above structure onto an episode of outer sensible affection as follows: (1) the affecting entity is the outer object; (2) the affected entity is the mind, via its sensible capacity; and (3) the effect within the mind is an outer intuition of the affecting object. An outer intuition, in this way, is the effect of affection which presents the affecting object.[21]

What, however, does inner sense contribute in such an act? On the face of it, the above picture might seem to leave no room at all for any contribution from inner sense, apart from an optional, second-order inner intuition of the outer intuition. Recall again, however, the following two truths. First, sensibility is a capacity for producing intuition and consciousness on the basis of affection by an object. And second, the general structure of affection implies an affecting entity, on the one hand, and an effect in the affected entity, on the other. And now note that I have so far only explained how one of these poles – namely the affecting object –

[21] To be sure, the form of outer intuition – space – is not the result of affection, but rather the a priori structure of outer sense.

comes to be intuited, i.e., brought to consciousness. In particular, I have said that when an object affects sensibility, the effect of that affection is an outer intuition of the affecting object. The outer intuition itself, however, which qua effect of affection constitutes the other pole implied by the general structure of affection, not yet itself been represented. And this, I submit, is the role of inner sense in an act of outer perception: where outer sense produces consciousness of the affecting object through the outer intuition that is the effect of that object, inner sense produces parallel consciousness of the outer intuition itself – i.e., of the effect of affection – through inner intuition. The role of inner sense in an act of outer perception can thus be easily understood in terms of the general structure of affection.

All well and good, but how does this picture bear on the mediation problem? Consider now the following question: how are the entities presented through outer and inner sense related in consciousness in an act of outer perception? In particular, are these entities merely juxtaposed in consciousness, or is there some more determinate relation between them?

It follows from the foregoing account of sensibility as a capacity for intuition on the basis of affection, I believe, that in order for the outer object to be represented as known on the basis of affection, and therefore in order to be represented as an empirical object, it must be represented as the ground of the outer intuition which presents it, i.e., as the ground of the effect of affection given in inner sense. If, after all, humans are distinct from non-rational animals in having a self-conscious understanding of our own representational capacity that informs our particular acts – as Kant believes is the case – then we must grasp, at least implicitly, that the object of an outer intuition is the ground of that outer intuition itself qua effect of affection given in inner sense.

Were the outer object not represented as the ground of the outer intuition which presents it, i.e., of the effect of affection given in inner sense, then that outer intuition would not, I submit, be comprehended as "a representation of the sort which would depend immediately on the presence of an object" (Prol. 4:281), and its object would not be represented as something known on the basis of affection**,** and hence not as an empirical object. Instead, the 'object' of such a representation would, I believe, be more akin to what Kant calls an empirical 'image' (*Bild*; cf. A120-1; A120n; A140/B179): a sensuous, perspectival, geometric presentation that nonetheless lacks the character of an empirical object proper because it consists solely of directly perceptible features like color and shape.[22] Johannes Haag aptly calls images "objects without objectivity,"[23] since, as Sellars explains,

> the image construct does not *have* categorial features. It has an *empirical* structure which we can specify by using words which stand for perceptible qualities and relations. But it does not have logical structure; not-ness, or-ness, all-ness, some-ness are not features of the image-model. They are features of judgment.[24]

[22] In the Metaphysics L1 Lectures of the mid-1770s, Kant is recorded as describing the act of image-formation as follows: "My mind is always busy with forming the image of the manifold…. The mind must undertake many observations in order to illustrate an object differently from each side…. There are thus many appearances of a matter according to the various sides and points of view. The mind must make an illustration from all these appearances by taking them all together" (28:236). An empirical image is thus comprised of currently, previously, and – presumably – potentially perceived aspects of an object, and their imaginative combination in one representation.

[23] Johannes Haag, "Kant on Imagination and the Natural Sources of the Conceptual," in *Contemporary Perspectives on Early Modern Philosophy: Nature and Norms in Thought*, ed. Martin Lenz and Anik Waldow (Springer, 2013), 69.

[24] Wilfrid Sellars, "The Role of the Imagination in Kant's Theory of Experience," in *Kant's Transcendental Metaphysics: Sellars' Cassirer Lecture Notes and Other Essays*, ed. Jeffrey F. Sicha (Atascadero, California: Ridgeview Publishing Company, 2002), 427.

Images are thus not presentations of genuine empirical objects – things capable, and known on the basis of, affection – since they do not have the requisite categorial aspects and powers. Instead, they are purely sensory, geometric entities.[25]

And this, finally puts us in a position to say something relevant to the mediation problem. Because, for the reasons given in chapter one, inner sense necessarily presents the outer intuition as in time,[26] and because, in order to be represented as an empirical object, the object must be represented as the ground of the outer intuition itself qua effect of affection given in inner sense, it follows that the outer object must be represented in time, in order to be capable of standing in the required grounding relation with the outer intuition. The object and outer intuition, that is to say, must be represented as occupying the same temporal domain, in order for the object to be represented as grounding the outer intuition, and in order for it to be represented as empirical object at all, i.e., as something known on the basis of affection.

This solution to the mediation problem – to the second problem about time – meets, I believe, all the criteria of adequacy listed at the end of the last section. First, it results in the outer object, and not just the intuition of it, being in time. Second, it explains why the relation between inner and outer sense in an act of outer perception necessitates that the outer object is given to us in time. Third, this necessity is objective and not merely subjective; it is a condition on the object being represented as an object, and not just on our consciousness of it.

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[25] For a helpful overview of the different kinds of imaginative synthesis in Kant – e.g., empirical and figurative/transcendental – see Samantha Matherne, "Kant's Theory of Imagination," in *The Routledge Handbook of the Philosophy of Imagination*, ed. Amy Kind, (Routledge, 2016).

[26] Namely because as the effect of external affection, the outer intuition must have evolved out of an opposing sensory state, which is a transition that can only occur over time.

Fourth, the account allows that outer sense provides immediate consciousness of outer objects through outer intuitions, and is thus consistent with the Refutation of Idealism. It is not the case, in other words, that outer intuitions must first be intuited through inner sense in order to reach consciousness and contribute to cognition. Fifth, it respects inner sense's standing as the faculty "by means of which the mind intuits itself, or its inner state" (A22/B37), since through inner sense we become conscious of a genuinely inner state of our mind – namely an inner state of outer intuition. And sixth, inner sense does not thereby present the mind as an object or substance, but rather presents the effect on the mind of an object, namely an outer intuition. These criteria were all met, it is worth noting, not through any contrived, artificial models of sensing, but rather simply by unfolding the idea of sensibility as a capacity for intuition on the basis of affection.

SECTION THREE: CLARIFYING THE ACCOUNT

This section clarifies the account by dealing with an objection, providing some more textual evidence, and developing some implications regarding the Kantian conceptualism/non-conceptualism debate.

Let us begin with the objection. I have said that an act of outer perception involves all of the following in parallel: (1) an outer intuition which presents the affecting object; (2) an inner intuition which presents that outer intuition in time (i.e., which presents the effect of affection); and (3) a comprehension that the object grounds the outer intuition qua effect of affection given in inner sense, and in such a way that entails the object being in time. The worry is that such a structure is far too phenomenologically and cognitively complex to be plausible.

When we perceive a tree, for example, it seems highly phenomenologically dubious that we are conscious of the tree through outer intuition, on the one hand, and of the outer intuition itself through inner intuition, on the other hand, let alone of a grounding relation between these entities, and indeed one that grounds the demand to represent the outer object in time. Such a structure simply does not seem present in our experience. From a cognitive perspective, moreover, it also seems highly unlikely that young children – who clearly represent an outer temporal world – could even grasp such a structure, let alone integrate it into their perceptual acts.

Beginning with the phenomenological part of the objection, it is first of all important to be clear that the idea is not that we have two wholly distinct representations – over here, an outer intuition of the tree, and over there, an inner intuition of that outer intuition – which we somehow bring into relation through the further representation of a grounding relation between them. Rather, the idea is that just as sensibility, qua unified capacity for receptive consciousness, involves inner and outer aspects for intuiting the two 'poles' implied by the general structure of affection – namely the affecting outer object, and effect on the mind of that object – so, in an act of outer perception, there is one representation with two internal, synchronized poles: at one limit, the tree, at the other limit, my inner state of outer intuition insofar as I perceive the tree. The major focus of such an act is, to be sure, almost always the outer object; it is only through an unusual shift in focus – as in doing philosophy – that the inner pole comes clearly into view. But this is consistent with there being an at-least implicit grasp of the object as grounding and constraining the state of outer intuition given in inner sense, even if our consciousness of this inner state is, relative to our consciousness of the object, fairly

obscure and peripheral. This, I hope, clarifies the kind of act and consciousness I am seeking to describe, and gives the phenomenological objection less bite.

It is also both philosophically and textually plausible, I believe, that the distinction between merely imagining versus actually intuiting an empirical object – a distinction which I assume is present in any experience purporting to be objective – involves different ways of construing the relation between the object of outer intuition, and the outer intuition itself qua determination of inner sense. In a note to the Refutation of Idealism, for instance, Kant explains that "in order for us even to imagine something as external, i.e., to exhibit it to sense in intuition, we must already have an outer sense, and by this means distinguish the mere receptivity of an outer intuition from the spontaneity that characterizes every imagining" (B276-7n). The representational distinction between what is real and what is imaginary, Kant suggests here, rests upon consciousness of the difference between passively received, versus spontaneously produced, outer intuitions. Since, however, outer intuitions presumably do not themselves inform us of whether they were passively or spontaneously produced – and instead simply present objects (real or imaginary) – our consciousness of this difference must come from elsewhere, and my account facilitates an easy explanation of the origin of this consciousness. Namely, if we represent the outer object as actually grounding the outer intuition which presents it, qua determination of inner sense, then we are conscious of that intuition as passive and of its object as real. Conversely, if we represent the outer object as

merely purporting[27] to ground the outer intuition which presents it, qua determination of inner sense, then we are conscious of that intuition as spontaneously produced, and of its object as imaginary. If this is the correct way of spelling out what consciousness of the difference between imagining and actually intuiting comes to, then in both kinds of experience, inner sense will be active qua providing consciousness of the outer intuition itself, even if this consciousness is obscure. This, I hope, further reduces the bite of the phenomenological objection.

Let us now turn to the 'too-cognitively-complex' aspect of this objection. This charges that the structure of outer perception, on my account, is far too cognitively complex to be understood by young children, let alone to be integrated into their perceptual acts, and that yet such children clearly know an outer temporal world. My response to this objection is to say that the relevant structure is present in human outer perception not in virtue of any explicit conceptualization or reflection on a knower's behalf, but merely in virtue of the apperception or self-consciousness of a knower. Recall from chapter one, for instance, how it is the self-consciousness of a knower, for Kant, that grounds the division of sensibility into an inner and outer sense – in order to accommodate intuitions of the subject and object, respectively – and that the representation "I" constitutes the topic or subject which inner sense presupposes in all of its determinations.[28] With this in mind, we can say that purely in virtue of self-consciousness,

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[27] I say 'merely purporting,' because in order to represent the imaginary outer object as an imaginary empirical object (e.g., a dog) as opposed to a mere image (e.g., a sheer geometric presentation with no causal properties), we still have to represent that object as the kind of thing which could ground our sensory state.

[28] As Kant puts it in the *Prolegomena*, "all the predicates of inner sense are referred to the *I* as subject, and this *I* cannot again be thought as the predicate of some other subject." (4:334).

human outer perception involves an inner pole that it would otherwise lack – i.e., a consciousness of one's inner sensory state insofar as one knows an outer object – and ultimately the entire structure I have articulated in this chapter which results in outer appearances necessarily being represented in time. While it must indeed be possible for a knower to bring this structure to reflective consciousness, such knowledge is not a condition on the structure being present in acts of outer perception in the first place, which is why young children still represent an outer temporal world despite the relative complexity of the underlying perceptual structure.

And there is textual evidence that Kant believes human outer perception involves a structure of the kind I have described here. In the Anticipations of Perception, for instance, Kant alludes to the comprehension of a grounding relation between object and intuition when he explains that "[a]ppearances… contain in addition to the [pure] intuition the materials for some object in general… i.e., the real of the sensation, as merely subjective representation, by which one can only be conscious that the subject is affected, and which one relates to an object in general" (A165/B207; my emphasis). Sensation, qua 'merely subjective representation', is thus a modification of one's inner sensory state which, in an outer intuition, is related to the object as its ground or cause.[29]

[29] Kant also alludes to such a grounding relation in the A-deduction, when he explains that "our thought of the relation of all cognition to its object carries something of necessity with it, since namely the latter is regarded as that which is opposed to our cognitions being determined at pleasure or arbitrarily… since insofar as our cognitions are to relate to an object they must also agree with each other in relation to it… (A104)." Cognition, that is to say, involves various representations being necessarily related to one another in our mind, since they are constrained and grounded by the object of cognition.

In the B-deduction and Schematism, similarly, Kant progressively specifies the 'figurative synthesis'[30] – the act by which the categories "acquire… application to objects that can be given to us in intuition" (B150-1) – in a manner which can also be read as congenial to my account. Beginning in §24 of the B-deduction, he explains that:

> Since there lies in us a certain form of a priori sensible intuition, which depends upon the receptivity of the faculty of representation (sensibility), the understanding, as spontaneity, is able to determine inner sense through the manifold of given representations, in accordance with the synthetic unity of apperception, and so to think synthetic unity of the apperception of the manifold *of a priori sensible intuition* – that being the condition under which all objects of our human intuition must necessarily stand. In this way the categories… obtain objective reality, that is, application to objects that can be given us in intuition. (B150)[31]

In determining the manifold of outer sense ('the manifold of given representations'), we can understand Kant as saying here, the understanding determines inner sense in parallel with its act ('determine[s] inner sense through the manifold of given representations'). Inner sense thereby produces, on my reading, a corresponding inner intuition of the state of outer intuition, which in turn is the ground of the demand to represent the outer object in time, and ultimately explains how the categories can be applied to 'objects that can be given us in intuition'.[32]

That it is the determination of inner sense by the understanding's act of determining the outer manifold – and the parallel inner intuition of our state of outer intuition – that grounds the demand to represent outer objects in time is in turn supported by the Schematism, where

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[30] Also known as the 'transcendental synthesis of imagination', cf. B151.
[31] I take this translation from *Critique of Pure Reason*, trans. Norman Kemp Smith, Revised Second Edition (Basingstoke: Palgrave Macmillan, 2007), 164. Guyer and Wood's translation, inexplicably, omits 'inner sense' from this passage. *Critique of Pure Reason*, ed. Paul Guyer and Allen W. Wood, The Cambridge Edition of the Works of Immanuel Kant (Cambridge: Cambridge University Press, 1998).
[32] How this part of the act facilitates the application of categories to appearances will be addressed in the next chapter.

Kant further specifies the figurative synthesis in the context of explaining what category schemata are. He writes:

> The schema of a pure concept of understanding… is a transcendental product of the imagination, which concerns the determination of inner sense in general, in accordance with conditions of its form (time) in regard to all representations, insofar as these are to be connected a priori in one concept in accord with the unity of apperception (A142/B181)

The schema of a category, Kant explains here, is the product or result of the understanding's determination of inner sense in the figurative synthesis, i.e., of the act which produces, on my reading, a parallel inner intuition of our state of outer intuition. And category schemata, Kant in turn holds, are crucially rules for representing the temporal aspect of appearances; as he puts is, "[s]chemata are… nothing but a priori time determinations in accordance with rules… in regard to all possible objects" (A145/B185-6). This strongly supports that it is the understanding's determination of inner sense with its act of determining outer sense – and parallel inner intuition of our state of outer intuition – that grounds the demand to represent outer objects in time, since category schemata, which are the result of this synthesis, serve to represent the temporal aspect of outer objects.

This now leads into two major implications of my account. First, Kant holds, on my account, a 'transformative' account of rationality, according to which sensibility is fundamentally changed by our rational capacities and self-consciousness, and is not a logically independent capacity whose deliverances our rational capacities act upon.[33] The structure of

[33] For criticisms of the opposing, 'additive' theories of rationality, see Matthew Boyle, "Additive Theories of Rationality: A Critique," *European Journal of Philosophy* 24, no. 3 (2016): 527–55; and Matthew Boyle, "Essentially Rational Animals," in *Rethinking Epistemology: Volume 2*, ed. Günter Abel and James Conant (Berlin, Boston: De Gruyter, 2012), 395–428. For an excellent defense of transformative readings of Kant, see James Conant, "Why

human outer perception is on my account distinct from that of non-rational animals in at least the following two ways. First, because it is self-conscious, it involves an inner pole which it otherwise would lack – namely, an inner intuition of our state of outer intuition insofar as we perceive an outer object. Mere animals, qua lacking self-consciousness and the representation "I" which constitutes the subject of all inner sense's determinations, would lack this inner perceptual pole altogether. Second, human outer perception not only differs qua involving this inner pole, but also in that it involves an active comprehension of how this inner pole relates to the outer pole, i.e., to the object. I have said, in particular, that we are conscious of the outer object as grounding the outer intuition which presents it, qua effect of affection given in inner sense. The representation of such a grounding relation would of course also requires the categories – most obviously those of substance and causation – and hence the categories are also active in human perception on my account.

The other major implication of my account is conceptualism about the perception of objects. Because a comprehension of the object as grounding the outer intuition which presents it, qua effect of affection given in inner sense, is a condition on representing that object as an object, and because self-consciousness and the associated conceptual capacities are conditions on inner sense and the representation of the relevant grounding relation, so they are conditions on the representation of empirical objects. My account is thus incompatible

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Kant is Not a Kantian," *Philosophical Topics* 44, no. 1 (2016): 75–125. For Conant's account of how to conceive of the sensible capacities of mere animals, and their relation to our own capacities, see James Conant, "Reply to Hamawaki: On the Relation of a Cartesian to Kantian Skepticism and the Relation of Consciousness to Self-Consciousness," in *The Logical Alien: Conant and His Critics*, ed. Sofia Miguens (Cambridge, Mass: Harvard University Press, 2020), 618–28, including footnotes 71, 72, 73, 80, 81, 82.

with those interpretations of Kant on which our self-conscious rational capacities are conditions only on a higher-order subset of representations of the natural world, e.g., on the representation of it as a scientific system of absolutely persisting substances governed by universal and necessary casual laws,[34] or on the representation of highly complex spatiotemporal relations within it, such as mereological relations or the distinction between subjective and objective temporal succession.[35] Instead, rationality is a condition on the presentation of anything over and above a mere image.

Relatedly, non-conceptualist interpreters of Kant sometimes speak of non-rational animals as representing spatiotemporal particulars 'outside of' and 'external to' themselves.'[36] Insofar as these ways of speaking imply a perceptual structure of the sort I have described here – namely, representing oneself as in relation to an outer entity – my account implies that such views are mistaken. To begin with, such a structure presupposes self-consciousness, since the representation 'I' constitutes the topic of the inner pole. Second, to represent oneself as in relation to an object in any meaningful way – i.e., in any way which contributes to the

[34] See: Allais, "Kant, Non-Conceptual Content, and the Representation of Space," 405; Hanna, "Kant and Non-Conceptual Content," 247–90; McLear, "Animals and Objectivity," 63. Allais, in particular, writes that "[w]e can distinguish between perceiving a particular (having a singular representation of an individual thing outside me) and representing a particular as an object in the full-blown sense of something which is grasped as a causally unitary, spatiotemporally persisting substance whose present complex of interrelated properties are a function of its causal nature and its causal history, which is in thoroughgoing law-governed community with other objects, and which is made of stuff that cannot come into or go out of existence absolutely."

[35] The latter is what Sacha Golob argues in "Why the Transcendental Deduction is Compatible with Non-Conceptualism," in *Kantian Nonconceptualism*, ed. Dennis Schulting (Basingstoke: Palgrave-Macmillan, 2016), 27–52.

[36] Allais, for example, says that animal perception involves "direct perceptual particulars… that are represented as outside and other than the [animal]." Allais, "Kant, Non-Conceptual Content, and the Representation of Space," 405. Sacha Golob, similarly, says that an animal intuits an object "as external to itself." Golob, "What Do Animals See?," 87.

representation of the object as an object – requires, on my account, representing the object as grounding one's inner sensory state, which, qua the ground-consequent relation, clearly surpasses non-discursive beings.

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Chapter one of this dissertation uncovered a general connection between time and acts of sensible intuition, which in turn provided the resources for resolving the first problem about time, or why it is that time is exclusively the form of inner sense. The general connection was that because sensible intuition is a capacity for intuition on the basis of affection, its act involves being determined, by an object, to transition between contrary sensory states, which is a kind of transition that can only occur over time. This meant that once the distinction between inner and outer sense is introduced – as it must be in the sensibility of a rational being – the necessity of alterations in inner sense, but not outer sense, followed from the bare concept of an act of sensibility, which is why time is exclusively the form of inner sense. Chapter one thereby also began to show how human intuition is like non-rational animals', and unlike God's, in that our acts of intuition are in time, and yet also unlike non-rational animals' in that, qua self-conscious, we possess an inner sense through which we represent our acts in time.

Chapter two has now resolved the second problem about time, or shown why, despite time being exclusively the form of inner sense, the relation between inner and outer sense in an act of outer perception necessitates that outer objects are in time. The argument was based on the idea that the general structure of affection implies (1) an affecting entity, (2) an affected

entity, and (3) an effect in the affected entity, which I argued in the case of outer sensible affection corresponds to (1) an outer object, (2) the mind, via its sensible capacity, and (3) an outer intuition of that object. The role of inner sense in such an act, I said, is to present the outer intuition itself – i.e., the effect of affection – through a parallel inner intuition in time, which in turn means that the outer object, as its ground, must also be represented in time. Chapter two thereby also showed how human sensibility is not only distinct from that of non-rational animals qua involving inner sense and the consciousness of our own acts in time, but also qua involving a self-conscious comprehension of our sensible capacity as a whole that means we also intuit outer objects in time.

And finally, while two fundamental questions about inner sense have now been answered – why time is exclusively the form of inner sense, and how outer objects come to be given in time, given this restriction – we still do not have a full account of this capacity. First of all, given that inner sense's fundamental role, qua aspect of "[t]he capacity… to acquire representations through the way in which we are affected by objects" (A19/B33), consists in presenting the inner sensory states following from outer affection, there remains a question concerning how states of the mind that are not essentially related to outer perception come to be given in inner sense. How, in particular, do non-cognitive sensory states, like desires and feelings, come to be given in inner sense, as well as purely intellectual representations, like judgments and inferences? All mental states and acts, after all, are for Kant possible determinations of inner sense (cf. A155/B194), and yet given the way in which inner is emerging as fundamentally an aspect of the capacity for outer perception and cognition, there

is a question concerning how states not essentially related to outer perception can be given in this capacity.

Second, there is also a lingering question concerning the exact extent to which inner sense is dependent upon outer sense. For example, does inner sense's standing as an aspect of a unified capacity for outer cognition mean that all acts of inner sense involve parallel acts of outer sense, or can there be presentations of inner sense independent of any presentation of outer sense? These are not just idle queries either. In experiencing debilitating pain, for instance, such as in a bad migraine, it seems entirely possible to lose consciousness of the outer world, while still maintaining consciousness of the inner succession of pain. Such an experiential possibility implies, on the face of it, that as a matter of fact there can be exercises of inner sense independent of any parallel exercise of outer sense, and as such one would hope that Kant can allow for this. These questions, however, and the full account of inner sense, will have to wait until chapter four and a discussion of the First Analogy of Experience and Refutation of Idealism.

Chapter Three: The Schematism and Time

Chapter one of this dissertation argued, on Kantian grounds, that there is an essential connection between time and acts of sensible intuition in that such acts involve transitioning, on the basis of affection by an independently existing object, between opposing sensory states, which is a kind of transition that presupposes time. This theory of the connection between time and sensible intuition was in turn used to resolve the first two problems about time – viz. why time is exclusively the form of inner sense, and how time comes to be a form of outer appearances – and an account of Kant's view of sensible cognition, and the subtle ways in which it is intertwined with time, has thus steadily emerged.

The present chapter continues this project in the context of the Schematism and the third problem about time. The Schematism, recall, is the short section of the *Critique of Pure Reason* in which Kant specifies "the sensible condition under which alone the pure concepts of the understanding can be employed" (A136/B176), or rules for subsuming appearances under categories. The third problem about time concerns the fact that, despite time and space having apparently coequal status qua dual forms of sensibility, Kant specifies these rules – which he terms 'transcendental schemata' – in terms of time alone and claims that they are "nothing but a priori time determinations in accordance with rules… in regard to all possible objects" (A145/B184). Space, in other words, apparently inexplicably falls by the wayside in the Schematism, and Norman Kemp Smith thus speaks for many commentators in remarking that

"Kant's concentration on the temporal aspect of experience is exceedingly arbitrary, and results in certain unfortunate consequences."[1,2]

The structure of the chapter is as follows. **Section one** explains why the Schematism constitutes a necessary stage in the *Critique of Pure Reason*'s progression, introduces Kant's general account of schemata and how they facilitate subsumption, and identifies some difficulties concerning transcendental schemata. This section offers two main takeaways. First, a schema is a rule, based on a concept, for unifying the sensible manifold which presents an object and thereby determining that object as an instance of the concept. Second, since the categories, qua concepts originating in the understanding, contain no sensible content whatsoever, there is a difficulty regarding both what sensible manifold their schemata unify and determine, and how that manifold could ever be adequate to, or 'homogeneous' with, the categories. **Section two** introduces Kant's answers to these last two issues – namely that transcendental schemata determine time, and that the temporal aspect of an object is

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[1] Kemp Smith's full, and quite insightful, complaint runs as follows: "It may be asked why Kant in this chapter [the Schematism] so completely ignores space. No really satisfactory answer seems to present itself. It is true that time is the one universal form of all intuition, of outer as well as of inner experience. It is also true that, as Kant elsewhere shows, consciousness of time presupposes consciousness of space for its own possibility, and so to that extent may be regarded as including the latter form of consciousness within itself. Nevertheless Kant's concentration on the temporal aspect of experience is exceedingly arbitrary, and results in certain unfortunate consequences. Owing to the manner in which Kant envisages his problem he is bound, indeed, to lay the greater emphasis upon time, but that need not have involved so exclusive a recognition of its field and function. Possibly Kant's very natural preoccupation with his new and revolutionary doctrines of inner sense and productive imagination has something to do with the matter." Kemp Smith, *A Commentary to Kant's 'Critique of Pure Reason,'* 341.

[2] Another difficulty with the Schematism, which I will not focus on here, concerns why exactly each transcendental schema is supposed to constitute the necessary and sufficient sensible condition of the corresponding category, since Kant more or less lists each schema without explanation or argument. Henry Allison thus remarks that "[t]his procedure seems a bit cavalier… if not utterly question begging." (Allison, *Kant's Transcendental Idealism*, Revised and Enlarged Edition, 218). I hope, however, that by the end of the present chapter this issue will also be less intractable, since having explained why the transcendental schemata focus on time and not space, Kant's principle in formulating them will have become clearer.

homogeneous with the category when so determined – and examines how commentators have received and defended these answers. I argue that as yet we lack a satisfactory understanding of Kant's account. **Section three** introduces my positive account. I contend that the key to understanding the Schematism's focus on time, as well as how transcendental schemata facilitate subsumption, lies in Kant's idea that an a priori representation can be valid of an empirical object if and only if it is a condition on a sensible manifold presenting that object. Drawing on chapter 1, I argue that the pure intuition of time is distinct from that of space in being by itself insufficient for the presentation of an object, and that this explains why transcendental schemata focus on time and not also space, and also clarifies how they facilitate subsumption. **Section four** clarifies the account by dealing with some objections and provides a worked-out example that draws together the first three chapters of the dissertation.

SECTION ONE: THE SCHEMATISM AND SCHEMATA

The Schematism, as already mentioned, is concerned with the possibility of subsuming appearances under categories, and it constitutes a necessary stage in the *Critique of Pure Reason*'s progression for at least two reasons. First, although the Transcendental Deduction has guaranteed <u>that</u> the categories apply to appearances, the categories have, to this point of the book, been described in almost exclusively logical, rather than sensible, terms, and as such it is unclear what they actually signify in the world. While we know, for instance, that the category of substance represents that which "in experience must always be considered as subject, never as mere predicate" (A94/B129) in a categorical judgment, we do not know what aspect of appearances actually meets this condition. Hence, before Kant can proceed to the Principles of

Pure Understanding, and articulate "those synthetic judgments that flow a priori from pure concepts of the understanding" (A136/B175), he must first specify "the sensible condition under which alone pure concepts of the understanding can be employed" (A136/B175), i.e., the schema of each category.

The second need for the Schematism arises because of a special difficulty concerning the possibility of subsuming appearances under categories. In particular, as concepts originating in the understanding, the categories contain no sensible content whatsoever and are, as Kant puts it, "entirely unhomogeneous" with appearances, and "can never be encountered in any intuition" (A137/B176). The categories instead represent the "necessary synthetic unity" (A79/B104) that is a condition on perceiving an object, but not itself something perceived, and as such it is hard to see how a sensible object could ever be adequate to, and subsumed under, these concepts.[3] For empirical concepts, in contrast, there is no great difficulty regarding their application to appearances since, qua derived from intuitions, they are guaranteed to have at least some sensible content, and thus to have a degree of homogeneity with their objects. Kant thus remarks that "[i]n all other sciences, where the concepts through which the object is thought in general are not so different and heterogeneous from those that represent it *in concreto*, as it is given, it is unnecessary to offer a special discussion of the application of the former to the latter" (A138/B177). Only in transcendental philosophy, in

[3] As Kant puts it, "no one would say that the category, e.g., causality, could also be intuited through the senses and is contained in the appearance" (A138/B177).

other words, is there a difficulty regarding how our concepts of an object can find application in the world.

Kant's solution to how categories, and more generally what we would call 'sortal' concepts,[4] can be applied to appearances involves an appeal to what he calls the 'schema' of a concept.[5] A schema, Kant explains, is "a rule for the determination of our intuition in accordance with a certain general concept" (A141/B180), or "a general procedure of the imagination for providing a concept with its image" (A141/B180). More specifically, a schema is a rule, based on a concept, for unifying a manifold of intuition – i.e., for combining, constructing, or synthesizing it – and thereby determining its object as an instance of the concept, i.e., for subsuming the object under that concept.[6, 7] The schema of the concept

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[4] I.e., Concepts expressed through common nouns and involving, at minimum, criteria for distinguishing and reidentifying their objects.

[5] Kant seems to think that even empirical and geometrical concepts – e.g., 'triangle' and 'dog' – require schemata for their application because of a gulf between concepts and intuitions qua general and singular representations, respectively. He says, for instance, that "[n]o image of a triangle would ever be adequate to the concept of it. For it would not attain the generality of the concept, which makes this valid for all triangles, right or acute, etc." (A141/B180), and that "[e]ven less does an object of experience or an image of it ever reach the empirical concept" (A141/B181). Instead, such objects "must be connected with the concept, to which they are in themselves never fully congruent, always only by means of the schema they designate" (A142/B181). The idea, presumably, is that where intuitions present particular, fully determinate objects (e.g., this triangle with these determinate angles and sides), concepts represent no particular objects but only a set of general characteristics (e.g., a three-sided, closed plane figure in general), and as such there is a fundamental 'incongruence' between how the very same feature (triangularity) is presented in each kind of representation which can only be bridged through a schema. I will not defend Kant on this point, since it is not obvious to me that the difference between a general and singular representation is, in and of itself, so great as to necessitate the introduction schemata as mediating representations, and nor is this difference what underlies the need for category schemata. The categories require schemata since, as already mentioned, they contain no sensible content whatsoever and as such there is a question concerning what they represent in appearances.

[6] I thus follow Longuenesse in distinguishing two ways in which concepts can serve as rules: first, as discursive rules of 'analytic unities' of marks contained in a concept; second, as rules of sensible synthesis via their schemata. Cf. Longuenesse, 48–50. For a commentator who denies that schemata are rules, see Moltke S. Gram, *Kant, Ontology, and the A Priori* (Evanston: Northwestern University Press, 1968), 128n.

[7] The two elements involved in schemata – a representation of a manifold, and a rule of its combination – are also reflected in Kant's remark in the B-deduction that the concept of combination presupposes "the manifold and its synthesis" (B130).

'triangle', for example, "signifies a rule of the synthesis of imagination with regard to pure shapes in space" (A141/B180), and in particular, as Kant puts in the A-deduction, for "the composition of three straight lines... according to which such an intuition can always be exhibited" (A105). The schema of the concept 'dog', similarly, signifies (amongst other things) "a rule in accordance with which my imagination can specify the shape of a four-footed animal in general, without being restricted to any single particular shape that experience offers me" (A141/B181). Any object whose sensible manifold can be determined on the basis of this rule qualifies as a dog, and can thereby be subsumed under the concept in judgment.[8,9]

Now, even with the notion of a concept's schema in one's toolkit, the possibility of transcendental schemata, and the subsumption of appearances under categories, remains troublesome. For starters, since the categories, as originating in the understanding, contain no sensible content whatsoever, they do not instruct as to what manifold their schemata might unify and determine. Instead, the categories are "related through the mere understanding to

[8] For an excellent discussion of Kant's account of the connection between singular judgment and intuition, and how this connection shapes his larger logical theory, see Matthew Boyle, "Kant on Logic and the Laws of Understanding," in *The Logical Alien: Conant and His Critics*, ed. Sofia Miguens (Cambridge, Mass: Harvard University Press, 2020), 117–44.

[9] We can also relate the idea of a schema to things Kant says in both editions of the Transcendental Deduction. In a well-known passage in the B-deduction, for instance, Kant explains that "[a]n object… is that in the concept of which the manifold of a given intuition is united" (B137). An object is thus what an intuition presents when its manifold is unified through the concept of an object, or rather, as the Schematism chapter makes clear is the case, through the schema of that concept. The A-deduction similarly explains that "we say that we cognize the object if we have effected synthetic unity in the manifold of intuition. But this is impossible if the intuition could not have been produced through a function of synthesis in accordance with a rule that makes the reproduction of the manifold necessary a prior and a concept in which this manifold is united possible" (A105). To cognize an object is to 'effect synthetic unity in the manifold of intuition' which presents the object. To so effect synthetic unity is to 'reproduce the manifold' in accordance with a rule. The relevant rule of reproduction, however, will be that of 'a concept in which this manifold is united'. And, as the Schematism makes clear, it must in fact be the concept's schema which provides the rule for unifying the reproduced manifold in such a way as to effect synthetic unity and present an object.

objects of intuition in general, without it being determined whether this intuition is our own or some other, but still sensible one" (B150). Empirical concepts, in contrast, as derived from intuition and necessarily containing sensible content, themselves dictate what manifold their schemata will unify. Second, whatever sensible manifold transcendental schemata ultimately unify and determine, it is unclear how this manifold could ever be adequate to, and homogeneous with, the categories, since the latter, as already mentioned, represent the "necessary synthetic unity" (A79/B104) that is a condition on perceiving an object, but not something itself perceived.[10] The next section introduces Kant's answers to these two questions, and examines their reception in the literature.

SECTION TWO: KANT'S ACCOUNT AND ITS RECEPTION

In a single dense and perplexing paragraph early in the Schematism, Kant offers answers to the above two questions, i.e., to the question of what manifold transcendental schemata unify and determine, and of how that manifold can ever be homogeneous with, and adequate to, the categories. It is worth quoting in full:

> The concept of the understanding contains pure synthetic unity of the manifold in general. Time, as the formal condition of the manifold of inner sense, thus of the connection of all representations, contains an a priori manifold in pure intuition. Now a transcendental time-determination is homogeneous with the *category* (which constitutes its unity) insofar as it is *universal* and rests upon a rule a priori. But it is on the other hand homogeneous with the *appearance* insofar as *time* is contained in every empirical representation of the manifold. Hence an application of the category to appearances becomes possible by means of the transcendental time-determination, which as the schema of the category, mediates the subsumption of the latter under the former. (A138-9/B177-8)

[10] As Kant puts it in the B-introduction, "[e]xperience tells us, to be sure, that something is constituted thus and so, but not that it could not be otherwise" (B3).

Time, Kant explains, 'contains a priori manifold in pure intuition' which transcendental schemata unify and determine. Category schemata, in other words, are time determinations. And transcendental schemata thereby facilitate subsumption, Kant continues, because insofar as they involve time, transcendental schemata are homogeneous with all appearances, while insofar as they rest on a priori rules, they are also homogeneous with the categories.

Let us note two initial difficulties with this story. First, while time's suitability for transcendental schemata is comprehensible insofar as it is clear enough why the relevant manifold must be both pure and yet sensible,[11] it is unclear why space, which is pure and sensible as well, does not thereby also figure in the transcendental schemata. At the beginning of the Transcendental Analytic, for instance, when first introducing the notion of pure synthesis and the possibility of a priori concepts governing it, Kant appeals to time and space as supplying "the pure concepts of understanding with a matter" (A77/B102), i.e., as supplying the pure sensible manifold which any pure synthesis would presuppose.[12] And yet this parity of space and time completely disappears in the Schematism.

The second difficulty is that it is unclear how exactly transcendental schemata are supposed to 'mediate' between categories and appearances, and thereby facilitate the

[11] It must be pure because the categories do not represent any material, directly perceptible aspect of appearances, and yet sensible in order to explain how the categories can actually be applied to what is given in intuition.

[12] Here is the passage in full: "Transcendental logic… has a matter manifold of sensibility that lies before it a priori, which the transcendental aesthetic has offered up to it, in order to provide the pure concepts of understanding with a matter, without which they would be without any content, thus completely empty. Now space and time contain a manifold of pure a priori intuition… Only the spontaneity of our thought requires that this manifold first be gone through, taken up, and combined in a certain way in order for cognition to be made out of it. I call this action synthesis." (A76-77/B102)

subsumption of the latter under the former. Kant seems to be saying that because categories and appearances are both homogeneous with transcendental schemata – qua involving a priori rules, and time, respectively – categories and appearances are therefore homogeneous with each other, and that this explains the possibility of subsumption. As many commentators have pointed out, however, this would be a non sequitur, since categories and appearances are then homogeneous with transcendental schemata in different respects.[13] Robert Paul Wolff thus complains:

> If A is identical with B in respect R, and B is identical with C in respect R, then what sense does it make to say that B "mediates between" A and C? Either appearances can be subsumed under the categories without the aid of the schemata, or else they cannot be subsumed at all. Bachelors and spinsters are both unmarried; spinsters and mothers are both women; but it does not follow that bachelors are mothers.[14]

That transcendental schemata are homogeneous with appearances qua involving time, while homogeneous with categories qua resting on necessary rules, by no means entails that appearances and categories are homogeneous with each other, since they are homogeneous with transcendental schemata in different respects. And if categories and appearances are

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[13] Cf. Wolff, 207–8; and Peter Krausser, "Kant's Schematism of the Categories and the Problem of Pattern Recognition," *Synthese* 33, no. 1 (1976): 178. Norman Kemp Smith makes a slightly different criticism when he charges Kant with wrongfully assimilating the issue of category application to that of applying class concepts to particulars, i.e., general concepts to instances, when what is really at issue is how the categories, qua formal representations, can be present in empirical intuitions. Kemp Smith argues, in particular, that the upshot of what it means for a category to be a formal representation is that it must always already be present in empirical intuitions, and that positing transcendental schemata, qua mediating representations, is therefore unnecessary. While I agree with Kemp Smith's thought that the categories, qua formal representations, must always already be present in empirical intuitions, I take it that the notion of transcendental schemata just is Kant's answer to how the formal rule of the category can be present in empirical intuitions, and that they are not intended, as Kemp Smith seems to thinks is the case, as 'connecting' representations through which the formal unity of the category can be applied to an independently given empirical intuition in a kind of secondary step. Cf. Kemp Smith, *A Commentary to Kant's 'Critique of Pure Reason,'* 334–36.

[14] Wolff, 207.

somehow homogeneous with transcendental schemata in the same respect, Wolff continues for good measure, then they would therefore be homogeneous with each other, in which case it is unclear why transcendental schemata are needed at all. Wolff concludes that "the artificiality of both the problem and the solution is evident upon reflection."[15]

Transcendental Schemata as Time Determinations

Let us now examine how commentators have defended Kant on these two points, beginning with the idea that transcendental schemata are exclusively time determinations. The most common strategy here involves appealing to time's greater universality vis-à-vis to space. In particular, where space is only the form of outer appearances, "time is contained in every representation of the manifold" (A138-9/B178-9), and as such temporal schemata guarantee the applicability of the categories to all appearances, outer and inner. Allison thus chides that "critics who take [Kant] to task for neglecting space are misguided" since "if, as Kant insists, the categories are to apply to appearances universally within the field of possible experience, then their application conditions must have reference to time."[16]

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[15] Wolff, 207. Two other scathing mid-twentieth century Schematism commentators are Geoffrey Warnock and Jonathan Bennett, who both argue, in slightly different ways, that the Schematism rests on the false assumption that we can possess a concept without knowing how to use it. Cf. G. J. Warnock, "Concepts and Schematism," *Analysis* 9, no. 5 (1949), 77–82; Bennett, 146. Bennett labels the Schematism "hopelessly confused" and acerbically remarks that "Warnock and I disagree about the scope, and about disreputability of Kant's 'problem'. We agree, however, that Kant does not solve whatever problem he has." Bennett, 150. I do not think, however, that we need read Kant as assuming we could possess a concept without being able to use it in order to motivate the Schematism. Instead, the Schematism identifies an issue with the categories – their lack of sensible content – that must be overcome before Kant can move on to the Principles of Pure Understanding and articulate the synthetic a priori truths that follow from their application to appearances.

[16] Allison, *Kant's Transcendental Idealism*, Revised and Enlarged Edition, 217–18. For other commentators who appeal to time's universality, see: H.J. Paton, *Kant's Metaphysic of Experience*, vol. II, H. J. Paton, *Kant's Metaphysic of Experience*, vol. I (London: Allen and Unwin Ltd, 1936), 28–9, footnote 4; Heidegger, *Kant and the Problem of Metaphysics*, 108–9; Lauchlan Chipman, "Kant's Categories and Their Schematism," *Kant-Studien* 63, no. 1 (1972),

There is reason, however, to think that time's greater universality does not completely explain all the schemata's neglect of space. Regarding the relational categories, at least, Kant is clear that only outer intuitions present anything properly homogeneous with these concepts – something which makes perfect sense, since they chiefly serve to distinguish an outer temporal order from the subjective order of our own perceptions – and as such it is unclear why their schemata neglect space.[17] The category of substance, for instance, receives the schema of "the persistence of the real in time" (A144/B183), yet in each of the First Analogy, Refutation of Idealism, and General Note on the System of Principles, Kant makes clear that only outer intuitions present anything adequate to this schema, "since space alone persistently determines, while time… and thus everything that is in inner sense, constantly flows" (B291).

47–9; Guyer, *Kant and the Claims of Knowledge*, 167; Gardner, 169; Engstrom, "The Category of Substance," 254–55.

[17] It is sometimes thought that Kant contradicts the Schematism in the General Note on the System of Principles when he claims that "in order to understand the possibility of things in accordance with the categories, and thus to establish the objective reality of the latter, we do not merely need intuitions, but always outer intuitions" (B291). I do not take Kant to here be saying that the categories only apply to outer appearances, however, but merely that outer appearances have a certain priority over inner appearances in the order of cognition and with respect to the categories' significance. This is more or less confirmed later on in the General Note when Kant notes that categories can be applied to inner appearances, but always only in a derivative, deficient sense. He says of the category of 'magnitude', for example, that it "can be exhibited only in outer intuition, and… by means of that alone can it subsequently also be applied to inner sense" (B293).

Only what is in space, that is to say, can persist, and as such time's universality seems insufficient to explain substance's schema's neglect of space, since nothing inner is properly homogeneous with this category.[18,19]

Other commentators, notably Guyer, have flirted with the idea that transcendental schemata are temporal and not spatial because time alone has sufficient structural complexity to express all categorial relations.[20] Guyer explains that time:

> contains sufficient *diversity* so that the different logical properties and relations from which the categories are (allegedly) derived can *all* be assigned an interpretation by means of this intermediary… [T]ime permits of a variety of 'transcendental time-determinations', and thus allows for the schematization of the *variety* of categories – each category can be associated with a *different* transcendental time-determination.[21]

The category of causation, for instance, could not be expressed in purely spatial terms, since causation involves not only dependence, but dependence qua change, and as such its schema must involve time.

Again, however, this seems insufficient to explain the Schematism's neglect of space. First, that the categories must be assigned different sensible interpretations by no means

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[18] Since inner experience presumably also requires that inner appearances be brought under the relational categories in some kind of imperfect, regulative application, it might be thought that this is why Kant omitted space from their schemata. Given, however, the seriousness with which Kant thematizes the problem of the Schematism and the issue of finding something properly homogeneous with each of the categories, it would be surprising if he omitted something essential to the intelligibility of the relational categories' application simply for the sake of leaving room for their imperfect application in inner experience.

[19] Time's universality also seems insufficient to explain why the category of reality, which represents "that to which a sensation in general corresponds" (A143/B182), does not have a spatial schema, since insofar as anything corresponds to sensation, it would seem to have to be something outer and hence in space.

[20] A. C. Ewing also pursues this kind of line: "It might be asked why Kant schematized the categories in terms of time only and not of space, since space was also both sensible and *a priori*. The answer is perhaps simply that the second method would not work out so well, for time seems essential for the formulation of any tolerably clear idea of substance or causality in a way in which space is not." A. C. Ewing, *A Short Commentary on Kant's Critique of Pure Reason* (Chicago: University of Chicago Press, 1967) chapter IV, 146.

[21] Guyer, *Kant and the Claims of Knowledge*, 166–67.

entails that these interpretations must all occur within a single sensible medium; indeed, the introduction of a second sensible medium – like space – would make the assignment of different sensible interpretations easier. Second, that some transcendental schemata must involve time does not show that they, or other transcendental schemata, cannot, and should not, also involve space. Indeed, we have just seen that for some categories at least, it seems that their schemata must involve space.

The final strategy I will consider is found in Longuenesse, who explains the Schematism's neglect of space in terms of its role in spelling out the notion of figurative synthesis (also known as the 'transcendental synthesis of imagination' or '*synthesis speciosa*') introduced in §24 of the B-deduction, and specifically the determination of inner sense by the understanding (Cf. B150). Drawing attention, in particular, to Kant's description in the Schematism of a transcendental schema as "a transcendental product of the imagination, which concerns the determination of inner sense in general according to conditions of its form (time)" (A142/B181) Longuenesse explains that:

> This passage invites us, in effect, to look back to what precedes the Schematism chapter: to the Transcendental Deduction of the Categories and, more specifically, to the explanation of the *synthesis speciosa* – the determination of inner sense by the understanding. This return to the Deduction is important in that it alone can dispel the seemingly arbitrary character of the relation between the pure concepts and their respective schemata… if we bring together the teachings of the Deduction and the Schematism, and examine the schemata in light of the relation, elaborated in the Deduction, between *synthesis intellectualis* and *synthesis speciosa*, we can give life to Kant's conception of the activity of discursive thought and crucial insight into the role he assigns to transcendental imagination.[22]

[22] Longuenesse, 246.

The reason transcendental schemata are time determinations, according to Longuenesse, is because they specify the syntheses following from the understanding's determination of inner sense, a determination first introduced, but not spelled out, in §24 of the B-deduction.[23] Such an explanation is also supported by Kant's remark in §24 that it is through the understanding's determination of inner sense that the categories "acquire objective reality, i.e., application to objects that can be given to us in intuition" (B150-1; my emphasis) – 'application' being the topic treated in the Schematism.

In emphasizing its relation to the Transcendental Deduction, and role in spelling out the figurative synthesis, Longuenesse is no doubt onto something important about the Schematism. Nonetheless, I think there is still a problem with this as an explanation of the Schematism's neglect of space. In particular, note that, as Longuenesse agrees, the figurative synthesis is concerned not only with the understanding's determination of inner sense and temporal synthesis, but also with its determination of outer sense and spatial synthesis.[24,] Indeed, it is the understanding's act of determining the outer manifold that also determines inner sense.[25]

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[23] Paton seems to have a similar thought in mind when he writes that "we know, from the Transcendental Deduction, that the categories must apply to all objects because the transcendental synthesis of imagination [i.e., the figurative synthesis] combines the manifold in one time. This does not mean that the chapter on Schematism is superfluous. We have still to show – the argument cries out for it – that the combination of the manifold in one time imposes on all objects certain universal characteristics corresponding to the separate categories." Paton, *Kant's Metaphysic of Experience*, vol. II, 28.

[24] Longuenesse holds a version of the view I argued for in the last chapter, according to which the figurative synthesis involves the understanding determining the outer manifold, and thereby also determining inner sense as part of the same act. Longuenesse explains that "as spontaneity (understanding), the mind combines what it receives in the form of outer intuition; and it affects itself, as inner sense, with this combination." Longuenesse, 228

[25] This is also apparent later on in §26 when Kant notes that the pure intuitions of space and time, qua containing pure manifolds, themselves presuppose the synthesis through which "the understanding determines sensibility" (B161n), the same synthesis described in §24 as "an effect of the understanding on sensibility" (B152).

If, however, figurative synthesis is essentially spatial as well as temporal synthesis, then it follows that Longuenesse's account only pushes the question of the Schematism's focus on time back one step further. The question now becomes: why, when discussing in §24 how the categories gain application to appearances through the figurative synthesis, does Kant focus solely upon the understanding's determination of inner sense and the temporal aspect of this synthesis, and not equally on its determination of outer sense and the spatial aspect of this synthesis? What is so special, in other words, about the inner aspect of the figurative synthesis when it comes to the homogeneity of categories and appearances, and the subsumption of the latter under the former? Kant's focus on inner sense and temporal synthesis again seems arbitrary.

Subsumption

Let us now return to Kant's argument for how transcendental schemata facilitate the subsumption of appearances under categories. The problem, recall, was that Kant seemed to be proposing a non sequitur: that because categories and appearances are both homogeneous with transcendental schemata – qua involving a priori rules, and time, respectively – they are therefore homogeneous with each other. This is course does not follow, since they are then homogeneous with transcendental schemata in different respects.

It is not obligatory, however, to read Kant as guilty of such a fallacy. If we recall that a schema is a rule for unifying and determining a sensible manifold – and not something we just passively compare with an independently given intuition and object – then we can understand Kant as saying the following. When, in the apprehension of an appearance, time's manifold of

moments is unified by a transcendental schema, then that appearance's temporal aspect is thereby represented through the a priori rule on which the schema rests, and on that count is homogeneous with, and subsumable under, the category. Appearances and categories, in other words, are not only homogeneous with transcendental schemata in different respects, since when the temporal aspect of an appearance is represented through the transcendental schema, it is thereby represented through the a priori rule of the category, and on that count is homogeneous with it.

Such an account of transcendental schemata and subsumption seems to be what both Allison and Longuenesse have in mind. Allison describes a schema as a "perceptual rule" which "functions to process the sensible data in a determinate way,"[26] and says that "to determine time *transcendentally* is to subject it to an a priori rule, that is, a category, which constitutes the 'unity' of such a determination."[27] When a sensible manifold is unified through a transcendental schema, Allison in other words holds, the appearance is thereby represented through, and homogeneous with, the category, since the latter's a priori rule constitutes the schema's 'unity'. Longuenesse likewise describes a transcendental schema as "a pure synthesis of time according to a rule of unity,"[28] something which she illustrates through the schema of causality:

> [I]n order to understand why, for example, "succession of the manifold, insofar as it is subjected to a rule," allows appearances to be subsumed under the category of

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[26] Allison, *Kant's Transcendental Idealism*, Revised and Enlarged Edition, 210. To quibble with Allison, I would resist the 'processing' terminology, since it suggests an impositionist reading according to which objects are 'built-up' over time by manipulating sensations according to categorial rules.
[27] Allison, *Kant's Transcendental Idealism*, Revised and Enlarged Edition, 216.
[28] Longuenesse, 245–46. To quibble with Longuenesse, I would resist saying that transcendental schemata are themselves pure syntheses of time. Instead, I would say that they are rules of this synthesis.

> causality, one must understand how this succession according to a rule is apprehended: it is apprehended in an act of sensible synthesis (*synthesis speciosa*) performed with a view to subsuming appearances under concepts according to the discursive form of hypothetical judgment

When, in the apprehension of an appearance, we can understand Longuenesse as saying here, the successive sensible manifold is unified through the schema of causality, that appearance is thereby represented through, and homogeneous with, the category contained in the schema, and can therefore be subsumed under it in a hypothetical judgment.[29] Transcendental schemata, on such an account, are thus rules for the unification of time – i.e., for synthesis of its manifold of moments – in the determination of an appearances' temporal aspect, an aspect which is in turn homogenous with the category insofar as the schema rests upon its a priori rule.

Now, while I think such a view of transcendental schemata and subsumption is heading in the right direction – and indeed ultimately correct – it is worth considering how it makes subsumption under categories different from subsumption under empirical concepts. In particular, note that on this view the manifold unified by transcendental schemata – time – only presents something homogeneous with the category <u>once</u> it is so unified. For instance, it is only <u>once</u> the successive moments of time are related to a single substance undergoing an alteration in accordance with a law – thereby unifying these moments through the schema of causality – that the appearance is homogeneous with the category, since only then is it represented through the latter's a priori rule. Prior to such determination, the pure intuition of time does

[29] In particular, a hypothetical judgment asserting that the appearance's succession follows some antecedent condition in accordance with a causal law.

not present anything homogeneous with the categories, and there thus seems to be a sense in which appearance and category are not 'intrinsically' homogeneous.

Empirical concepts, in contrast, are homogeneous with the sensible manifold that their schemata unify even apart from that unification. For instance, although the schema of the concept of a triangle is required to recognize an intuition as presenting a triangle, it is not required for that intuition's homogeneity with the concept of a triangle in the first place. An intuition of a triangle still presents a closed, three-sided, figure – the same material marks generally represented in the concept – apart from its manifold being unified by the schema and recognized as a triangle. A possible drawback of the view of transcendental subsumption I am advocating here, then, is that it makes the homogeneity of categories and appearances apparently dubitable in a way that should not be possible given the results of the Transcendental Deduction. In particular, it seems to open up the possibility that since appearances are only homogeneous with the categories once time is unified through transcendental schemata, the categories are therefore subjective representations which we illegitimately impose onto objects.

SECTION THREE: A CLUE TO THE SCHEMATISM

The situation is as follows. First, there seems to be no clear reason why transcendental schemata are exclusively time determinations and not also space determinations. Second, while we have a somewhat attractive account of how transcendental schemata facilitate subsumption – according to which appearances are homogeneous with the categories when their temporal aspect is determined through transcendental schemata – it seems to leave open

the possibility that the categories are illegitimate, subjective projections. I will now propose a strategy for resolving both of these issues at once, i.e., for showing why transcendental schemata focus on time and not also space, as well as why the worry about the account of transcendental subsumption I am advocating is mistaken.

The key to the strategy lies in Kant's theory of how an a priori representation can be valid of an empirical object, despite not being derived from it. An a priori representation can be valid of an empirical object, for Kant, if and only if it is a condition on cognizing that object as an object. Hence just prior to the Transcendental Deduction he explains that:

> [t]here are only two possible cases in which synthetic representation and its objects can come together, necessarily relate to each other, and, as it were, meet each other: Either if the object alone makes the representation possible, or if the representation alone makes the object possible. If it is the first, then this relation is only empirical, and the representation is never possible a priori. But if it is the second, then since representation in itself… does not produce its object as far as its *existence* is concerned, the representation is still determinant of the object a priori if it is possible through it alone to *cognize something as an object*. (A92/B124-5)

In any valid representation of an object, Kant explains here, there is always a 'making-possible' relation between representation and object that explains their agreement. In the case of empirical representations, the object makes the specific content or 'matter' of the representation possible, since such representations are – in one way or another – ultimately derived from sense affections. For valid a priori concepts and intuitions, meanwhile, such representations make the object possible in various formal respects, namely qua categorial and sensible form, respectively. Part of what legitimates this second kind of 'making-possible' relation, however, is the idea that a sensible manifold could not present an object but for the structure provided by the relevant a priori representations; this is why such formal

representations can still be valid of objects, despite not being derived from them. For instance, even though the pure intuitions of space and time are subjective, a priori forms of sensibility, they are still objectively valid of empirical objects, because they are conditions on sensation so much as presenting an object in the first place (Cf. A20/B34).

This suggests a possible reason why transcendental schemata focus on time and not also space, as well as why the worry about the account of transcendental subsumption I am advocating is mistaken. In particular, if categories only apply to appearances in virtue of transcendental schemata, and if transcendental schemata are "nothing but a priori time determinations in accordance with rules" (A145/B185-6) – i.e., rules for unifying and determining the temporal aspect of appearances – then this implies that the pure intuition of time is distinct from that of space in being, in a certain sense, by itself insufficient for the presentation of an object. Only if this were the case, after all, would the categories relate to objects in what Kant says is the only way possible for a priori representations: namely in virtue of being a necessary condition on a sensible manifold presenting an object in the first place. And in such a case it would simply make no sense to wonder whether appearances' temporal aspect is 'truly' homogeneous with the categories, since appearances would have no temporal aspect apart from such determination. The worry about the view of transcendental subsumption I am advocating, in other words, would be mistaken.[30]

[30] One might, to be sure, then wonder why Kant says that appearances are homogeneous with transcendental schemata only qua involving time, and not also qua presupposing a priori rules. The reason for this, I suggest, is that Kant wants to emphasize that the demand to represent objects in time is ultimately a demand of sensibility, even if it is only possible through transcendental schemata and hence the a priori rules of the categories.

What sense can be given to this idea that the pure intuition of time, in contrast to that of space, is by itself insufficient for the presentation of an object? Let us begin with space. "Space," Kant holds, "is nothing other than the form of all appearances of outer sense" (A26/B42). When an object affects outer sense, the resulting sense impressions are necessarily ordered within the pure intuition of space, and the object is thereby "determined a priori according to relations of space" (A34/B51). Part of what it means, however, to be represented in space is to necessarily be represented as something external and other to the mind and self. Hence Kant explains that everything represented in space is "related to something outside me" (A22/B38) and "related to something external" (A28/B44). Through the pure intuition of space, that is to say, "we represent to ourselves objects as outside us" (A22/B37). The pure intuition of space is thus the pure sensible form of what is other and external to the mind and self.

It follows, I believe, from space so being the pure sensible form of externality and otherness that the pure intuition of space is, in the following sense, what I will call 'intrinsically object-related.' Namely, the individual spatial positions which comprise the pure intuition of space's manifold are, simply in virtue of being parts of the whole of space, themselves already representative of what is other than, and external to, the mind. Individual spatial positions, that is to say, require no further unification – in addition to their original unification within the pure intuition of the whole of space – in order to be "related to something outside me" (A22/B38) and "related to something external" (A28/B44); they already have this status simply in virtue of being parts of the whole of space. We can also put the point this way: in order to represent an appearance's spatial aspect – its particular shape and location – will need only limit, and never further unify or determine, the pure intuition of space. This is so because the spatial positions

which comprise the pure intuition are, simply in virtue of being part of the whole of space, already themselves possible positions of an object, and hence to specify a set of spatial positions – to limit the pure intuition of space – is already to specify the spatial aspect of a possible object.[31]

Now consider time. Time, as should be all too familiar by now, is the form of inner sense; it is the form of the capacity "by means of which the mind intuits itself, or its inner state" (A23/B37). Part of what it means, however, for time to be the form of inner sense is that time is, in the first instance, the pure sensible form – not of externality and otherness – but rather of internality and the self. Hence Kant explains that "[t]ime can no more be intuited externally than space can be intuited as something in us" (A23/B37), and that "time cannot be a determination of outer appearances; it belongs neither to a shape or a position, etc., but on the contrary determines the relation of representations in our inner state" (A33/B50). Time, in other words, belongs most originally to what is inner and not outer. Chapter one of this dissertation, moreover, gave an account of why exactly this is. Time is the form of inner sense because the ultimate ground of time is the transition between opposing inner sensory states, on the basis of affection, that an act of sensibility necessarily involves. While outer appearances are also necessarily in time, this only follows from the relation of inner and outer sense in a

[31] Kant describes the way in which spatial points and temporal instants are limitations of the pure intuitions of space and time as follows at A169/B211: "Points and instants are only boundaries, i.e., mere places of limitation; but places always presuppose those intuitions that limit or determine them, and from mere places, as components that could be given prior to space or time, neither space nor time can be composed."

unified act of perception, and not from the bare concept of outer sense's contribution to such an act.

It follows from time so being the form of inner sense, I believe, that the pure intuition of time is, in the following sense, not intrinsically object-related. The moments or instants which comprise the pure intuition's manifold do not, simply in virtue of being parts of the whole of time, refer anything other than our own inner states, and therefore not to an object. Where individual spatial positions, that is to say, already instantiate possible determinations of an object purely in virtue of being parts of the whole of space, temporal positions, purely in virtue of being parts of the whole of time, merely "determine[] the relation of representations in our inner state" (A33/B50). In order, therefore, to determine an outer object's temporal aspect it is not sufficient simply to limit the pure intuition of time, and this gives us a natural way of understanding the function of transcendental schemata. They are rules for how the pure intuition of time, which is not intrinsically object related, must be further unified and determined if it is to present something other than our own mental states, i.e., if it is to present an object. The Schematism focuses on time and not also space, in other words, because time does not of itself refer to anything other than our own inner states, and as such presupposes further unification – and not mere limitation – in order to be related to an object.

And there is evidence in the Aesthetic for this way of thinking about the difference between the pure intuitions of space and time, even apart from Kant's exhortations that time "belongs neither to a shape or a position" and merely "determines the relation of representations in our inner state" (A33/B50). The passage comes early on, in the context of Kant introducing the ideas of a form of sensibility and pure intuition:

> So if I separate from the representation of a body that which the understanding thinks about it, such as substance, force, divisibility, etc., as well as that which belongs to sensation, such as impenetrability, hardness, color, etc., something from this empirical intuition is still left for me, namely extension (*Ausdehnung*) and shape (*Gestalt*). These belong to the pure intuition, which occurs a priori, even without an actual object of the senses or sensation, as a mere form of sensibility in the mind. (A20-1/B35)

If we start with an empirical intuition of an object, Kant here explains, and abstract from sensation as well as 'that which the understanding thinks about it', i.e., from the contribution of the categories, then what we are left with is spatial extension and shape, or a specification of the object's spatial aspect within the pure intuition of space. Note, however, that Kant does not say that we are similarly left with a specification of the object's temporal aspect within the pure intuition of time. This suggests that the categories – 'that which the understanding thinks' – are conditions on the representation of an object's temporal aspect in a way that they are not conditions on the representation of its spatial aspect, since in abstracting from the contribution of the categories' we lose the former but not the latter.[32] And the reason for this, I am urging, is because time is the form of inner sense, and that as such its manifold does not of itself refer to an object but merely to our own mental states. For the representation of an object's temporal aspect, a further unification of time through the categories is required, which is why the transcendental schemata – "the sensible condition under which alone pure concepts of the understanding can be employed" (A136/B175) – are "nothing but a priori time determinations in accordance with rules" (A145/B185-6).

[32] The temporal analogue of this thought experiment would presumably involve abstracting from the content given in inner sense to be left with bare temporal extension.

SECTION FOUR: CLARIFYING THE ACCOUNT

I have given what amounts to an extremely abstract argument for why transcendental schemata are time determinations as well as how they facilitate subsumption. In a nutshell, because the pure intuition of time, unlike that of space, does not by itself refer to anything other than the mind, the representation of an object's temporal aspect presupposes further determination of time through transcendental schemata, and to so determine an object's temporal aspect is to make it homogeneous with, and subsumable under, the category. In order to further clarify the account, it will be useful to consider two objections and provide an example that relates it to the first two chapters of the dissertation.

Two Objections

The first objection points out that, as Kant makes clear in the Transcendental Deduction, the pure intuitions of space and time themselves contain manifolds, and as such presuppose categorial determination for their unity.[33] If, however, the pure intuition of space so presupposes categorial unity, and if transcendental schemata are rules for determining sensible manifolds on the basis of the categories, then surely this means – the objection posits – that the determination of an object's spatial aspect requires spatial transcendental schemata, in which case my explanation of the Schematism's focus on time fails.

[33] In §26 of the B-deduction, in particular, Kant explains that because space and time are pure intuitions "which contain a manifold," they therefore presuppose "the determination of the unity of this manifold in them," and that "this synthetic unity can be none other than that that of the combination of the manifold of a given intuition in general… in agreement with the categories" (B160-1). Similarly, in the A-deduction, Kant explains that transcendental apperception, which the categories make possible, is the condition of "even the purest objective unity, namely that of the a priori concepts (space and time)" (A107).

In order to meet this objection, we need to distinguish between two contributions of categorial unity to the constitution of appearances, and two corresponding aspects of objective unity. On the one hand, we can distinguish categorial unity in its contribution to the constitution of the pure intuitions of space and time, especially through the categories of quantity. Now, even though the pure intuitions of space and time in this way presuppose categorial unity, Kant makes clear that these representations are still ultimately products of sensibility. Hence immediately after arguing in the B-deduction that space and time themselves presuppose categorial determination for the unity, Kant emphasizes that because these representations "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" (B160-1n; Kant's emphasis).[34] The given nature of space and time – i.e., their singular and immediate nature – means that their synthesis ultimately has its seat in sensibility and not the understanding, even though this synthesis would be impossible apart from the latter's spontaneity. Let us call this singular, immediate aspect of the objective unity of appearances – one which presupposes categorial unity, but must ultimately be ascribed to sensibility – '*Gegenständlichkeit.*'

On the other hand, we can distinguish categorial unity insofar as it constitutes what Kant sometimes calls the "concepts of an object in general" (cf. A109; A111; B129; Bxvii), or the "fundamental concepts for thinking objects in general in the appearances" (A111). Kant explains what he means by such concepts in the A-deduction as follows:

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[34] Kant continues: "In the Aesthetic, I ascribed this unity 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 become possible." (B160-1n)

> We find, however, that our thought of the relation of all cognition to its object carries something of necessity with it, since namely the latter is regarded as that which is opposed to our cognitions being determined at pleasure or arbitrarily rather than being determined a priori, since insofar as our cognitions are to relate to an object they must also agree with each other in relation to it, i.e., they must have that unity that constitutes the concept of an object. (A104-5)

The concepts of an object in general are, collectively, the concept of something which grounds our various intuitions, and which more specifically possesses various powers and potentialities which explain them.[35] The concept of a substance, for instance, is the concept of something that persists over time and which can therefore be perceived on many different occasions, from many different perspectives, as having many different states, and so on. In this way, the concept of substance explains what we perceive. Because, furthermore, the concepts of an object in general concern objects qua bearers of powers and potentialities, they are also the ground of those objects' falling under universal and necessary laws. The category of substance, for example, is the ground of the law that "[i]n all change of appearances substance persists, and its quantum is neither increased nor diminished in nature" (B224). Kant thus says that through the concepts of an object in general, the understanding "is itself the legislation for nature" (A126) and that "[t]he categories prescribe laws a priori to appearances, thus to nature as the sum total of all appearances" (B163). Categorial unity qua constituting the concepts of an object in general, then, concerns not, fundamentally, the singular and immediate aspect of appearances (*Gegenständlichkeit*), but rather their status as bearers of powers and

[35] For an excellent discussion of the explanatory role that such a concept plays, and how this relates to their objective validity, see Matthew Boyle, "Sortalism and Perceptual Content" (Kant on Intuition, University of Chicago, 2010).

potentialities describable according to universal and necessary laws.[36] Call this aspect of an appearances' objective unity "*Objektivität*."[37]

My claim, then, is that when Kant enquires in the Schematism, as well as in §24 of the B-deduction, into how appearances can be subsumed under, and homogeneous with, the categories, he is concerned not with categorial unity in its contribution to *Gegenständlichkeit* and the constitution of the pure intuitions of space and time, but rather with categorial unity in the guise of *Objektivität*, and qua constituting concepts of an object in general. This must be the case, moreover, since the Analytic of Principles, of which the Schematism is the first chapter, is concerned with pure knowledge on the basis of – not sensibility – but judgment, i.e., "with those synthetic judgments that flow a priori from pure concepts of the understanding" (A136/B175). It is also born out by Kant's remark that "[t]he schema is really only the phenomenon, or the sensible concept of an object, in agreement with the category" (A146/B186; my emphasis). Transcendental schemata, that is, are the sensible conditions of the categories qua concepts of an object in general. And what categorial unity in this guise represents and makes possible, I am claiming, is the temporal aspect of appearances, since the pure intuition of time is – unlike that of space – not intrinsically object related, and as such is in need of further categorial determination through the concepts of an object in general in order

[36] Longuenesse, for one, agrees with the distinction between two different functions or actualizations of the categories: one in the constitution of the pure intuitions of space and time, and another in the determination of particular objects within space and time. See Longuenesse, 213–15.

[37] I use the *Gegenständlichkeit*/*Objektivität* contrast because Kant tends to associate '*Gegenstand*' with the determinate object of a representation, including with what is given through intuition, while '*Objekt*' tends to be associated with the more general cognitive content of a representation, and as such captures what categorial unity represents in the guise of the concepts of an object in general. For a brief discussion of this distinction, see *The Cambridge Kant Lexicon*, ed. Wuerth, 'Object' entry by Desmond Hogan, 311.

to be related to an object. By thus distinguishing different contributions of the categories to the constitution of appearances, we can allow that the pure intuition of space indeed presupposes categorial unity, while maintaining that the categories qua concepts of an object in general fundamentally make possible and represent the temporal aspect of appearances.

This, however, leads into the second objection. Namely, how can all this be squared with the idea that – as I insisted earlier – only outer intuitions present anything properly homogeneous with, at the very least, the relational categories? If outer intuitions alone present anything adequate to category of substance, for example, then surely this means that such a schema must involve space as well as time?

First, let me flag that I agree: at some level of description, the transcendental schemata of at least the relational categories must also involve space, since space alone presents the persistent substances which those categories serve to determine. The question, however, concerns how exactly such schemata involve space. And in pursuit of this let us briefly refresh on what a schema is. A schema, Kant explained, is "a rule for the determination of our intuition in accordance with a certain general concept" (A141/B180), and "a general procedure of the imagination for providing a concept with its image" (A141/B180). His most detailed example was the schema of the concept of a triangle, which "signifies a rule of the synthesis of imagination with regard to pure shapes in space" (A141/B180), and in particular a rule for "the composition of three straight lines… according to which such an intuition can always be exhibited" (A105). On this basis, I concluded that 'a schema is a rule, based on a concept, for unifying a manifold of intuition – i.e., for combining, constructing, or synthesizing it – and

thereby determining its object as an instance of the concept, i.e., for thereby subsuming it under the concept.'

Now note that, on the above definition, we can distinguish between the manifold that a schema unifies, on the one hand, and in what respect the object of that manifold is determined, or subsumed under, the corresponding concept, on the other. And in particular, we can say that while the schema of, for instance, the category of substance is indeed a rule for unifying the spatial manifold with the temporal manifold of an object, it is nonetheless fundamentally a rule for determining or representing the object's temporal aspect, since this is what the schema makes possible. The object's spatial aspect, for the reasons given in section three of this chapter, rest merely upon a limitation of the pure intuition of space, and not upon this further unification of space through transcendental schema. We can also put the point this way: although the relational categories necessarily and only apply to spatial objects, they so apply in virtue of the latter's temporal aspect.[38] We can thus consistently allow that although the

[38] Here is an analogy. The representation of an organism presupposes, as I explained in chapter one, representing the organism's parts as in some sense grounded in, or explained by, the whole. In representing a human body, for example, we represent the heart as existing for the sake of circulating blood and nourishing the whole body. Now, a condition on so determining an organism – on representing the whole as the ground of its parts – is of course also representing its merely mechanistic aspect, since this is what its parts are made of. A human heart, for instance, is comprised of matter in space and time. Now, although the representation of an organism in this way presupposes the representation of its merely mechanistic aspect, it would clearly be a mistake to say that it makes the latter aspect possible. We can, after all, determine an object's mechanistic aspect without thereby determining it as an organism (e.g., in representing a rock). In an analogous manner, then, we can say that although the schemata of the relational categories presuppose, and unify, the spatial as well as temporal manifold of an object, they are, in the first instance, determinations of an object's temporal aspect, since it is solely the latter aspect that they make possible. The spatial aspect, like the purely mechanistic aspect of an organism, does not presuppose such determination for its representation.

schemata of at least the relational categories will necessarily involve space, they are first and foremost time determinations.

An Example

Let us now draw together, through an example, the results of the first three chapters of this dissertation. Chapter one argued that outer sensible affection, whether in a rational or non-rational being, necessarily involves a continuous transition, on the basis of affection by an object, between opposing sensory states over time. Upon being affected by a tree, for example, an initial state of sensibility is replaced by an opposing sensory state brought about by the tree, via a continuous transition through intermediate sensory states over time. Chapter one then argued that because the sensibility of a self-conscious being is divided into inner and outer sense – in order to facilitate intuitions of the subject, and object, respectively – it follows that inner sense's form must be time, in order to be capable of representing such transitions. Upon being affected by the tree, for example, there is a continuous transition from an initial sensory state to an opposing state of outer intuition presenting the tree, and this transition, qua determination of the mind, is given in inner sense in time.

Chapter two extended this account to explain why, despite time being solely the form of inner sense, outer appearances are also in time. It argued that an act of human outer perception involves all of the following in parallel: an outer intuition which presents the affecting object in space; a parallel inner intuition, in time, of the outer intuition qua effect of affection; and finally, a grasp that because the outer object grounds the outer intuition qua effect of affection given in inner sense, so must the object itself be in time. So, upon being

affected by the tree, understanding determines outer sense to produce an outer intuition of the tree; inner sense is determined in parallel by this act to produce a corresponding inner intuition of the outer intuition of the tree; and we grasp, finally, that because the outer intuition, qua given in inner sense, is in time, so must the tree – as the outer intuition's ground – also be represented in time.

The main lesson of chapter three has been that the final aspect of the above act – the determination of the tree in time – cannot occur directly or 'for free', since time is the form of inner sense, and the pure intuition of time does not of itself present anything distinct from the mind. For this reason, the determination of the tree's temporal aspect presupposes – as another aspect of the act of outer perception, and specifically of the figurative synthesis – a further synthesis of time in which time's moments are related to an object through schemata of the concepts of an object in general. Through, for example, the schema of substance – "the persistence of the real in time" (A144/B183) – the successive moments of time, produced as inner sense intuits the states of outer intuition presenting the tree, are themselves related to the tree as the single persistent substance or 'real' which grounds those outer intuitions qua effect of affection given in inner sense. In this way, the pure moments of time are synthesized or unified with what is given in space – i.e., with the tree – and related to something distinct from the mind. Because, furthermore, the schema of substance rests upon the a priori rule of the category, the tree's temporal aspect is thereby also homogeneous with, and subsumable under, the category.

* * *

Chapter one of this dissertation demonstrated how human intuition is like that of non-rational animals, and unlike God's, in that our acts of intuition are essentially in time, and yet also unlike that of non-rational animals, since, qua self-conscious, we possess an inner sense through which we are also conscious of our acts in time. Chapter two then showed that not only is human intuition distinct from that of non-rational animals qua involving inner sense and the consciousness of our own acts in time, but also in that it involves a self-conscious comprehension of sensibility as a whole which means that we also grasp and intuit outer objects time. Chapter three has now shown that the intuition of an outer object in time involves complex intellectual conditions, since the pure intuition of time, as the form of inner sense, is not of itself sufficient for the presentation of an object, and as such presupposes further determination through transcendental schemata. The categories – a finite intellect's fundamental a priori concepts of an object – therefore have a fundamentally temporal significance with respect to outer appearances, which is why the Schematism focuses on time.

Chapter Four: Inner Sense and the Priority of Outer Time

I began this dissertation by flagging idealist readings of Kant and how they can offer answers, of sorts, to at least the first two problems about time, or the issues of why time is exclusively the form of inner sense, and how, given this restriction, time comes to be a form of outer appearances. Time is the form of inner sense, the idealist can say, because time is the form of the 'parade of representations' the mind undergoes. And yet outer appearances are also necessarily in time – the idealist continues – because such appearances are, in one way or another, ultimately completely internal to our representations and mind, and all mental entities, qua determinations of inner sense, are necessarily in time. Idealist readings came at the clear cost, however, of defying Kant's empirical realism about outer objects – especially as expressed in the Refutation of Idealism – as well as our commonsense understanding of such objects as having at least a degree of mind-independence.

Chapters one and two of this dissertation, meanwhile, offered an alternative explanation of these doctrines, one that took off from Kant's idea that the finitude of our cognitive capacity has non-trivial consequences for the nature of our knowledge, in order to argue that the ultimate ground of time is the transition between opposing sensory states, on the basis of affection, that acts of sensible intuition necessarily involve. This facilitated an explanation of time being the form of inner sense, since it is inner sense that must, in such acts, represent the transition between inner sensory states, as well as of why outer objects are in time, since such objects are the ground of those inner sensory transitions, and so must themselves be posited in time. The account also facilitated an explanation of the third problem

about time – the issue of the Schematism's focus on time and neglect of space – since it made clear how time is distinct from space qua originally presenting inner states of the mind alone, and why it thus stands in need of further unification through the schemata of the categories in order to present an object.

There is, however, another important strand to Kant's thinking about time – indeed one that undergirds his empirical realism – that may be seen as in tension with the view of time that has emerged here. Namely, as the First Analogy and Refutation of Idealism make clear, the consciousness of outer appearances in time has a kind of priority over consciousness of inner appearances in time – i.e., of states of our own mind in time – since only outer appearances persist in the way that all time-determination requires.

Now, on the one hand, such a notion is obviously congenial to this dissertation, since most of my positive proposals about inner sense and time were generated by considering inner sense's contribution to outer perception and cognition, and it thus would have been bad news indeed if inner sense turned out to be a free-standing capacity, one whose exercise was logically independent from outer sense. But on the other hand, the notion that consciousness of outer objects in time has priority over that of inner states in time seems deeply uncongenial to this dissertation, since a central theme of it has been that time is, in the first instance, related to the representation of that which is inner and concerns the subject, and only

secondarily – and in virtue of this more original relation – to the representation of what is outer and concerns the object.[1]

Idealist readers of Kant, it is worth noting, do not obviously face a problem here, since they can make a distinction between two kinds of determinations of, or representations within, inner sense. The idealist interpreter can say that time is the form of inner sense because time is the form of the parade of representations the mind undergoes. And yet the idealist can also say that, since, amongst the variety of representations passing through the mind, a certain subset must be regarded as outer objects – namely outer appearances – and since this subset has priority in the order of cognition, so time first and foremost the form of outer objects. Or to put the point another way, although time is the form of all inner determinations of the mind, it is first and foremost the form of those inner determinations purporting to be outer objects. Idealist interpreters can thus at least nominally respect the claims that time is originally the form of inner sense, and yet most originally related to outer objects.

The main aim of this chapter, then, is to reconcile the First Analogy and Refutation of Idealism with the thesis that time is originally related to the representation of inner determinations of the mind. Doing so, moreover, will also provide the opportunity for clarifying the first three chapters of this dissertation, and especially how the account of time, inner sense, and outer cognition contained therein maps onto different aspects of an act of outer perception. It will also provide the opportunity for addressing the two issues concerning inner

[1] I go into more detail later regarding how exactly each of the first three chapters might be construed as inconsistent with the idea that there is a priority to the consciousness of outer objects in time.

sense left over from chapter two. First, given that inner sense's essential role, as an aspect of "[t]he capacity… to acquire representations through the way in which we are affected by objects" (A19/B33), consists in presenting the inner sensory states following from outer affection, how do mental states not essentially related to outer perception – e.g., desires, feelings, and purely intellectual representations – come to be given in this capacity? Second, to what extent is inner sense dependent upon outer sense? Does, for instance, inner sense's standing as an aspect of the capacity for outer sensible cognition mean that all acts of inner sense involve parallel acts of outer sense? Or can Kant allow for what I will call 'purely inner experiences': exercises of inner sense independent of any corresponding exercise of outer sense, in which all we are conscious of is our own inner states, such as in a succession of debilitating pain?[2]

The structure of the chapter is as follows. **Section one** reconstructs the argument of the First Analogy and then explains how the Refutation of Idealism concludes on the basis of it that consciousness of outer objects in time has a priority over that of inner states in time. The reading of the First Analogy I adopt is largely inspired by, and conforms to, that of Sebastian Rödl in *Categories of the Temporal*, though I make what I think is a small improvement to it.[3] **Section two** shows how, by distinguishing between different respects in which time and the consciousness of it are dependent, we can reconcile the idea that there is a priority to the

[2] To the best of my knowledge, Kant does not ever explicitly discuss the possibility of such experiences, and so my assessment of whether he can allow for such experiences takes the form of extrapolating from various things he says.

[3] Sebastian Rödl, *Categories of the Temporal: An Inquiry into the Forms of the Finite Intellect* (Cambridge, Mass: Harvard University Press, 2012), 116–27.

consciousness of outer objects in time with the idea that time nonetheless originally presents inner states of the mind alone. **Section three** draws on the Refutation of Idealism to address the two outstanding issues concerning inner sense left over from chapter two – namely how mental states not essentially related to outer perception come to be given in this faculty, and whether Kant can allow for purely inner experiences – and gives a summary of the account of inner sense that has emerged in the dissertation. **Section four** concludes the chapter and dissertation with some reflections on the connection between time and finite cognition, the role that the concept of a cognitive capacity played in the account, and Kant's relation to the philosophical tradition that sees time as intimately related to finitude.

SECTION ONE: THE FIRST ANALOGY AND REFUTATION OF IDEALISM

The First Analogy: Substance and State

The First Analogy articulates and justifies the synthetic a priori principle that follows from the determination of appearances by the category of substance: "All appearances contain that which persists (substance) as the object itself, and that which can change as its mere determination, i.e., a way in which the object exists" (A182). All outer objects, this principle says, bear the structure of persistent, underlying substance, on the one hand, and changeable determination or state, on the other. Water, for instance, is comprised of a persistent

substance that will persist throughout any change it may undergo, including the separation of the hydrogen and oxygen molecules constituting the water itself.[4]

The idea, however, that all physical objects are comprised of necessarily persisting substance is controversial, since it goes beyond all possible experience qua making a claim about what always and necessarily happens. Hume, for instance, had argued that the concept of substance is really just a concoction of the imagination – one formed by illegitimately relating an object's directly perceptible qualities to "an unknown *something*"[5] – and that there is really no contradiction in the idea of an object's suddenly going out of existence, i.e., disappearing altogether. Kant argues, however, that outer objects really are persistent substances – i.e., the principle of the First Analogy is true – since such a structure is a condition on appearances being in time.[6] Here is his argument, broken into lettered sections for ease of reference:

> [A] All appearances are in time, in which, as substratum (as persistent form of inner intuition), both *simultaneity* as well as *succession* can alone be represented. [B] That time, therefore, in which all change of appearances is to be thought, lasts and does not

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[4] At some points, Kant talks as if anything that can serve as the substratum of change, i.e., anything which be represented as the bearer of opposing attributes, is absolutely persistent (e.g., A185/B228; A187/B230-31). Given, however, Kant was certainly aware that the empirical objects which usually serve this purpose – e.g., tables, chairs, trees, animals, etc. – themselves arise and perish, it seems safe to say that he is thinking of substance as a more fundamental entity that persists throughout any possible empirical change.

[5] David Hume, *A Treatise of Human Nature: A Critical Edition*, ed. David Fate Norton and Mary J. Norton, The Clarendon Edition of the Works of David Hume (Oxford: Clarendon Press; Oxford University Press, 2007), 16. Volume 1, book 1, part 1, section 6: "Of Modes and Substances"

[6] Kant's repeated emphasis throughout the Analogies on the ever-successive nature of our perceptions has typically been taken as his denial that we directly perceive an objective outer temporal order, and the Analogies have thus typically been understood as rules for inferring such an order from the subjective order of our own perceptions. Cf. Longuenesse, 334–35; Guyer, *Kant and the Claims of Knowledge*, 244 and 248. Sebastian Rödl points out, however, that if we never directly perceive an objective outer temporal order, then it is hard to see how we could come to know such an order at all. The correct way of understanding Kant's emphasis on the ever-successive nature of our perceptions, Rödl argues, is instead that from the temporal order of our perceptions alone it does not yet follow that we perceive an objective outer temporal order, and that there thus must be further conditions on the direct perception of such an order, conditions which the Analogies articulate. Cf. Rödl, 120–23.

> change; since it is that in which alone succession or simultaneity can be represented only as determinations of it. [C] Now time cannot be perceived by itself. [D] Consequently it is in the objects of perception, i.e., the appearances, that the substratum must be encountered that represents time in general and in which all change and simultaneity can be perceived in apprehension through the relation of appearances to it. However, the substratum of everything real, i.e., everything that belongs to the existence of things, is *substance*, of which everything that belongs to existence can be thought only as a determination. (A181/B224-5)

Section [A] reminds the reader of two conclusions from the Transcendental Aesthetic. First, all appearances are ordered in time: for any two appearances, they will stand in a relation of simultaneity or succession in one temporal order. Second, the representation of time – the pure intuition of it – precedes and makes possible the perception of any particular case of succession or simultaneity. It is only in virtue of locating appearances within the prior representation of the whole of time, that is to say, that we can represent them as simultaneous or successive in the first place (Cf. A30-1/B46).

Section [B] – "[t]hat time, therefore, in which all change of appearances is to be thought, lasts and does not change; since it is that in which alone succession or simultaneity can be represented only as determinations of it" – can be understood as making explicit an important implication of [A]. The pure intuition of time – that which precedes and makes possible the perception of any particular temporal relation – is a representation of the fixed, unchanging temporal positions which constitute the whole of time. Individual times, that is to say, are only <u>times</u> because they stand in a fixed relation to the totality of <u>other</u> times within the <u>whole</u> of time. In this sense, time 'lasts and does not change'; the order of temporal

positions is permanent.[7] Since, however, the pure intuition of time is nothing apart from the totality of individual times comprising it, it follows that in order to determine the pure intuition of time with an appearance – as we must if we are to represent the latter in time – we need to determine a particular time with that appearance, and we therefore have a series of conditions it is worth making explicit. First, the representation of the whole of time is a condition on the representation of particular times, in that particular times are only times in virtue of standing in a fixed relation to the totality of other times. Second, the representation of particular times is a condition on the representation of an appearance in time, in that to determine the pure intuition of time with an appearance just is to determine a particular time with that appearance. The whole of time is thus a condition on particular times, while particular times are a condition on the determination of an appearance in time.

Section [C] observes that "time cannot be perceived by itself." We can understand this as saying that the order of particular times that comprise the pure intuition of time cannot itself be perceived; it does not constitute part of the material content of perception. This, however, raises a question: how can we determine the pure intuition of time with an appearance – as we must, according to the argument of section [B], if we are to represent the appearance in time – if the order of times cannot be perceived?

Section [D] provides Kant's answer: it is the appearance itself – the object – that instantiates the general structure of time, and makes possible the determination of the pure

[7] I take this way of construing the notion of time's persistence from Matthew Boyle's lectures on the *Critique of Pure Reason* given at the University of Chicago in the Fall of 2019.

intuition of time with the appearance. In particular, "everything that belongs to the existence of things, is *substance*, of which everything that belongs to existence can be thought only as a determination." We can spell this out in terms of the series of conditions I mentioned earlier. The state of a substance perceptibly instantiates and indexes the particular time at which the substance is perceived, while the substance itself, qua persistent thing, perceptibly instantiates and indexes the whole of time, or the fixed totality of particular times which is a condition on the present moment and state of the substance.[8,9] We thus determine the pure intuition of time with the appearance, by representing the latter's state as a determination of persistent substance. In perceiving water, for instance, I perceive a particular state of it – e.g., its liquidity – which instantiates and indexes the particular time at which I perceive it. I also, however, perceive something which will endure throughout any change, and of which this liquidity is a determination, and this persistent thing instantiates and indexes the whole of time, i.e., the fixed totality of times which is a condition on the particular time at which I perceive the substance's present state.[10] The structure of persisting substance and changeable state which the First Analogy articulates thus makes possible the determination of appearances in time.

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[8] Later on in the First Analogy, Kant puts it as follows: "Persistence gives general expression to time as the constant correlate of all existence of appearances, all change and all accompaniment. For change does not affect time itself… If one were to ascribe such a succession to time itself, one would have to think yet another time in which this succession would be possible." (A183/B226) Cf. also B277-8.

[9] As I mentioned in the introduction, this reading is largely taken from Rödl (*Categories of the Temporal*, 116–27). My one amendment of Rödl is that, while he clearly sees how substance, qua permanent, instantiates and indexes the fixed whole of time, he does not clearly have in view how particular times – i.e., the instants which presuppose the whole of time as their condition – are instantiated and indexed by the states of substances. He does not fully see, in other words, how the general structure of time – i.e., the whole of time, and the particular times conditioned by it – is fully instantiated by the structure of substance and state; his focus is only on the substance aspect. Cf. Rödl, 119–20.

[10] Guyer, quite reasonably, questions why anything at all must perceptibly instantiate the whole of time in order for us to determine an appearance in time, i.e., why "permanence in something imperceivable must be

Refutation of Idealism: The Priority of Outer Cognition

The Refutation of Idealism provides, on the basis of the argument of the First Analogy, a proof against what Kant calls 'material' idealism, or "the theory that declares the existence of objects in space outside us to be either merely doubtful and indemonstrable, or else false and impossible" (B274). The former, 'problematic' material idealism is that of Descartes, who held that the existence of outer objects is always uncertain since our access to them is necessarily mediated by our own representations, which may just be products of imagination. The latter, 'dogmatic' material idealism, meanwhile, is most obviously that of Berkeley, who held that the notion of mind-independent outer objects is not only doubtful but incoherent, and that objects

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represented by permanence in something perceivable." (Guyer, *Kant and the Claims of Knowledge*, 219) One might think, for example, that while it is certainly not true of our experience, there is no contradiction in the idea of an experience consisting exclusively of fleeting, non-substantial entities or mere 'sense-data', e.g., sounds, colors impressions, feelings, transient spatial shapes, and so on. Such entities would have no existence outside of our perception of them, and as such could not perceptibly instantiate the whole of time, and yet – one might think – one could still be conscious of them as in time. Strawson entertains just such a scenario in *The Bounds of Sense*. He argues that since mere sense-data perceptions do not present anything distinct from themselves – i.e., since "their *esse* is, to all intents and purposes, their *percipi*" – a pure sense-data experience would be impossible, since self-consciousness, qua requiring the self-ascription of representations, presupposes that at least some of our representations admit of the distinction between the representing and the represented. "The hypothesis," in Strawson's words, "seems to contain on ground of distinction between the supposed experience of awareness and the particular item which the awareness is awareness of." (Strawson, 100) While I am not sure about Strawson's way of spelling out the conditions of self-consciousness – especially the idea of it as a second-order self-ascription – his account does seem to me to be going in the right direction, or at least in the direction that Kant wants to go. In the A-deduction, for instance, Kant explains that if appearances were not objectively 'associable' – i.e., if they could not be unified terms of an objective world – then "a multitude of perceptions and even an entire sensibility would be possible in which much empirical consciousness would be encountered in my mind, but separated, and without belonging to one consciousness of myself... For only because I ascribe all perceptions to one consciousness (of original apperception) can I say of all perceptions I am conscious of them." (A122) If, in other words, the sensible manifold consisted entirely of mere sense-data, then we could not unify it in one consciousness on the basis of the a priori concepts of an object in general, and could not be conscious of it as our own. In such an experience, the mind would presumably undergo one sense-data perception after another, without being able to reproduce past perceptions as past perceptions, and without being able to unify the manifold through a priori rules and thereby be self-conscious of it.

of outer perception are completely mental entities ultimately grounded in the mind of God.[11] What problematic and dogmatic idealism have in common, then, qua material idealisms, is that they both view outer appearances – i.e., the things of which we are conscious in outer intuition – as completely internal to our representations, and take inner experience as foundational and indubitable.

Against such idealism, Kant argues that "[t]he mere, but empirically determined, consciousness of my own existence proves the reality of objects in space outside me." (B275) Even the consciousness of one's own mental states in time – a consciousness which the material idealist takes as foundational – presupposes, Kant thinks, the perception of non-mental outer objects. Here is Kant's argument, again broken into lettered sections for ease of reference:

> [A] I am conscious of my existence as determined in time. [B] All time-determination presupposes something persistent in perception. [C] This persistent thing, however, cannot be something in me, since my own existence in time can first be determined only through this persistent thing. [D] Thus the perception of this persistent thing is possible only through a thing outside me and not through the mere representation of a thing outside me. [E] Consequently, the determination of my existence in time is possible only by means of the existence of actual things that I perceive outside myself. [F] Now consciousness in time is necessarily combined with the consciousness of the possibility of this time-determination. Therefore it is also necessarily combined with the existence of things outside me, as the condition of time-determination, that is, the consciousness of my own existence is at the same time an immediate consciousness of the existence of other things outside me. (B276)

[11] Cf. George Berkeley, *Three Dialogues between Hylas and Philonous*, ed. Michael B. Mathias, The Longman Library of Primary Sources in Philosophy (New York: Routledge, 2016).

Section [A] – "I am conscious of my existence as determined in time" – states the premise that the material idealist accepts.[12] Whether outer objects just are mental states, as per dogmatic idealism, or whether outer objects perhaps exist – albeit unknowably – outside of our representations, as per problematic idealism, we can at least know our own inner representational state.

Section [B] – "All time-determination presupposes something persistent in perception" – references a conclusion of the First Analogy. Namely, since we can only represent an appearance in time by determining the pure intuition of time with it, and since the pure intuition of time is comprised of the fixed totality of particular times, it follows that there must, given the imperceptibility of time itself, be something persistent in perception which instantiates and indexes the fixed whole of time, and which makes it possible to determine the pure intuition of time with the appearance.

Section [C] observes that this persistent thing "cannot be something in me," since, as Kant explains in his reformulation of this point in the B-preface, "all the determining grounds of my existence that can be encountered in me are representations, and as such they themselves

[12] Jonathan Bennett thinks that the relevant inner experience is "consciousness of the self as determined in certain ways, as having this rather than that history," (Bennett, 205) and goes on to argue that such specific knowledge of the past presupposes knowledge of outer events. This, however, seems to me too 'thick' a conception of inner experience, both because it is something we can clearly be mistaken about (e.g., we might get the order of mental events wrong) and therefore is something the idealist would likely be willing to give up, and also because I do not think Kant's argument requires it. Henry Allison argues that the relevant inner experience is instead consciousness of oneself as purportedly having a particular succession of mental events (Allison, *Kant's Transcendental Idealism*, Revised and Enlarged Edition, 290), which improves on Bennet insofar as such consciousness is presumably not something the idealist would want to give up. I do not think, however, that Kant's argument requires even this comparatively 'thinner' concept of inner experience. Instead, all Kant's argument requires, on my reading, is consciousness of oneself as having a particular mental state now; we need not be conscious of any past mental states – real or imaginary – at all.

need something persisting distinct from them, in relation to which their change… can be determined." (BxxxixN) We can spell this out in terms of the first two chapters of this dissertation. Inner sense is fundamentally an aspect of the capacity for outer cognition; its basic act consists in presenting, as an aspect of outer perception, the inner sensory states – and transition between them – following from outer affection. If, however, inner sense is such a subordinate aspect of the capacity for outer cognition, then it should be unsurprising that what inner sense presents – the mind's inner state – is not itself an object proper, since such a presentation is a mere dimension of that larger act which does present objects proper, namely an outer perception. Thus while inner sense certainly presents states of the mind, it never thereby presents the mind as an object – i.e., as something over and above those states – and hence nothing given in inner sense could persist in the way required to instantiate the general structure of time.[13]

Section [D] infers that the persistent thing must therefore be something given in outer sense, and not just a representation of outer sense – since representations, as determinations of inner sense, are always transient – but an object of outer sense. The relevant object, of course, is the persistent outer substance that the First Analogy describes. Section [E] concludes that the determination of one's mental states in time – the inner experience material idealism takes for granted – therefore presupposes the perception of real, persisting substances outside of oneself which perceptibly instantiate the fixed whole of time. The consciousness of outer

[13] Kant acknowledges that the representation 'I' – pure apperception – is indeed one and the same in all of our representations, and is in this sense persistent. The problem, however, is that qua purely intellectual representation, the "I" contains nothing intuitive that could act as the perceptible instantiation of the whole of time. Cf. B278.

objects in time thus has a priority over that of inner states in time, since the former is a condition of latter.[14]

SECTION TWO: VARIETIES OF TIME'S DEPENDENCE

As already mentioned, the notion that consciousness of outer objects in time has such a priority over consciousness of inner states in time seems a bad result for this dissertation, since a central theme which has emerged throughout it is that time is originally related to the representation of that which is inner and concerns the subject, and only secondarily – and in virtue of this more original relation – to the representation of that which is outer and concerns the object. If, however, consciousness of outer objects in time has priority in the way the Refutation of Idealism describes, then it seems my account must be mistaken.

Regarding chapter one, in particular, it would seem that – contrary to my account – time cannot be the form of inner sense simply because it is that structure required in order to represent transitions between opposing inner sensory states following from outer affection. Instead, it would seem time must possess its specific structure first and foremost because of the nature of outer objects, since such objects are what it most originally represents. Regarding chapter two, likewise, if consciousness of outer objects in time has priority over that of inner states in time, then it would seem that the explanation of why outer objects are in time, despite time being solely the form of inner sense, cannot involve an appeal to a grasp of one's inner sensory state as grounded in the outer object, since the consciousness of outer objects in

[14] As Kant puts it: "Inner experience itself is consequently only mediate and possible only through outer experience" (B277).

time has priority over the consciousness of inner states. And regarding chapter three and the Schematism, finally, if consciousness of outer objects in time has priority over that of inner states in time, then it would seem that time is strictly not in need of any special, additional unification in order to present an object – as opposed to merely presenting determinations of our own mind – since consciousness of outer objects in time is a prior condition on the consciousness of mental states in time.

The obvious way to deal with these issues, and the way which I think is clearly present in Kant's thinking, is to distinguish between different respects in which time, and the consciousness of appearances within it, are dependent or conditioned. Beginning with the worry about chapter two, since it is the most illuminating, we can say the following. Even though consciousness of one's inner states in time presupposes consciousness of outer objects in time – since only the latter persist in the way that time-determination requires – in another respect, consciousness of outer objects in time presupposes consciousness of inner states in time, and specifically of outer intuitions qua inner sensory states grounded in (or caused by) outer objects. These two dependencies, moreover, can and must coexist as mutually enabling dimensions of a single act. In particular, upon being affected by an outer object, consciousness, through outer intuition, of a persistent object in time is in one respect the ground of the parallel consciousness, through inner intuition, of that same outer intuition qua determination of inner sense (since the outer object alone persists). In another respect, however, consciousness, through inner intuition, of that same outer intuition qua temporal determination of inner sense, is the parallel ground of the consciousness of the outer object being in time, since – as chapter two argued – that is what grounds the demand to represent

the object in time in the first place. These two dependencies, as already mentioned, can coexist as parallel and mutually enabling aspects of an act of outer perception.

It is thus important to be clear that although consciousness of outer objects in time has, in one respect, priority over consciousness of inner states in time, it cannot, on my account, have a temporal priority, since consciousness of outer temporal objects in turn presupposes consciousness of outer intuitions qua determinations of inner sense. It is thus strictly not the case that the various dependencies and conditions involved in temporal cognition are satisfied successively – e.g., first we are conscious of outer objects in time, then we are conscious of inner states in time, etc. – but rather that they are, in the fundamental case, internal aspects of a single unified act of outer perception.

These observations also provide the resources for resolving the worries about chapters one and three. Regarding chapter one, we can say that even though consciousness of outer objects in time, qua presenting persistent substances, has a certain priority over consciousness of inner states in time, it is nonetheless still the case that the pure intuition of time is, in the first instance, the dense, linear order which inner sense must produce in order to present the transition between opposing sensory states following from outer affection. The demands following from what inner sense must contribute to an act of outer perception, in other words, still explains the specific structure of time, even though we could not be conscious of this structure, nor of anything in it, if we did not also, as part of the very same act, determine an outer object in time.

And regarding the worry about chapter three, finally, we can say that even though consciousness of outer objects in time, qua presenting persistent substances, has a certain

priority over consciousness of inner states in time, it is nonetheless still the case that because the pure intuition of time is, in the first instance, what inner sense produces in order to present the transition between opposing inner sensory states, the required parallel determination of an outer object's temporal aspect still presupposes a further unification of time through transcendental schemata. It is consistent, in other words, to say that although the consciousness of an outer object in time is in one respect a condition on the consciousness of inner states in time, the former kind of consciousness is still more cognitively complex than the latter – since the pure intuition of time originally presents solely inner states of the mind – and as such requires additional unification in order to present an object.

To summarize, then, we can distinguish at least the following five ways in which time and the consciousness of it are dependent. First, the fundamental reason for time – why time 'is', in the first place – is the capacity for finite, sensible intuition, and the transition between opposing sensory states, on the basis of outer affection, which its acts involve. Time depends upon sensible intuition. Second, the representation of time – i.e., the pure intuition of it – depends upon inner sense, because it is inner sense that must, in acts of outer perception, represent the transition between opposing inner sensory states following from outer affection. The pure intuition of time depends upon inner sense. Third, the reason that outer objects are necessarily in time, despite time being solely the form of inner sense, is that in a unified act of outer perception, the outer object must be comprehended as the ground of the outer intuition qua temporal determination of inner sense, which in turn entails the temporality of the outer object itself. Outer temporality depends upon inner temporality. Fourth, the reason, though, that we can cognize or be conscious of anything in time at all, despite the imperceptibility of

time itself, is that outer sense presents persistent substances which perceptibly instantiate the fixed whole of time, and which by ordering appearances with respect to, we can determine them within the pure intuition of time. Consciousness of time depends upon outer sense and consciousness of outer substances. Fifth, because, however, time originally presents inner determinations of the mind alone, the perception of an outer substance's temporal aspect presupposes a further unification of time through our spontaneous faculty of understanding. Consciousness of outer temporal substances depends upon a further unification of time through transcendental schemata.

The first dependency, note, is a dependency on sensible intuition in general, whether that of a rational or non-rational being: (1) the ultimate ground of time is the transition, on the basis of outer affection, between opposing sensory states that acts of sensible intuition necessarily involve. The rest of the dependencies, meanwhile, qua concerning the representation or consciousness of time, involve conditions that only rational beings can meet. To take them in order: (2) the pure intuition of time depends upon inner sense, which is a capacity that only rational, sensible beings possess, since inner sense's topic or subject – the "I" or self – presupposes rational spontaneity for its representation; (3) the consciousness of outer objects in time depends not only upon the inner sense which is unique to rational beings, but also upon a grasp of the ground-consequent relation between the outer object and sensory state which presents it, which is a relation that only rational beings can represent; (4) the consciousness of time in general depends upon the determination of outer, persistent objects through the category of substance, which, qua concept or rule, only rational beings can represent; and (5) the perception of an outer object's temporal aspect depends upon an

additional unification of the pure intuition of time – since it originally presents inner determinations of the mind alone – which is something that only a being with understanding, i.e., a spontaneous representational faculty, can achieve.[15]

And finally, before moving on to the outstanding issues about inner sense, it is worth touching on a worry one might have about the first of the above dependencies, namely that time depends upon sensible intuition. In particular, this might strike one as a hopelessly subjective and anthropocentric thing to say. We know, after all, that billions of years passed before humans came into being, and that it took millions of years of evolution for us to arrive at our cognitive state, and as such it cannot possibly be the case – one might think – that time depends upon sensible intuition in the unabashed way I have described.

Kant addresses exactly this sort of worry in a section of the Antinomies entitled "Transcendental Idealism as the Key to Solving the Cosmological Dialectic." He explains that:

> all those events which have elapsed from an inconceivable past time prior to my own existence signify nothing but the possibility of prolonging the chain of experience, starting with the present perception, upward to the conditions that determine it in time. If, accordingly, I represent all together all existing objects of sense in all time and all space, I do not posit them as being there in space and time prior to experience, but rather this representation is nothing other than the thought of a possible experience in its absolute completeness. In it alone are those objects (which are nothing but mere representations) given. But to say that they exist prior to all my experience means only that they are to be encountered in the part of experience <u>to which</u> I, starting with the perception, must first of all progress. (A495-6/B523-4)

[15] One might be uncomfortable with rationality being a condition on time consciousness in these ways. Many intelligent animals, for instance, behave in a manner consistent with their being consciousness of outer objects in time, e.g., by having expectations about the future and learning from the past. Kant naturally appeals to instinct and association in order to explain such behaviors (Cf. *Anth.* 7:196; *CPJ* 5:464n). Whether such a strategy succeeds depends upon whether intelligent animal behavior outstrips what mere instinct and association can explain.

We can correctly say that the universe existed prior to ourselves, Kant allows here, but we must be careful about what we mean. In representing the universe as existing prior to ourselves, in particular, we necessarily represent such prior states of it as connectable with our own actual experience of it according to empirical laws. Empirical reality, in other words, has an essential relation to our own cognitive faculty, and is always, in principle, an object of possible experience, even if no humans were around to actually perceive it. Thus if, in representing the universe as existing prior to human beings, one thinks that one can represent it apart from the sensible conditions of our experience of it, and yet still as spatiotemporal, then one is mistaken. For, as Kant puts it in the Aesthetic, "if we remove… the subjective constitution of the senses in general, then all constitution, all relations of objects in space and time, indeed space and time themselves would entirely disappear" (A42/B59). Space and time, and everything within them, have an essential relation to our own sensibility, and thus while one can correctly say that the universe existed in space and time prior to humans, it is always only as object of possible (though not actual) experience.

SECTION THREE: INNER SENSE AGAIN

Let us now turn to the two outstanding issues about inner sense left over from chapter two. First, given that inner sense's essential role, as an aspect of "[t]he capacity… to acquire representations through the way in which we are affected by objects" (A19/B33), consists in presenting the inner sensory states following from outer affection, how do non-cognitive sensory states – like feelings and desires – as well as purely intellectual representations – like judgments and inferences – come to be given in inner sense, given that such states do not

contribute to outer perception? Second, to what extent is inner sense dependent upon outer sense in its exercises, and can Kant allow for purely inner experiences, i.e., acts of inner sense independent of any parallel act of outer sense? Note that the Refutation of Idealism makes these questions pressing, since its argument for the priority of cognition of outer objects in time makes clear that inner sense is not a self-standing introspective capacity which disinterestedly supervises the mind as a whole, and which is indifferent to the inner states it intuits.

Let us examine the final section of the Refutation of Idealism's argument, which I omitted in my initial treatment of it. In particular, immediately after concluding, in section [E], that "the determination of my existence in time is possible only by means of the existence of actual things that I perceive outside myself" (B275), Kant continues:

> [F] Now consciousness in time is necessarily combined with the consciousness of the possibility of this time-determination. Therefore it is also necessarily combined with the existence of things outside me, as the condition of time-determination, that is, the consciousness of my own existence is at the same time an immediate consciousness of the existence of other things outside me. (B276)

Crucially, Kant claims here that consciousness of one's inner states in time only presupposes consciousness of the possibility of determining those states with respect to persistent outer substances, but not the actual determination of them with respect to presently perceived outer substances. This of course implies that not all states of the mind given in inner sense are outer intuitions – since if they were, such inner states would presumably always also be determined with respect to the outer substances they present – and it also leaves room to say the following. Namely, where inner sense depends upon outer sense at the level of capacity – in that a condition on inner sense is that it is part of a larger capacity which presents outer persistent substances with respect to which inner states can be ordered – inner sense is not

dependent upon outer sense at the level of individual acts in at least two ways. First, inner sense is free to present any state or act of the mind whatsoever – outer intuition, judgment, inference, desire, feeling, or whatever – but, again, only because it is part of a larger capacity for outer cognition which presents persistent substances with respect to which such appearances can be ordered. And second, inner sense can be exercised in a kind of purely inner experience, independent of any parallel exercise of outer sense, in which all we actually perceive is a succession of inner states – e.g., pains – but in which we are still conscious, in some sense, of the possibility of ordering those states with respect to persistent outer substances. Of course, spelling out such implicit consciousness of the 'possibility' of ordering an inner appearance with respect to outer substances is no easy task, and I will not attempt to do it here. But I think that so long as we bear in mind that sensibility is originally a unified capacity for intuition – of which inner and outer sense are mere aspects – then it is intelligible how there could be an exercise of inner sense in which there is no parallel exercise of outer sense, but in which we are still conscious of the possibility of ordering the inner appearance with respect to outer appearances.[16]

[16] Here is an analogy. Coal is burnable; the reason coal is burnable, however, is not because it is coal's essence to be burnt, but rather because of the various geological factors that make coal into a substance with the power to be burnt. Inner sense, similarly, can be exercised in purely inner experiences, and also present non-cognitive and purely intellectual representations. The reason, however, that inner sense can perform such functions is not because they constitute inner sense's essence, but rather because inner sense is an aspect of the capacity for outer cognition, and as such has powers that make it capable of being exercised in these auxiliary ways. Were inner sense not an aspect of a larger capacity for outer cognition – one which presented outer substance with respect to which inner states could be ordered – inner sense could not be exercised in these different ways, just as coal would not be burnable but for the various geological factors.

Let us now turn to some broader implications of the account of inner sense given here. To begin with, there are at least two interesting asymmetries between inner and outer sense that come into view. First, while inner sense depends upon outer sense at the level of capacity, but not at the level of individual acts, outer sense does depend upon inner sense at the level of act, and a fortiori also at the level of capacity. We saw in chapter two, for instance, how the perception of an outer object necessarily involves a contribution from inner sense – specifically an inner intuition of the outer intuition qua effect of affection – and even geometry, for Kant, necessarily involves inner sense and temporal synthesis, insofar as acts of spatial synthesis always also determine inner sense.[17] All acts of outer sense are therefore also acts of inner sense, but not all acts of inner sense are acts of outer sense.

The second asymmetry is that, despite inner sense enjoying a kind of autonomy and independence from outer sense that outer sense does not enjoy from it, only outer intuitions, and not inner intuitions, amount to cognition proper. As I touched on earlier, part of what it means for inner sense to be fundamentally an aspect of the capacity for outer cognition is that inner intuitions do not of themselves present objects proper, since they are a mere dimension of that larger act which does present an object proper, namely an outer perception. It is for this reason that Kant says, "the representations of outer sense make up the proper material with which we occupy our minds" (B67), and that "in order to understand the possibility of things in accordance with the categories, and thus to establish the objective reality of the latter, we do

[17] Cf. B155n: "[M]otion, as *description* of a space, is a pure act of the successive synthesis of the manifold of outer intuition in general through productive imagination, and belongs not only to geometry but even to transcendental philosophy."

not merely need intuitions, but always outer intuitions" (B291). Only outer appearances constitute objects proper and fully instantiate all the categories, and while inner appearances can and must also be brought under the categories, this is always only in a kind derivative, attenuated sense, since the categories are dependent upon outer appearance for their full meaning and instantiation.[18]

Moving on, a related consequence of the truth that inner sense is originally an aspect of the capacity for outer cognition is that, in its paradigmatic act, inner sense presents the mind or self insofar as it knows an outer object. The fundamental kind of inner intuition and self-knowledge, in other words, consists in a presentation of the sensory states involved in an act of outer perception, and not in a presentation of those non-cognitive sensory states which can figure in purely inner experiences, namely feelings and desires. Thus although only outer appearances amount to knowledge proper, amongst the possible varieties of inner appearances, Kant reserves the term 'cognition' (*Erkenntnis*) for those inner states which can contribute to outer cognition, and explains that "the feeling of pleasure and displeasure and the will… are not cognitions at all" (A49/B67), and that from "the existence of things outside us… we after all get the whole matter for our cognitions, even for inner sense" (BxxxixN). Only states of the mind which can contribute to outer cognition, that is to say, amount to inner cognition proper.

[18] Of "the category of magnitude," for instance, Kant says that it "can… be exhibited only in outer intuition, and… by means of that alone can it subsequently also be applied to inner sense." (B293)

And part of what it comes to, finally, for feelings and desires not to be genuine inner cognitions, for Kant, seems to be that they are less easily studied and analyzed than states of the mind which can contribute to outer cognition. The remark that "the feeling of pleasure and displeasure and the will… are not cognitions at all" (A49/B67), for instance, occurs in the context of Kant noting that such states are the only things exempt from the principle that "everything in our cognition that belongs to intuition… contains nothing but mere relations" (A49/B66). Feelings, in particular, consist in the mere consciousness of "the promotion or inhibition of the powers of life" (*CPJ*, 5:278), and as such do not refer to objects in space and time, while desires do refer to such objects, but in a merely creative or productive sense, rather than a cognitive or descriptive sense (Cf. 6: 212). Feelings and desires are thus less easily studied than those states of the mind which contribute to outer cognition both in that they cannot be correlated with anything outer and intersubjective – as for example, sensation can[19] – and also because, qua not being so correlated, they are less intimately related to the forms of intuition and as such are less relational, and ultimately less mathematically and categorially tractable.[20]

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[19] Kant makes clear in the Anticipations of Perception, for instance, that sensation shares an intensive magnitude with the outer objects it presents.

[20] This thought is also evident in the *Metaphysics of Morals*, for instance, when, after distinguishing between states of the mind which do and do not contribute to outer cognition, Kant explains that because "pleasure and displeasure… expresses nothing at all in the object but simply a relation to the subject," they "cannot be explained more clearly in themselves" and "instead, one can only specify what results they have in certain circumstances, so as to make them recognizable in practice" (6:212). Feelings, as the consciousness merely of one's own wellbeing, can only be gestured at and indirectly signified, and do not admit of further analysis and explanation.

Let us summarize the account of inner sense that has emerged in this dissertation. Regarding its essential function, inner sense is originally an aspect of the capacity for outer cognition. Its essential function consists in presenting the sensory states, and transitions between them, following from affection by an outer object, and for this reason inner sense's form, and its form alone, is time. Nonetheless, because outer objects, in order to be represented as known on the basis of affection, must be comprehended as the ground of the sensory states given in inner sense, outer objects must also be represented in time, and so the form of inner sense – time – is also the universal form of appearances, inner and outer.

Although inner sense is originally an aspect of the capacity for outer cognition, it is not wholly dependent upon outer sense for its manifold, and can intuit both non-cognitive states of the mind, like feelings and desires, as well as purely intellectual representations, like judgments and inferences. Yet inner sense is only able to intuit such states of the mind because it is part of a larger capacity for outer cognition which presents persistent substances which instantiate the fixed whole of time, and with respect to which inner states can be ordered and determined in time.

Regarding the kind of cognition that inner sense furnishes, inner intuitions do not, relative to outer intuitions, amount to cognition proper. Only outer appearances – that which is the product of the joint contribution of outer and inner sense, and which inner sense exists for the sake of helping to determine – fully instantiate all the categories, and the cognition of inner appearances is dependent upon that of outer appearances insofar as our core representational classes and distinctions only get their full meaning from the latter.

Amongst the possible varieties of inner appearance and self-knowledge, however, the fundamental variant consists in a presentation of one's inner state insofar as one knows an outer object. Such states are what inner sense presents in its fundamental act, and are also, qua being correlated with outer objects, more public, more relational, and more mathematically and categorially tractable than feelings and desires.

Yet feelings and desires – non-cognitive mental states – are also unique qua being able to figure in purely inner experiences, i.e., actualizations of inner sense independent of any parallel actualization of outer sense. Inner sense thus has an independence and autonomy from outer sense that outer sense does not have from it, since all acts of outer sense do involve parallel acts of inner sense. Nonetheless, inner sense can only be exercised in such purely inner experiences because it is part of a larger sensible capacity which presents persistent outer substances with respect to which such inner appearances can, in principle, be ordered. Thus, even in its purely inner exercises, inner sense remains firmly part of the capacity for outer cognition.

SECTION FOUR: CONCLUDING REMARKS

I have shown, I hope, how in addition to the many well-known connections that Kant sees between our finitude and certain aspects of our knowledge,[21] he also sees an essential connection with time, and that this connection informs his account of our cognitive capacity in nuanced ways, as evidenced by my solutions to the three formerly intractable problems about

[21] Most famously, the discursive nature of our understanding, and sensible nature of our intuition.

time. In particular, the ground of time, for Kant, is finite, sensible intuition and the transition between opposing sensory states, on the basis of affection by an independently existing object, which acts of such intuition involve. This picture provided the resources for explaining why time is the form of inner sense (because it is inner sense that must represent the transition between opposing sensory states), why outer objects are also necessarily in time (because the outer object is the ground of the transition between inner sensory states, and so itself must be posited in time), and why the Schematism is focused on time and not space (because the pure intuition of time, unlike that of space, originally presents inner states of the mind alone, and thus requires further unification in order to be related to an object).

The key to uncovering the connection between time and sensible intuition – and thus to resolving the three problems about time – lay in a proper understanding of two fundamental philosophical concepts which Kant employs. First there was the traditional idea, which Kant takes up, that our knowledge rests upon a cognitive capacity, i.e., upon the kind of thing to which such Aristotelian distinctions apply as potentiality versus actuality. Second there was the idea, also foundational to Kant, that our knowledge does not create its object, and as such depends upon affection by it. And the connection between time and sensible intuition only came into view by comprehending how these two concepts relate to each other, i.e., by comprehending how a transition from potentiality to actuality is possible for a capacity – like sensibility – which depends upon determination by an external condition. Such a transition presupposes that the state of potentiality from which the capacity begins is in some respect determinate, since otherwise the subsequent state of actuality cannot be understood as opposed to the initial state, and cannot be understood as the result of external determination.

Transitions between determinate, opposed states, however, are only possible via a continuous transition over time, and hence the acts of any capacity which depends upon determination by an external condition are essentially temporal. Absent such an analysis of sensibility through the framework of capacities, and absent a rigorous understanding of what it means for sensibility to be finite and to depend upon external affection, the connection between sensible intuition and time does not come into view, and the three problems about time remain opaque.[22]

This analysis of human knowledge through the framework of capacities also did not, I hope, despite yielding substantive truths, involve postulating anything perniciously psychological or contingent about our minds. Strawson, for instance, famously thinks that any Kantian claim about mental faculties and acts not translatable into an "analytical philosophy of mind"[23] – i.e., one framed around "the general structure of ideas and principles which is presupposed in all our empirical knowledge"[24] – must be discarded since it "belong[s] to the imaginary subject of transcendental psychology"[25] and will ultimately lead to psychologism.[26] I doubt my account could be so translated, since the connection with time it is based upon is not an 'idea or principle presupposed in empirical knowledge', but rather something grounded in the structure of a particular mental act – namely an act of sensible intuition. Establishing this

[22] Indeed, absent this kind of explanatory framework, it seems to be a brute fact that sensible intuition has anything to do with time at all.
[23] Strawson, 97.
[24] Strawson, 19.
[25] Strawson, 97.
[26] Kant, according to Strawson, was motivated to embrace a peculiar form of psychologism in order to establish an unknowable, supersensible realm that would "safeguard[] the interests of morality and religion,"[26] as well as facilitate solutions to the Antimonies of pure reason. Strawson, 22.

connection with time, however, did not involve postulating anything particular to human beings – indeed, the connection applied to the sensibility of both rational and non-rational beings – and so if it is psychological, then I submit that it is not psychological in a pejorative sense.

What did involve postulating capacities and acts peculiar to human beings was explaining our consciousness of time, i.e., explaining how, qua self-conscious, our sensible acts are not only in time but about time. The explanation of this truth involved, for instance, theories of inner sense, of the understanding's schematism, of the comprehension of a grounding relation between what is given through inner and outer sense, etc., all of which were unique to rational beings. So long as we bear in mind, however, that what is thereby explained is our knowledge of that structure which characterizes both rational and non-rational sensible intuition – time – then this framework of additional capacities and acts is still objective, in that it is simply what must be posited to explain our consciousness of what is essential to sensible intuition as such.

And this, finally, begins to take us back to Kant's relation to the philosophical tradition which sees time as essentially connected with finitude, one going back through the likes of Leibniz, Aquinas, Plato, and Parmenides. In this tradition, time has typically been associated with a lack, i.e., with our missing out on something. When Plato labels time "a moving image of eternity,"[27] for instance, part of the idea is that the temporal universe is an impoverished, fleeting, finite expression of that which is infinite, unchanging, and atemporal. Now, whether or not Kant agrees that to know the temporal is necessarily to miss out on something, he at least

[27] Plato, *Timaeus*, trans. Benjamin Jowett, (New York: Liberal Arts Press, 1949), 37D.

departs from this tradition in thinking that the consciousness of time is something special to rational beings, and something to be celebrated, thematized, and explained. Non-rational animals, for Kant, are in the lamentable situation of being in time yet unable to represent it, and thus time consciousness becomes, with Kant, a feature of our cognitive capacity indicative of our position in the cognitive order. We are below God, and with mere animals, insofar as we are essentially in time, and yet above mere animals, and closer to God, insofar as we know time.

Time thus also enters into the heart of Kant's account of the human cognitive capacity in a way that is, to that point in the history of philosophy, unprecedented. Through the theories of inner sense, self-affection, figurative synthesis, inner experience, the understanding's schematism, and the Analogies of experience, Kant's account of the human cognitive capacity is shot-through with time and the explanation of our consciousness of it. Kant thus emerges, on my account, not only as an inheritor of the traditional idea that time is essentially connected with finitude, but as someone who deploys it in a radically new way by showing the way in which the finite cognitive capacity is essentially structured around time and its representation.[28]

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[28] Since Kant, the relation between human cognition and time has been taken most seriously perhaps by the phenomenologists, especially Husserl and Heidegger, both of whom were heavily influenced by Kant. Husserl labels time consciousness the most "the most difficult of all phenomenological problems," and "perhaps the most important in the whole of phenomenology." Edmund Husserl, *On the Phenomenology of the Consciousness of Internal Time (1893-1917)*, trans. John B. Brough (Dordrecht: Kluwer Academic Publishers, 1991), 286 and 346. Heidegger, meanwhile, in *Being and Time*, gives a radically new slant on the relationship between time and finitude by arguing that time consciousness is most fundamentally the consciousness of our mortality and inevitable future death. Martin Heidegger, *Being and Time*, trans. John Macquarrie and Edward S. Robinson (New York: Harper Perennial Modern Classics, 2008).

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CPJ = Critique of the Power of Judgment. Translated by Paul Guyer and Eric Matthews. New York: Cambridge University Press, 2000.

Prol = Prolegomena to Any Future Metaphysics: *With Selections from the Critique of Pure Reason*. Translated by Gary C. Hatfield. Cambridge Texts in the History of Philosophy. Cambridge: Cambridge University Press, 1997.

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